Strategic Financial Management

Workbook

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Contents

Brief Summaries of Chapters	**1**
Part I: Multiple-Choice Questions and Answers (with Explanatory Notes)	**5**
Frequently Used Formulae	**140**
Part II: Problems and Solutions	**148**
Part III: Applied Theory Questions and Answers	**259**
Part IV: Case Studies Problems and Solutions	**354**
Part V: Caselets Questions and Answers	**418**
Part VI: Model Question Papers (with Suggested Answers)	**523**

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Preface

The ICFAI University has been upgrading the study material so that it is amenable for self study by the Distance Learning Students.

We are delighted to publish a Workbook for the benefit of the students preparing for the examinations. The workbook is divided into six parts.

Brief Summaries of Chapters

A brief summary of all the chapters in the textbook are given here for easy recollection of the topics studied.

Part I: Multiple-Choice Questions and Answers (with Explanatory Notes)

Students are advised to go through the relevant textbook carefully and understand the subject thoroughly before attempting Part I. Under no circumstances the students should attempt Part I without fully grasping the material included in the textbook.

Part II: Problems and Solutions

The students should attempt Part II only after carefully going through all the solved illustrations in the textbook. A few repetitive problems are provided for the students to have sufficient practice.

Part III: Applied Theory Questions and Answers

All theory questions are applied in nature. Having understood the basics in the textbook, the students are expected to apply their knowledge to certain real life situations and develop relevant answers. To be able to answer the applied theory questions satisfactorily all the students are advised to follow regularly the Analyst magazine, business magazines and financial dailies.

Part IV: Case Studies Problems and Solutions

A case study attempts to test the cognitive skills of the student in integrating various concepts covered in the subject with focus on quantitative aspects. Hence, students should attempt them only after they are thorough with the entire subject.

Part V: Caselets Questions and Answers

A caselet also tests the cognitive skills of the student in integrating various concepts but with focus on qualitative aspects. Students are advised to try to answer the questions given at the end of the articles in the ICFAI Reader to develop their skills further. The caselets given in this part also help students gain the adequate exposure on how current events of interest can be analyzed and interpreted.

Part VI: Model Question Papers (with Suggested Answers)

The students should attempt all model question papers under simulated examination conditions. They should self score their answers by comparing them with the model answers.

Please remember that the ICFAI University examinations are quite rigorous and demanding. The student has to prepare well for each examination. There are no short-cuts to success. We hope that the students will find this workbook useful in preparing for the ICFAI University examinations.

Work Hard. Work Smart. Work Regularly. You have a good chance to succeed. All the best.

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Brief Summaries of Chapters

Introduction to Strategic Management

- Strategic Management can be defined as the set of decisions and actions resulting in formulation and implementation of strategies designed to achieve the objectives of the organization. The origin of strategic management can be traced back to a battlefield of past wars.
- The systematic study of strategic management was pioneered by Ansoff. Mintzberg added new dimensions to strategic management by bringing personal side of the manager into the picture. Peter F Drucker's contribution to business strategy was the introduction of the concept of Management By Objective (MBO). Later Michael Porter introduced generic strategies to reduce the uncertainties of the competitive environment.
- The comprehensive understanding of the components of strategic management like vision, mission, objectives etc helps in designing effective plans for the future of organization.
- The process of strategy formulation requires the understanding of the characteristics and value of strategic management.
- The levels of organizational strategies are corporate level strategy, business level strategy and the functional level strategy.

Strategic Management Process

- The process of strategic management consists of, environmental scanning, strategy formulation, strategy implementation, evaluation and control.
- Environmental scanning involves the study of external environment of the organization. Strategy formulation involves setting up long-term and short-term objectives.
- The strategic decisions can be undertaken in the entrepreneurial mode, the planning mode, or the adaptive mode. Strategy implementation involves the process by which strategies are put into action.
- The evaluation phase marks the beginning and end of the strategic management process.
- The criticism on strategic management is that the strategic management model is too holistic, excessively analytic and non-political.

Company Mission

- The first step in the strategy formulation begins with the organization's vision.
- The mission is defined as the 'fundamental and enduring purpose of an organization that sets it apart from other organizations of similar nature'.
- While formulating the mission the main factors to be considered are the basic product, primary market, principal technology, company gals, company philosophy, public image and the company's self-concept.
- Company's goals express its mission in specific terms. The mission should also take into consideration the public image of the organization.

Analyzing the External Environment

- The process of strategic management starts with the analysis of external environment and it consists of many factors that govern the product sale.
- The environment is primarily divided into remote environment and the operating environment.
- The remote environment consists of political, social, economic factors and the operating environment consists of creditors, customers, suppliers, competitors etc.
- The main competitive forces are threat to entry, potential competitors' rivalry, bargaining power of suppliers, bargaining power of customers, and the threat from substitutes.
- The effective formulation of strategy helps the company to establish itself in the competitive environment.

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Evaluating the Multinational Environment

- There are different types of industry based competitions that exist and these differences are linked to an understanding of the strategic options available to a multinational corporation.
- The strategic planning for multinational environment is more complex that of domestic planning.
- The complexity of strategic planning for the multinational firms is the addition of two recent trends, namely, the globalization of industries and the increased activism of stakeholders.
- The theories that explain the evolution of MNCs are the Internalization theory, Oligopoly theory, Tariff jumping hypothesis, Obsolescing bargain theory.
- The corporate mission statement must be reviewed and revised by the management if it is going for international expansion. The guiding purpose of the firm must be reclarified through multinationalization of the mission statement.

Internal Analysis of the Company

- The internal analysis provides the means to identify the strengths to build on and the weakness to overcome when formulating strategies. Strategic success depends on a realistic analysis of the firm's internal capabilities.
- An internal analysis that leads to a realistic company profile involves the trade-offs, value judgments and informed and educated guesses.
- Careful planning, execution and co-ordination of the functional departments are highly essential for the efficient strategic planning.
- Within a strategic framework, the internal analysis begins and ends with the organization's management.

Company Cultures and Values

- The organizational culture is an intangible, ever-present theme that provides meaning, direction, and the basis for action. It is the set of important assumptions that members of an organization share in common.
- The strength of culture determines its efficiency; however the content of culture determines its effectiveness. Content determines the direction in which culture influences organizational behavior.
- Culture and the strategy creation revolve around the strategy and culture relationship that requires sensitivity to the interaction between the changes necessary to implement the new strategy and the compatibility between those changes and the firm's culture.

Formulating Long-term Objectives and Strategy

- The purpose of an organization's existence should be clarified, articulated and defined by the management through the establishment of objectives.
- The objective of an organization ranges from strategic objectives to functional objective.
- Objectives state end results and overall objectives need to be supported by sub-objectives and thus it forms a hierarchy of objectives in an orderly and logical framework.
- Grand strategies provide the basic directions for strategic actions at the corporate level. The major grand strategies involve the growth strategies and the retrenchment strategies.

Strategic Analysis and Choice

- For evaluating the strategic alternatives, a number of criteria are available. For making the evaluation practically possible, all criteria are classified into three groups, i.e., criteria of suitability, feasibility and acceptability.
- The corporate strategy is concerned with the generation and allocation of corporate resources. The portfolio analysis method is a technique of strategy examination at corporate level and among important are BCG matrix and GE nine cell planning grid.

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- The business level strategies must be examined in order to identify and evaluate the strategy options of each business. SWOT analysis and strategy selection matrix are used in business level.
- The success of the strategy chosen is contingent to varying degrees on future conditions. There should be a contingency approach to strategic choice-by incorporating the flexibility to alter a chosen strategy if the underlying assumptions change.

Operationalizing the Strategy

- Strategy formulation, analysis of alternative strategies and strategic choice precede implementation.
- The crucial step in the successful strategy implementation starts with the identification and communication of annual objectives that relates to the long-term objectives of the strategy.
- Functional strategies should be consistent with long-term objectives and the grand strategy. They enable the grand strategy to be pursued in terms of daily activities.
- The basic characteristics that differentiate functional strategies from the grand strategies are; time horizon covered; specificity; participation in their development.
- Policies are directives to aid the decisions and actions of managers and their subordinates in the implementation of organizational strategy. Policies establish indirect control over independent action by making clear statements about how things are to be done.

Strategy and Structure

- There are three organizational elements that provide the fundamental, long-term means for institutionalizing the firm's strategy and they are; Structures, Leadership and Culture.
- A structure means the division of tasks for efficiency and clarity of purpose and coordination between the interdependent parts of the organization to ensure organizational effectiveness. A well defined organizational structure is the first priority in the implementation of strategies.
- There are five basic types of structures that most organizations currently use.
- A good organizational structure can create a favorable environment in the organization and helps in the accomplishment of the strategy.

Resource Management and Control

- Corporate resource planning relates to the allocation of resources between various parts of the organization together with corporate investment decisions concerning the acquisition of additional resources.
- When resources are allocated to functions or to particular activities within functions, it is important to consider the relative importance of each function.
- The allocation of resources in an origination requires planning and controlling. The budgeting is the important tool of resource allocation. The budget is an instrument for putting plans and policies into effect for the achievement of objectives.
- Strategic controls are intended to steer the company towards its long-term strategic goals. The four types of strategic controls are, premise control, implementation control, strategic surveillance and special alert control.
- Crisis management addresses certain risks and uncertainties that arise over a period of time. Wherever possible, firms should prepare contingency plans to mitigate the effects of these crises.

The Value Chain and Competitive Scope

- A value chain is a linked set of value creating activities that begins with the purchase of basic raw materials and ends with distribution of products or service. A value chain analysis evaluates the organization in the context of its value creating activities.
- The value activities can be classified as Primary activities and Support activities.

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- Competitive scope influences the competitive advantage by shaping the structure and economics of the value chain. The segments of value chain are, segment scope, vertical scope, geographic scope and industry scope.
- The relationship between the competitive scope and the value chain provides the basis for defining relevant business unit boundaries.
- The value chain plays a valuable role in designing organizational structure because organizational structure influences the strategy implementation.

The Value Chain and Generic Strategies

- The behavior of a firm's costs and its relative cost position stems from the value activities the firm performs in competing in an industry. The cost analysis involves the meaningful examination of costs within these activities.
- The cost position of the firm's results from the cost behavior of its value activities is influenced by number of structural factors.
- The cost of value activity is often subject to economies or diseconomies of scale. Economies of scale results from the ability to perform activities efficiently at a larger volume.
- The cost of a value activity is frequently affected by how other activities are performed. The two types of linkages are linkage within the value chain and vertical linkage with the value chains of suppliers and channels.
- Cost advantages leads to the differentiation strategies by making a firm unique from its competitors.
- The differentiation strategies are very useful for a firm to get succeeded in the market because; the firms can be differentiated based on the unique factors that are possessed by each one of them.

Strategic Financial Management: An Overview

- The objective of decision-making in corporate finance is to maximize firm value/stock prices.
- The company also needs to be socially desirable by fulfilling its non-financial objectives – like welfare of employees, management, customers, and suppliers and to the society at large.
- There is a conflict of interest between stockholders and managers. The important agency relationship exists between the stockholders and managers, between managers and debt holders and between managers, stockholders and debt holders in times of financial distress.
- An agency problem in this context refers to conflict between the principle and the agent. For, instance, managers might fix for themselves higher salary, obtain large stock option, at the expense of the stockholders.
- An agency costs refers to the monitoring costs incurred by the principles over their agents in making them act in the interests of the former.
- Financial planning refers to the managerial function of developing, defining and evaluating the organizational objective and devising strategies in fulfilling these objectives.
- The long-term objectives of the company might include – survival or growth of the firm. The company might need to balance the long-term profitability with the short-term gains.

Firm's Environment, Governance and Strategy

- The business environment of the firm consists of the state of the economy, resource availability, external governance groups (media, government and the creditors), internal governance groups (The shareholders, Board of Directors, managerial hierarchy and the internal capital markets).

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- The operational structure of the firm consists of the
  a. The capital budgeting decisions.
  b. Decision regarding the size of the company.
  c. Decision regarding the production function (capital/labor intensive operations).
  d. Internal audit consisting of the cost and the quality audit.
  e. Decision regarding the financial structure of the company.
- The financial structure decisions typically comprises of the ownership structure, financial leverage, dividend and stock repurchase policies and the executive compensation policies.
- The designing of the executive compensation policies is a difficult task as the interests of the managers and that of the stakeholders' tends to clash. It thus views executive compensation not only as an instrument for addressing the agency problem between managers and shareholders, but also as part of the problem itself.

Valuing Real Assets in the Presence of Risk

- There are basically two methods for computing the market values of the future cash flows of risky investment projects – the certainty equivalent approach and the Risk-Adjusted Discount Rate (RADR) method.
- The RADR method, which obtain the discount rates (i.e. the cost of capital) from widely used theories of risk and return (such as the CAPM and APT) is impractical when the betas of the comparison firms are difficult to estimate.
- In cases where the comparison firms do not exist and scenarios are required to estimate risk, practical considerations require that certainty equivalent approach is a better valuation tool.
- Tracking error refers to the difference between the cash flows of the tracking portfolios and the cash flows of the projects.
- The tracking portfolio approach seeks to develop tracking portfolios for which the present value of the tracking error is zero.
- Whenever a tracking portfolio for the future cash flows of a project generates tracking error with zero systematic (or factor) risk and zero expected value, the market value of such a tracking portfolio is equal to the present value of the project's future cash flows.
- To compute the present value of the next period's cash flow using RADR
  - Compute the future period cash flow.
  - Compute the beta (β) of the return from the project.
  - Compute the expected return of the project by substituting the beta (calculated above) with the tangency portfolio risk-expected return equation (R_T).
  - $PV = \dfrac{\text{Future period expected CF}}{1 + r_f + \beta(\bar{R}_T - r_f)}$
- Cost of equity is given by

  $\bar{r}_e = r_A + D/E\ (r_A - r_D)$

  r_e increases as the firm's leverage ratio (D/E) increases. It increases linearly if the debt is default-free and if $\bar{r}_A$ (the expected return of the assets) does not change as the leverage rises.
- The certainty equivalent present value formula is given by

  $$PV = \frac{\Sigma(\bar{C}F) - \beta(\bar{R}_T - r_f)}{(1 + r_f)}$$

  Where,

  $\bar{C}F$ = Expected future CF

  β = Beta of the future CF

  $\bar{R}_T$ = Risk of the tangency portfolio.

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- It is possible to estimate the expected future CF of an investment or project under a scenario where all securities are expected to appreciate at risk-free rate of return. The PV of the CF is then computed by discounting the expected CF for risk-free scenario at risk-free rate.
- Capital rationing in a process of developing capital budgets on the basis of predetermined availability of funds.

Allocating Capital and Corporate Strategy

- Firms should evaluate investment projects on the basis of their potential to generate valuable information and the direct cash flows they generate.
- Most projects can be viewed as a set of mutually exclusive projects. For instance, undertaking a project today is one project, taking it a year later is another project, that is forgoing the capital investment immediately (which might have a present NPV). It is done if the other alternative, waiting to invest, has a higher NPV.
- In the ratio comparison approach, firms value projects on the basis of comparison with other traded projects/assets.
- The other approach is the P/E ratio method. This is done by
  a. Obtaining the appropriate P/E ratio for the project from a comparable investment whose P/E ratio is known.
  b. Multiplying this P/E ratio with the first year's net income of the project.
  c. The company should accept the project when the ratio of its initial cost to earnings is lower than the P/E ratio of the comparison investment.
  d. P/E ratio of a portfolio of stocks is the sum of their respective P/E ratio times their weight.
- The competitive analysis approach
  – The firm in a competitive market can achieve a positive NPV from a project if they have sense advantage over their competitors. When other firms have a competitive edge, the project will then have a negative NPV.
- Strategic options exist whenever the firm has any flexibility regarding the implementation of the project.
- The existence of these options improves the value of the investment project. If the management ignores these options, the project shall stand under valued.

Real Options

- Opportunities to respond to changing circumstances are called managerial option as they give managers a chance to influence the outcome of the project. Such projects are also called as real options as they deal with real rather than financial assets.
- Many projects include a variety of 'embedded options' that can dramatically influence its NPV. These can be –
  a. Investment timing option – that allows the firm to delay the project.
  b. Growth option – that enable a firm to manage its capacity in response to changing market conditions.
  c. Abandonment option, and
  d. Flexibility options – which give flexibility to a firm over its operations.
- There are five possible procedures for valuing real options.
  a. DCF only, ignoring the real option.
  b. DCF analysis and qualitative assessment of the real option value.
  c. Decision tree analysis.
  d. Analysis with a standard model for an existing financial option.
  e. Financial engineering technique.

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- The various drawbacks of real option analysis includes
  - Using it where it is not applicable
  - Framing a wrong model for valuation
  - Using incorrect data and biased judgment, and
  - Miscalculation.

Capital Structure

- Capital structure theories analyze the proportion of debt and equity in the capital structure of a firm. There are conflicting views regarding the impact of capital structure on the valuation of a firm.
- Net income approach contends that the valuation of the firms can be increased by the application of leverage, provided the cost of equity is greater than the cost of debt.
- Net operating income approach assumes that the value of the firm remains constant irrespective of the degree of leverage.
- Traditional approach contends that the cost of capital is dependent on the capital structure of the firm.
- MM approach postulates that the composition of the capital structure is an irrelevant factor in the market valuation of a firm.
- Modigliani and Miller explain the arbitrage process to support their view that the value of a levered firm cannot be higher than the value of an unleveled firm and vice versa.
- The imperfections that can affect the capital structure are taxation, bankruptcy costs, difference between homemade leverage and corporate leverage and agency costs.
- Pecking order theory of financing assumes that firms follow a specific order of preferences in the financing decisions and the most popular mode is the retained earnings.
- Trade – off theory of financing assumes that the firm attempts a trade – off between the size of the tax shelter and the cost of financial distress.
- The major determinants of capital structure are type of asset financed, nature of the industry, degree of competition, obsolescence, product life cycle, financial policy, past and current capital structure, corporate control and credit rating.

Industry Analysis, Financial Policies and Strategies

- Agency theory suggests that firms in an industry shall be grouped into two. One would consist of large, capital intensive, levered and highly profitable firms and the other group shall consist of small, labor intensive, less levered and less profitable firms.
- As a result of the asset substitution problem associated with debt, the firms would come under two major segments — one would consist of highly levered firms who would pursue more profitable projects and the other group shall consist of firms with low leverage and will pursue less risky projects.
- An industry may have an optimal debt capacity even though individual firms within the industry do not. This happens as a result of bankruptcies and liquidations within the industry, when it is depressed. Hence, the assets are sold at 'fire sale' prices. Hence, the future expected cost of financial distress and bankruptcy increases thereby limiting the composite debt capacity in the industry.
- A firm's leverage should be set to balance the managerial agency costs (which decreases as the firm's leverage decreases) with the costs associated with competition in terms of product market strategy (which increases with the firm's leverage).
- The executive compensation contracts should reflect the firm's industry relative performance as well as absolute performance, depending upon the level of competition in an industry.
- A firm in a competitive industry should maintain excess debt capacity as a matter of competitive strategy.

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- Leverage can be used to create a barrier to the entry of rival firms in an industry.
- Co-operative relationship among firms, like joint ventures and strategic alliances are becoming means to compete effectively in an industry.

Dividend Policy

- Dividend policy refers to the management's views regarding distribution of earnings to their shareholders.
- Graham-Dodd model postulates that the market price of a share is function of its dividend and earnings.
- Walter model contends that the market price of a share is the sum of the present value of the future stream of dividends and the present value of the future stream of returns from the retained earnings.
- Gordon model values the share by capitalizing its future stream of dividends.
- Modigliani and Miller propounds that the dividend pay – out is an irrelevant factor in the market valuation of firms.
- The strategic determinants of dividend policy are liquidity, investment opportunities, access to finance, floatation costs, corporate control, investor preferences, restrictive covenants, taxes and dividend stability.
- Lintner model states that the current dividend of a firm depends on its current earnings and its past dividends.
- Bonus issue, stock dividends, stock splits and share repurchases have strong signaling effects on the market.

Information Asymmetry and the Markets for Corporate Securities

- The problem of information asymmetry pertains to the dilemma that the corporates face of whether to release information of strategic importance to the investors or not. If it releases such information, it can be leaked out to the competitors, yet it is difficult to see securities to ill-informed investors or to procure more funds.
- There are various mechanisms used to mitigate this problems. These are:

  – The use of screening devices

  – Costly signals that are difficult or impossible to mimic

  – The seller's reputation

  – Ex post contract enforcement

  – Guarantees.
- Managers can distinguish their firm as a better one by issuing debt.
- In general, in the presence of information asymmetry between market and managers, external financing is costlier than interval financing.
- There is a preference structure or the pecking order regaining financing alternatives when in need of funds, firms must first use retained earnings, debt, external equities in that order.
- Low cost borrowers choose secured debt with a low interest rate. In contrast, riskier borrowers have a high credit risk, having a higher probability of defaulting and losing the security, hence choose unsecured loan with high interest rate.
- Dividends represent a costly signal of management's strategic information about future cash flows. Share repurchase and debt retirements can serve as effective signals of the firm's value.

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Managerial Incentives

- The degree to which the managerial incentives match with that of the shareholders depends upon the time the managers spend on the job and the number of shares they own.
- Firms with concentrated ownership are lively to be better monitored and are hence better managed. However, the cost of having a less diversified portfolio is borne only by the large shareholder. Because of the lost of bearing firm specific risk, ownership is likely to be less concentrated than it would be if management efficiency were the only consideration.
- Entrepreneurs may obtain a better price for their shares if they hold a larger part of the share capital of a company. The incentive to hold shares is also related to risk aversion.
- Managers prefer investments that minimizes risk. This means that they might prefer larger, diversified firms and investment that pay–off more quickly than those that maximize shareholders' wealth.
- The benefit of managerial discretion are greater in more uncertain environments and when there is a gap in the alignment of the interest of the managers and shareholders.
- Shareholders prefer a higher leverage than managers. Hence, firm which are strongly influenced by shareholders employ higher leverage.
- A large debt obligation prohibits the managements ability to use resources in wage that do not enhance shareholders wealth.
- Agency problems partly arise because of imperfect and risk aversion.
- Stock based compensation has this advantage that it motivates manages to improve share prices.
- However, stock prices change for reasons beyond managerial control. Hence, a cash flow based compensation plan might provide the best way of motivating the managers.

Decision Support Models

- Decision support models help management to identify the relationship between different variables and help them to get an optimal decision.
- Modeling process follows steps like feasibility study, model construction, compatibility of the model with the tools used, model validation, implementation, revision and documentation.
- Probabilistic analysis can be used at the time of recession.
- Marakon model uses four steps like understanding of financial factors that determine the firm's value, understanding the strategic forces that affect the firm's value, formulate strategies that lead to a higher value of the firm and create internal structures to counter the divergence between the shareholder goals and the managements goals.
- Alcar model uses the discounted cash flow analysis to identify value-adding strategies. According to this model there are seven value drivers that affect a firm's value.
- Mckinsey model identifies value drivers at generic level, department level and grass root level. The key steps in maximizing the value of a firm are identification of value maximization as the supreme goal, identification of value driver, development of strategy, setting of targets, deciding upon the action plan, setting up the performance measurement system and implementation.

Financial Statement Analysis

- Financial statements contain a wealth of information, which if properly analyzed and interpreted can provide valuable insights into a firm's performance and position.
- Liquidity ratios refers to the ability of firms to meet its obligations in the short run. The important liquidity ratios are current ratio, quick ratio, short-term finance to net current assets ratio and interval measure.

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- Leverage refers to the use of debt finance. The important leverage ratios are debt-equity ratio, total debt-equity ratio, debt ratio, interest coverage ratio and debt service coverage ratio.
- Turnover ratios reflect the efficiency with which a firm utilizes its various assets. The important turnover ratios are inventory turnover ratio, accounts receivable turnover ratio, fixed assets turnover ratio and total assets turnover ratio.
- Profitability ratios reflect the final result of business operations. The important profitability ratios are gross profit margin ratio, net profit margin ratio, return on capital employed and return on net worth.

Financial Distress and Restructuring

- Sick Industrial Companies Act, 1985 (SICA), defines "a sick industry as an industrial company (being a registered company for not less than five years) which has at the end of any financial year accumulated losses equal to or exceeding its net worth".
- Factors for bankruptcy is divided into external and internal.
- A firm that faces imminent bankruptcy has two alternatives – reorganization and liquidation.

Working Capital Management

- Working capital leverage reflects the sensitivity of return on investment to change in the level of current assets.
- Weighted operating cycle analysis is used to ascertain the duration for which funds are required for various stages of the working capital.
- Cash budget simulation consists of phases, which include model development, specification of probability distribution of exogenous variables and running the model.
- Discriminant analysis is a statistical tool helpful for classification purposes.
- Cash management model ensures that a firm has adequate cash at all times.
- Baumol model applies the economic order quantity concept to determine the cash conversion size.
- Miller and Orr model consider a stochastic generating process for periodic changes in cash balance.

Strategic Cost Management

- The chapter primarily focuses on the different costing methodologies that is considered during the strategic analysis of a firm. It starts with a brief note on value chain analysis, followed by activity based costing. Having spoken at length about ABC, it graduates to target costing and explains the same in details. Apart from this, the concept of quality costing and life cycle costing is also explained in details.

Inflation Accounting

- Inflation accounting speaks about the concepts on the impact of inflation on the financial statements. It also explains the various objectives behind inflation accounting. The chapter ends with the guidance note of ICAI on accounting for changing price.

Corporate Risk Management

- The chapter provides a primary platform for risk management concepts. It mention the various sources of risk and the different types of risk. Further it also explains the various approach towards risk management. Apart from this, the basics of risk management techniques are also explained. The chapter concludes with a brief introduction to asset-liability management.

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Risk Management and Corporate Strategy

- In the absence of taxes and transaction costs, hedging decisions do not affect the value of the firm if such decisions do not affect the cash flows from real assets.
- To improve upon the value of the firm, hedging decisions must increase the expected cash flows. Merely, reducing the variances of its future cash flows is not enough.
- Firms which are exposed to a high financial distress cost have a greater reason to hedge.
- For firms that have a limited access to outside financial markets and that find it costly to delay or change their investment plans, hedging would be beneficial.
- Hedging shall be more profitable when it is difficult to evaluate and monitor management.
- Corporates should align their hedging in a way that reflects why they are hedging.
- Managers have limited financial information at their disposal. Hence, it is better if they hedge rather than speculate.
- A firm's liability stream can be broken up into two parts – one that relates to default free interest rates and the other to the firm's credit rating. Derivative instruments allow firms to separate these two sources of risk –
  - to create liability streams that are sensitive to interest rates but not to the credit ratings.
  - to create liability streams that are sensitive to their credit ratings but not interest rates.
- If the interest rate changes are due to inflation, then the firm will want its liabilities to be exposed to interest rate risk. However, if the interest rate change is due to change in the real interest rate change, the firm would want to limit its exposure of its liabilities.
- When exchange rate changes can be generated by both real and nominal changes, it may be impossible for firms to hedge their long-term exposures, effectively.

Organization Architecture, Risk Management, and Security Design

- A firm's organizational architecture consists of business architecture and financial architecture.
- Business architecture includes all aspects of the firms its environment, assets and operations that describes the circumstances under which and the manner in which business is conducted by it, barring its financial contracts.
- The firm's financial contracts forms the financial architecture of a firm.
- An efficient organizational architecture is built by recognizing and giving due importance to the components and elements within the system (architecture).
- Components of financial architecture includes derivative (forward contracts, futures, options, swaps) and contracts like insurance and guarantees to manage various types of risk [currency risk, commodity price risk, interest rate risk etc.).
- Security should be so designed by the firm so as to maximize stockholder wealth. It should be targeted at the investor group that values them most. Debt and equity are optimal generic securities.

The Practice of Hedging

- The managerial focus must be more on risk management than on risk elimination which comes at a very high cost.
- Future hedges must be linked to the interest earned on due amount of cash that is exchanged because of mark to market feature.
- The long dated obligations which are hedged with short-term forwards needs to be linked if the underlying commodity has a convenience yield. The degree of link depends upon the convenience yield earned between the maturity date of the forward instrument used to hedge and the date of the long-term obligation.

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- The greater is the sensitivity of convenience yield to the commodity spot price, the less risky is the long dated obligation to buy/sell a commodity.
- The greater is the sensitivity of the convenience yield to the price of the underlying commodity, the lower is the hedge ratio when a long dated obligation is hedged with a short-term forward agreement.
- For hedging a long-term obligation with a short-term forward or futures contract, the greater the unchangeable convenience yield risk, due lower is the hedge ratio.
- If a company's exposure to a risk factor is eliminated by acquiring 'f' forward contract then the firm can eliminate that risk exposure by acquiring f/Δ options, where Δ is the forward delta of the option.
- The factor risk of a cash flow is eliminated by acquiring a portfolio of financial instruments whose factor beta stands exactly opposite to the cash flow factor beta.
- The regression co-efficient represent the hedge ratio that minimizes the variance given that there are no capital constraints on the use of costless financial instruments for hedging.

Enterprise Risk Management

- Enterprise Risk Management (ERM) can be considered to be a logical extension of corporate risk management. It speaks about some of the advanced areas of risk management, such as technology risk, anti-trust risk, environment risk, political risk, etc. Basically, the chapter deals with the holistic framework of risk management that an organization needs to consider in turbulent times.

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Part I: Questions on Basic Concept

Introduction to Strategic Management

1. Which organization level is responsible for the formulation of a multifunctional strategy for a single industry or product-market area?

a. Corporate level.

b. Multifunctional level.

c. Business level.

d. Multi-industrial level.

e. Product level.

2. Which of the following is **not** included in strategic management?

a. Providing and organizing the resources required.

b. Analyzing company's options by matching its resources with external environment.

c. Identifying the most desirable strategy.

d. Setting long-term objectives.

e. Developing a company profit that reflects its internal conditions and capabilities.

3. In a multi-business firm at which level are the objectives set and strategies formulated to govern the activities of a firms' business?

a. Business level.

b. Multi-business level.

c. Corporate level.

d. Both (a) and (b) above.

e. Both (a) and (c) above.

4. Which level of managers translate the corporate strategy into concrete objectives for their individual business?

a. Business level.

b. Corporate level.

c. Multi-business level.

d. Functional level.

e. None of the above.

5. Who develops the short range objectives and strategies for introduction, operation, marketing, etc?

a. Corporate level managers.

b. Business level managers.

c. Functional level managers.

d. Multi-business level managers.

e. All of the above.

6. Which of the following concentrate on doing 'the right things'?

a. Corporate level managers

b. Business level managers.

c. Functional level managers.

d. Both (a) and (b) above.

e. Both (a) and (c) above.

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7. What comprises the fundamental ends and means of an organization?

a. Planning.

b. Objective.

c. Strategy.

d. Staffing.

e. None of the above.

8. Which of the following will **not** come under immediate external environment?

a. Competitors.

b. Technological developments.

c. Resources.

d. Government agencies.

e. Suppliers.

9. What prepares the organization and its individuals to define and achieve success by facilitating self-development?

a. Strategic planning.

b. Strategic decision making.

c. Management development.

d. Training.

e. Strategic analysis.

10. Which of the following reveals a firm's financial risk?

a. Leverage ratios.

b. Liquidity ratios.

c. Activity ratios.

d. Profitability ratios.

e. None of the above.

11. Which mode of formality is/are suitable for smaller firms?

a. Entrepreneurial mode.

b. Planning mode.

c. Adaptive mode.

d. Both (a) and (b) above.

e. Both (b) and (c) above.

12. Which of the following is/are a part of the remote external environment?

a. Government agencies.

b. Political priorities.

c. Economic and social conditions.

d. Both (a) and (b) above.

e. Both (b) and (c) above.

13. Which of the following provides a set of decisions and actions that result in the formulation and implementation of plans designed to achieve a company's objectives?

a. Strategic management.

b. Strategic decision.

c. Strategic implementation.

d. Strategic planning.

e. All of the above.

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14. Which of the following processes, puts strategies and policies into action through program budgets and procedures?

a. Environmental approach.

b. Strategic formulation.

c. Strategic implementation.

d. Evaluation and control.

e. Strategy planning.

Strategic Management Process

15. What allows a firm to identify a wide range of opportunities?

a. Policies.

b. Objectives.

c. Strategic analysis.

d. Budgets.

e. Functional strategies.

16. Which objective includes productivity, technological leadership, employee relations, etc?

a. Long-term objective.

b. Short-term objective.

c. Medium-term objective.

d. Annual objective.

e. None of the above.

17. Which of the following reflects the means to achieve the objectives of the organization?

a. Corporate strategy.

b. Policies.

c. Procedures.

d. Grand strategy.

e. Functional strategy.

18. Which of the following provides the means to achieve annual objectives?

a. Functional strategy.

b. Business strategy.

c. Operating strategy.

d. Strategic choice.

e. Grand strategy.

19. As per Henry Mintrzberg's classification, which of the following is **not** a mode of strategic decisions making?

a. Entrepreneurial mode.

b. Adaptive mode.

c. Reactive mode.

d. Planning mode.

e. Both (b) and (c) above.

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20. What are policies that provide guidelines to make operating processes consistent with the firm's strategic objectives referred to as?

a. Standard operating procedure.

b. Standardizing routine decision.

c. Institutionalizing the strategy.

d. Strategy formulation.

e. Functional strategies.

21. Which of the following is **not** a basic element of the strategic management?

a. Environmental scanning.

b. Strategy formulation.

c. Strategy implementation.

d. Budgeting.

e. None of the above.

22. Which of the following identifies the strategic factors that determine the future of a firm?

a. Strategy evaluation and control.

b. Environmental scanning.

c. Strategy formulation.

d. Strategy implementation.

e. Strategy planning.

23. Which of the following measures is used by a company to ensure that every employee takes decision within the company mission, objective and strategy?

a. Objectives.

b. Policies.

c. Processes.

d. Programs.

e. Appraisal.

24. Which of the following describes the various activities to be carried out to complete the corporation's program?

a. Procedures.

b. Policies.

c. Processes.

d. Budgets.

e. All of the above.

25. Who develops strategies for their own units within the overall guidelines of the corporate strategy?

a. Chief Executive Officer.

b. Line Manager.

c. Managing Directors.

d. Supervisors.

e. All of the above.

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26. In a divisionalized organization which strategy gives the financial objectives and determines the business?

a. Corporate strategy.

b. Central corporate strategy.

c. Functional strategy.

d. Strategic formulation.

e. Strategy implementation.

27. What bridges the gap between a strategy formulation and implementation?

a. Strategic planning.

b. Strategic management.

c. Decision-making.

d. Organizing.

e. Strategy development.

28. What is the process of logically approaching the task of identifying the ends and the means of achieving them known as?

a. Rational planning.

b. Organizing.

c. Controlling.

d. Decision-making.

e. Evaluation and control.

Company Mission

29. What describes the market, product and technological area of a business?

a. Company's vision.

b. Company's mission.

c. Bumper-sticker strategy.

d. Strategic plan.

e. Company's goals.

30. Which of the following defines the company's intention to achieve results within the pre-defined operational areas?

a. Plan.

b. Policies.

c. Strategies and tactics.

d. Mission.

e. Vision.

31. Which of the following is **not** a requirement of Bumper-sticker strategy?

a. The basic type of product or service to be offered are specified by it.

b. The core competencies of the business must under pin the strategy.

c. It must be differentiated from competitor's strategy.

d. It must promise something of value not to business, its employees or owners, but to the world.

e. None of the above.

32. What are the indispensable components of a mission statement?

a. Product, primary market and technology.

b. Basic product, primary markets and principal technology.

c. Plans, visions and basic product.

d. None of the above.

e. All of the above.

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33. Which of the following indicates the desired future state that a company attempts to realize?

a. Company's plan.

b. Company's mission statement.

c. Company's goal.

d. Company's self-concept.

e. Company's vision.

34. What is the clear indication of a firm's ability to satisfy the principal claims and desires of the employees and stockholders?

a. Profitability.

b. Liquidity.

c. Company's mission statement.

d. Debt-equity ratio.

e. All of the above.

35. Which of the following leads to strategic myopia?

a. Long-term profitability measures.

b. Short-term profitability measures.

c. Medium-term profitability measures.

d. Indecision.

e. Poor decision.

36. What defines a framework/boundary for individual actions aimed at achieving corporate goals?

a. Company's philosophy.

b. Company's objective.

c. Company's policy.

d. Company's image.

e. Company's mission.

37. What are the economic goals that guide the strategic direction of every viable business organization?

a. Survival, growth and profitability.

b. Growth, profitability and public image.

c. Goal, profit and public image

d. Public image, growth and profit.

e. Philosophy mission and vision.

Analyzing the External Environment

38. Which factor indicates the nature and direction of the economy in which a firm operates?

a. Economic environment.

b. Social environment.

c. Legal environment.

d. Operating environment.

e. Political environment.

39. Which environment is also referred to as competitive environment?

a. Economic environment.

b. Operating environment.

c. Social environment.

d. Political environment.

e. Cultural environment.

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40. Which of the following does not act as a barrier to entry?

a. Product differentiation.

b. Large capital requirements.

c. High switching costs.

d. Diseconomies of scale experienced by existing firms.

e. Existing factors having better access to distribution channels.

41. How can a firm determine the purchasing power of a customer?

a. By considering the life style and geographic variables.

b. By considering the personality and demographic variables.

c. By considering personality and life style.

d. By considering demographic and geographic variables.

e. Taking the per capita income into consideration.

42. Which of the following situations **does not** help in increasing the bargaining power of suppliers?

a. When the product sold by the suppliers has more substitutes.

b. When it is costly for a company to switch from one supplier to another.

c. When the buying companies do not have chance of integrating vertically backward.

d. Both (a) and (b) above.

e. Both (a) and (c) above.

43. How can a manager identify the opportunities and threats in the competitive industrial environment?

a. Analyze the competitive forces.

b. Market research.

c. Market analysis.

d. Sales analysis.

e. Cost analysis.

44. Why is investment in building a brand name risky?

a. Consumers tastes change.

b. Substitute with similar products.

c. Price war.

d. No salvage value.

e. High cost.

45. How can a buyer pose a competitive threat in the market?

a. Change brands.

b. Demand high price with quality.

c. Demand lower price and better service.

d. Demand product differentiation.

e. Demand easy availability.

46. When does a company take the advantage of lowering the prices of the inputs with improved quality?

a. Suppliers are strong.

b. Suppliers are moderate.

c. Suppliers are weak.

d. Suppliers are less in number.

e. Suppliers are adequate in number.

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47. Which of the following will reduce the rivalries among companies?

a. Reducing demand for a product.

b. Increasing demand for a product.

c. Increasing supply for a product.

d. Create a shortage in the market.

e. Withdrawing from the market.

Evaluating the Multinational Environment

48. Which companies have their origin in a country and operate with their subsidiaries in other countries in a competitive environment?

a. Global companies.

b. Multinational companies.

c. International companies.

d. Domestic companies.

e. Universal companies.

49. How can a company increase international visibility?

a. Participate in technological trade fairs

b. Circulate brochures

c. Invention and technology

d. Both (a) and (b) above.

e. All of the above.

50. Which of the following is based on the host nation's power and leaves an impact on international affairs?

a. Political status.

b. Economic status.

c. Cultural status.

d. Social status.

e. Legal status.

51. Why is internal assessment strength necessary in international operation?

a. Stability of the economy can be determined.

b. Economic condition can be known.

c. It reflects bargaining the power of the company.

d. Consumer behavior can be identified.

e. All of the above.

52. In which industry is competition within the industry essentially segmented from country to country?

a. Multi-domestic industries.

b. Multi-national industries.

c. Global industries.

d. International industries.

e. Domestic industries.

53. Which of the following is a marketing tool to make customers' accept the firm's product in the market?

a. Company's philosophy.

b. Company's profile.

c. Company's profile.

d. Public image.

e. Company's strategy.

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54. How can a firm select a pure global strategy?

a. Co-ordinate of multinational activities.
b. Geographical concentration.
c. High foreign investment.
d. Both (a) and (b) above.
e. Both (a) and (c) above.

Internal Analysis of the Company

55. Which of the following will reveal the capability of an organization in view of the resource profile?

a. Market Research.
b. Internal Analysis.
c. Financial Analysis.
d. Research and Development.
e. Profitability Analysis.

56. Which of the following will **not** come under manufacturing operations?

a. Productivity of the equipment.
b. Appropriate automation of procurements processes.
c. Efficiency of finished goods and warehousing activities.
d. Efficiency of plant layout and workflow design.
e. Efficiency of material utilization.

57. Which of the following **does not** come under primary activity?

a. Operations.
b. General administration.
c. Outbound logistics.
d. Profit margin.
e. Sales and marketing.

58. What reduces the cost per unit as business gains the market share?

a. Capital labor substitution.
b. Economies of scale
c. Learning.
d. All of the above.
e. None of the above.

59. What is the need of research and development in production group of a company?

a. Maintain quality.
b. Reliability at a minimum cost.
c. Enhance company's financial position.
d. Both (a) and (b) above.
e. Both (a) and (c) above.

60. Which analysis of a firm offers abundant information about the present position and reveals the results of operation over time?

a. Liquidity ratio.
b. Financial statement.
c. Profitability ratio.
d. Marketing.
e. Market research.

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61. Which of the following will not come under activity ratios?

a. Fixed charged coverage.

b. Total asset turnover.

c. Average collection brand.

d. Fixed asset turnover.

e. Inventory turnover.

62. How can a firm get information about the organization and the management?

a. Market Analysis.

b. Market Research.

c. Research and development.

d. Review of financial condition.

e. Advertising.

63. What brings the organization and external environment together?

a. Superior customer service.

b. Research and development.

c. Advertising.

d. Marketing.

e. Financial analysis.

64. What forms the basis of product development?

a. Market Research.

b. Sales Forecast.

c. Market Forecast.

d. Market Analysis.

e. Research and Development.

65. Which major functional area in an organization, does contribute to the development of innovative products or services?

a. Advertising.

b. Marketing.

c. Research and Development.

d. Superior Customer Service.

e. None of the above.

66. In R&D, what is concerned with innovation and implementations?

a. Product R&D.

b. Process R&D.

c. Service R&D.

d. Both (a) and (b) above.

e. Both (a) and (c) above.

Company Culture and Values

67. What epitomizes an organization's culture?

a. Shared internalized beliefs.

b. Values.

c. Accountability

d. All of the above

e. Both (a) and (b).

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68. In which type of culture should an employee either accept the norms laid out or opt out from the company culture?

a. Dominant Culture Company.

b. Hierarchical Culture Company.

c. Strong Culture Company.

d. Weak Culture Company.

e. None of the above.

69. Which of the following course of action should be followed by a company that needs only a few changes in key organizational factors in order to implement a new strategy, with these changes having a high potential compatibility with existing culture?

a. Link changes to basic mission and fundamental organizational norms.

b. Focus on reinforcing culture.

c. Reformulate strategy.

d. Manage around the culture.

e. Both (a) and (b) above.

70. What depends on the relationship between a firm's culture and the critical factor that form an organization?

a. Strategy.

b. Mission.

c. Vision.

d. Organization Structure.

e. Culture.

71. Which type of firms link changes to basic mission with fundamental organizational norms?

a. Firms that need many changes in key organizational factors to implement a new strategy.

b. Firms which the changes to be implemented have high potential compatibility with existing cultures.

c. Firms that need few changes in key organizational factors to implement a new strategy.

d. Both (a) and (b) above.

e. Both (b) and (c) above.

72. Which structure maximizes the CEO's control?

a. Functional organization.

b. Divisional organization.

c. Simple organization.

d. Strategic business unit.

e. Matrix.

73. Which of the following allows specialization, encourages greater efficiency and refinement of a particular functional expertise?

a. Matrix.

b. Divisional.

c. Functional.

d. Simple.

e. SBU.

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74. Which type of organization structure can accommodate a varied and changing project, technology focus and increase the efficient use of functional specialist?

a. Divisional.

b. Matrix.

c. Functional.

d. Simple.

e. SBU.

75. What determines the direction of influence of culture on the organizational behavior?

a. Clarity of ordering.

b. Content of a culture.

c. Intensity of a culture.

d. Thinness of a culture.

e. Thickness of culture.

76. Which type of culture is innovative and encourages reward initiative by middle and lower level of management?

a. Thick culture.

b. Adaptive culture.

c. Inert culture.

d. Thin culture.

e. Normal culture.

77. Which type of control is highly efficient in selective environment?

a. Formal control through procedures.

b. Clan control.

c. Price control.

d. Quality control.

e. None of the above.

78. Which of the following **does not** explain the term objectives?

a. Objectives are the goals, aims and purposes that an organization wishes to achieve over varying periods of time.

b. Objectives do not indicate the end point of a management program.

c. Managerial objectives intend goals that prescribe definite scope and suggest direction.

d. Objectives define the desired state of affairs, which the organization attempts to realize.

e. Objectives are the concrete, specific aims that management seeks to achieve for the organization, often within a stated time period.

Formulating Long-term Objectives and Strategy

79. Which of the following factors are to be considered while formulating objectives?

i. External environment.

ii. Internal resources.

iii. Personal values of decision makers.

iv. Social obligations.

a. Both (i) and (iv) above.

b. Both (ii) and (iii) above.

c. Both (i) and (ii) above.

d. Both (iii) and (iv) above.

e. All of the above.

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80. Which of the following provide direction, serve as standards for evaluating performance and motivate members of the organization?

a. Mission.

b. Values.

c. Objectives.

d. Goals.

e. Vision.

81. What is the peak point of hierarchy of objectives?

a. To contribute to the welfare of the people

b. Accomplish the mission of the organization.

c. Accomplish the overall strategies of and organization.

d. Accomplish specific objectives of an organization.

e. Accomplish employee satisfaction.

82. Which of the following is **not** a growth strategy?

a. Horizontal integration.

b. Vertical integration.

c. Divestiture.

d. Both (a) and (b) above.

e. Both (a) and (c) above.

83. Which of the following strategies provides the basic direction to strategic actions?

a. Grand strategy.

b. Growth strategy.

c. Organizational strategy.

d. Development strategy.

e. Diversification strategy.

84. Which of the following term best explains the strategy of a firm to direct its resources to the profitable growth of a single product, in a single market, with a single dominant technology?

a. Concentration.

b. Market development.

c. Conglomerate diversification.

d. Concentric diversification.

e. Joint venture.

85. Star Ltd., has implemented a growth strategy which involves acquisition of one or more similar firms operating at the same stage of production marketing chain. This is example of

a. Horizontal integration

b. Backward integration

c. Forward integration

d. Concentric diversification

e. Conglomerate diversification.

86. Which of the following term best explains the partnership between two or more firm's to carry out a specific project in a selected area of a business?

a. Joint venture.

b. Merger.

c. Partial acquisition.

d. Conglomerate diversification.

e. Concentric diversification.

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87. Which of the following term best explains diversification into a new business area that has no obvious connection with any of the company's existing areas?

a. Divestiture.

b. Conglomerate diversification.

c. Concentric diversification.

d. Backward integration.

e. Mergers.

88. When does a firm consider a retrenchment strategy?

a. The firm has a weak competitive position.

b. The firm's survival is at stake.

c. The firm cannot implement latest technology.

d. The firm is not able to meet the company objective.

e. All of the above.

89. Which of the following strategies can be opted by firms in a divestiture situation?

i. Spin off part of the business as an independent entity.

ii. Sell the business unit to another firm.

iii. Close down a portion of the firm's operations.

iv. Sell the entire firm.

a. Both (i) and (ii) above.

b. Both (iii) and (iv) above.

c. Both (ii) and (iii) above.

d. All of (i), (ii) and (iii) above.

e. All of the above.

Strategic Analysis and Choice

90. What is the purpose of Strategic Analysis?

a. Search for multiple alternatives.

b. Understand the future.

c. To study the past profitability.

d. Both (d) and (c) above.

e. Both (a) and (b) above.

91. Which criteria measures the extent to which the proposed strategies fit the situation identified in the strategic analysis?

a. Criteria of acceptability.

b. Criteria of feasibility.

c. Criteria of suitability.

d. Criteria of responsibility.

e. Criteria of flexibility.

92. Which criteria assesses the practical implementation and working of strategy?

a. Criteria of feasibility.

b. Criteria of sustainability.

c. Criteria of acceptability.

d. Criteria of suitability.

e. Criteria of flexibility.

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93. What method of corporate strategy is adopted in a diversified, multi-industry company?

a. Corporate portfolio approach.

b. Business portfolio approach.

c. Merchandise portfolio approach.

d. Both (a) and (c) above.

e. Both (b) and (c) above.

94. What is the matching stage of the analytical framework for strategy formulation also called as?

a. Corporate portfolio analysis.

b. Business portfolio analysis.

c. Multinational portfolio analysis.

d. Both (a) and (b) above.

e. Both (a) and (c) above.

95. What approach provides a simple way of identifying and evaluating alternative strategies for the generation and allocation of corporate resource?

a. Portfolio approach.

b. Strategic approach.

c. Managerial approach.

d. SWOT analysis.

e. Functional approach.

96. What indicates the attractiveness of the markets served by each of the businesses in the corporation's portfolio of business?

a. Market sales.

b. Market movements.

c. Market growth rate.

d. Market stability.

e. Market value.

97. What provides the basis of comparing the relative strength of different businesses in terms of the strength of their position in each businesses' respective market?

a. BCG Matrix.

b. GE Nine Cell Model.

c. 7s Framework.

d. Five Force Model.

e. SWOT Analysis.

98. Which category represents the best long run opportunities in the firm's portfolio?

a. Cash cows.

b. Stars.

c. Question marks.

d. Dogs.

e. None of the above.

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99. Which category of the BCG matrix generates substantial cash surpluses due to low industry growth rate and high profit share?

a. Dog.

b. Cash cow.

c. Question mark.

d. Star.

e. None of the above.

100. What is the long range planning concerned with developing a company's mission, objectives, strategies and policies referred to as?

a. Strategic analysis.

b. Strategy formulation.

c. Strategic implementation.

d. Strategy identification.

e. Strategy planning.

101. Which analysis gives a systematic study and identification of those aspects and strategies best suiting the individual company's position in a given situation?

a. SWOT analysis.

b. Corporate analysis.

c. Business level analysis.

d. Managerial grid.

e. Functional analysis.

102. By which strategy does the business gain new strength by streamlining its operations and eliminating waste?

a. Vertical integration strategy.

b. Turnaround strategy.

c. Divestiture.

d. Liquidation.

e. Horizontal integration.

103. Which strategy offers a good possibility for recouping the company's investment?

a. Retrenchment.

b. Turnaround.

c. Liquidation.

d. Divestiture.

e. Vertical integration.

104. What should a firm concentrate on if it believes in and prefers an internal emphasis for maximizing strength?

a. Market development.

b. Product development.

c. Innovation.

d. Concentration.

e. All of the above.

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105. Which strategy is selected when the business's strengths are in product design stage?

a. Concentration.

b. Innovation.

c. Product development.

d. Market development.

e. Design development.

106. Which type of managers prefer offensive and opportunistic strategies?

a. Risk Oriented.

b. Innovative Manager.

c. Risk Averse.

d. Both (a) and (b) above.

e. Both (a) and (c) above.

107. What provides a powerful tool of strategy implementation, when linked with operating strategies and long-term objectives?

a. Objectives.

b. Strategies.

c. Policies.

d. Functions.

e. All of the above.

108. Which of the following provides a specific basis for monitoring and controlling organizational performance?

a. Daily objectives.

b. Weekly objectives.

c. Monthly objectives.

d. Annual objectives.

e. Quarterly objectives.

109. How is the effective nature of a particular strategy assessed?

a. Return on investment.

b. Market penetration.

c. Stock price.

d. Market share.

e. All of the above.

110. What is the crucial factor needed for a successful implementation of long-term strategy?

a. Identification.

b. Communication of annual objective.

c. Strategy formulation.

d Strategy development.

e. Strategy implementation.

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Operationalizing the Strategy

111. How can operating managers and personnel understand their role in the business mission?

a. Annual objectives.

b. Functional strategies.

c. Business strategies.

d. Promotional strategy.

e. Short-term objectives.

112. Which of the following is a short-term strategy for a firm?

a. Business strategy.

b. Annual objectives.

c. Functional strategy.

d. Grand strategy.

e. Company mission.

113. What draws a functional manager's attention on the needs to make grand strategy work?

a. Specificity.

b. Time horizon.

c. Participation in the development.

d. Both (a) and (c) above.

e. Both (a) and (b) above.

114. Which aspect of functional strategies limits them to the company's subunits in carrying out functional activities in key areas to implement grand strategy?

a. Time horizon.

b. Participation.

c. Specificity.

d. Non-specificity.

e. All of the above.

115. In a functional strategy which component of the marketing function take care of the customer requirement and satisfaction with quality products and services?

a. Product component.

b. Process component.

c. Packaging.

d. Accessories.

e. Pricing component.

116. In which approach is pricing based on consumer demand?

a. Functional approach.

b. Cost oriented approach.

c. Market oriented approach.

d. Competition oriented approach.

e. Product approach.

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117. Which of the following focuses on the reallocation of existing capital resources?

a. Capital allocation strategy.

b. Retrenchment strategy.

c. Dividend management.

d. Working capital management.

e. Financial analysis.

118. Which of the following is **incorrect**?

a. The time horizon for a functional strategy is usually shorter than that for a business strategy.

b. Business or grand strategies are more specific than the functional strategies.

c. The time horizon for a functional strategy is longer than that for a business strategy.

d. Both (a) and (b) above.

e. Both (b) and (c) above.

119. Which department helps complete a grand strategy, ensures development of managerial talent and motivated employees?

a. HR.

b. POM.

c. R&D.

d. Promotional.

e. Pricing.

120. Which of the following guide the thinking, discussions, actions of managers and their subordinates in the implementation of organizational strategy?

a. Strategy formulation.

b. Business policies.

c. Policies.

d. Strategy planning.

e. Strategy implementation.

Strategy and Structure

121. Which of the following is/are the organizational element(s) that provides fundamental means for institutionalizing the firm's strategy?

a. Structure of the organization.

b. Leadership.

c. Culture.

d. Both (a) and (c) above.

e. All of (a), (b) and (c) above.

122. Which type of structure exists, if a firm concentrates on one or few related products?

a. Divisional

b. SBU

c. Matrix

d. Functional

e. Simple.

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123. Which of the following structures leads to specialization, greater efficiency and refinement of particular expertise?

a. Simple.

b. Functional.

c. Divisional.

d. Matrix.

e. Centralized.

Resource Management and Control

124. In which approach would the priorities be decided centrally, but after allowing all divisions and business units to formulate their own preferred strategies?

a. Centralized approach.

b. Decentralized approach.

c. Semi-centralized approach.

d. Both (b) and (c) above.

e. Both (a) and (c) above.

125. Which of the following policies tend to stop the efficient and effective thinking of managers and employees?

a. Mandatory policies.

b. Advisory policies.

c. Explicit policies.

d. Implicit policies.

e. Comprehensive policies.

126. Which of the following policies provide a clear framework to understand the behavior pattern that is expected in particular circumstances?

a. Advisory policies.

b. Explicit policies.

c. Mandatory policies.

d. Implicit policies.

e. Marketing policies.

127. Which type of budget provides vital tool for controlling cash and meeting current obligations, forecast cash receipts and outlays?

a. Marketing budget.

b. Balance sheet budget.

c. Budgeted income statement.

d. Cash flow budget.

e. Pro forma balance sheet.

128. Which budget shows special expense accounts, compensation and human resource requirements for higher levels of the organization?

a. Manufacturing budget.

b. Research and development budget.

c. Effective staff budget.

d. Branch and regional budgets.

e. Balance sheet budget.

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129. Which of the following provides detailed, step-by-step instructions as to what should be done?

a. Budget.

b. Procedure.

c. Standard operating system.

d. Budgeting process.

e. Premise control.

130. What gives a detailed explanation of the development of economic, revenue and profit forecast?

a. Zero-base budgeting.

b. Budgeting process.

c. Premise control.

d. Special alert control.

e. Procedures.

131. What enables the management to find out whether the strategic management processes are appropriate, compatible and functioning in the desirable direction?

a. Implementation control.

b. Special alert control.

c. Premise control.

d. Strategic control.

e. Strategic surveillance.

132. Which of the following is designed to monitor a broad range of events inside and outside the company, which are likely to threaten the course of a firm's strategy?

a. Special alert control.

b. Strategic control.

c. Strategic surveillance.

d. Implementation control.

e. Premise control.

133. What provides an ongoing vigilance of daily operation to uncover information that may prove relevant to the firm's strategy?

a. Strategic surveillance

b. Strategic control

c. Special alert control

d. Implementation control

e. Premise control.

134. Which of the following reflects the need to thoroughly reconsider the firm's basic strategy on sudden unexpected events?

a. Premise Control.

b. Implementation Control.

c. Strategic Surveillance.

d. Special Alert Control.

e. Functional Control.

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135. Which type of budget provides an outline of specific expenditure for plants, equipment, machinery, inventories and other requirements needed during budget period?

a. Revenue budget.

b. Capital budget.

c. Expenditure budget.

d. Manufacturing budget.

e. Sales budget.

136. Which of the following is/are a statement that presents the financial plan for each department during the budget period?

a. Expenditure budgets.

b. Revenue budgets.

c. Capital budget.

d. Both (a) and (c) above.

e. Both (b) and (c) above.

137. What are the important means of controlling the implementation of strategy at the operational level of a company?

a. Budgeting.

b. Scheduling.

c. Monitoring Key Success Factors.

d. All of the above.

e. None of the above.

The Value Chain and Competitive Scope

138. What is a set of activities beginning from resourcing raw materials from suppliers, to the production of a product for final consumption known as?

a. Cost based value activities.

b. Value activities.

c. Cost reduction activities.

d. Promotional activities.

e. Pricing activities.

139. What are the four functions – R&D, Production, Marketing, Sales and Service – known as?

a. Value added activities.

b. Value addition functions.

c. Primary activities.

d. Secondary activities.

e. Functional activities.

140. What are the activities like material management, human resource function, companies infrastructures that provide inputs to primary activity and adds value for competitive advantage known as?

a. Functional activities.

b. Secondary activities.

c. Support activities.

d. Backward integration activities.

e. Forward integration activities

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141. Which support activity gains prominence, as the organization structure, control systems and culture of the company are included, and gives more scope for adding value?

a. Material management.

b. Human resource management.

c. Companies infrastructure.

d. Production management.

e. Marketing management.

142. Technology licenses, supply agreements, marketing agreements and joint ventures are the examples of

a. Amalgamation

b. Horizontal integration

c. Merger

d. Coalition

e. Joint venture.

143. Marketing department of an organization joins hand with marketing wing of other company to promote a product. This is an example of

a. Joint venture

b. Coalition

c. Horizontal coalition

d. Vertical coalition

e. Mergers.

144. What is the separation of like activities known as?

a. Segmentation.

b. Demarcation.

c. Distribution.

d. Differentiation.

e. Diversification.

145. What is a firm's value chain embedded in a large stream of activities known as?

a. Primary activities.

b. Secondary activities.

c. Value system.

d. Supportive activities.

e. Value analysis.

146. What differentiates a firm's value chain with its competitors?

a. Segment scope.

b. Geographic scope.

c. Industry scope.

d. Competitive scope

e. Market scope.

147. Why does competitive scope have powerful effect on competitive advantage?

a. It shapes the configuration of value chain.

b. It shapes economics of value chain.

c. It integrates the value activities.

d. Both (a) and (b) above.

e. Both (b) and (c) above.

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148. Which competitive scope is formed by various products produced and buyers served?

a. Vertical scope.

b. Geographic scope.

c. Segment scope.

d. Industry scope.

e. Market scope.

149. Which of the following is an example of vertical scope?

a. A firm relying on application capabilities of an engineering firm.

b. Service capability of engineering firm.

c. High productivity of a firm.

d. Both (a) and (b) above.

e. Both (a) and (c) above.

The Value Chain and Generic Strategies

150. Which among the following firms attain a cost advantage position?

a. A firm achieving a lower cumulative cost of performing value activities than its competitors.

b. Firm trying to outsource all relative products from one company to gain economies of scale.

c. Firm trying to restrict the cost control measure relative to its nearer competitor.

d. Firm that attains high profitability.

e. Firm that has a low retention ratio.

151. What are the factors that determine the cost behavior of value activities known as?

a. Cost centers.

b. Cost nodes.

c. Cost drivers.

d. Cost zones.

e. Cost units.

152. What is the component referred to when the cost behavior **cannot** be understood by examining the activity alone?

a. Learning and spillover.

b. Capacity utilization.

c. Linkage.

d. Utility.

e. Cost driver.

153. What does vertical linkage refer to?

a. Interdependencies between a firms activities and the value chain of suppliers and channels.

b. Interdependencies between two firms of the same industry.

c. Interdependencies between two hierarchy levels of the firm.

d. Both (a) and (b) above.

e. Both (a) and (c) above.

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154. Which of the following is/are a mechanism through which linkages within the value chain lead to opportunities for cost reduction?

a. Coordination.

b. Differentiation.

c. Optimization.

d. Both (a) and (c) above.

e. Both (b) and (c) above.

155. In which of the following factors does cost reduction sometimes erode competitive advantage?

a. Value activity.

b. Perceived quality.

c. Differentiation.

d. Focus.

e. Integration.

156. How can firms enhance the role of channels in differentiation?

a. Channel selection to achieve consistency, capability or image.

b. Establishing standards and policies for how channels must operate.

c. Provision of advertising and training activities for use by channels. Provide funding so that channel can offer credit.

d. All of the above.

e. Both (a) and (b) above.

157. Which of the following is/are a mechanism through which a firm creates a value for a buyer to justify a premium price?

a. Lowering buyer's cost.

b. Raising buyer performance.

c. Raising buyer's cost.

d. Both (a) and (b) above.

e. Both (b) and (c) above.

158. At which stage is an industry known as the embryonic industry?

a. Growing stage.

b. Beginning stage.

c. Mature stage.

d. Declining stage.

e. Company at the maturity stage.

159. At which stage of the industry do barriers to entry tend to be based on access to key technological know-how rather than on cost economies or brand loyalty?

a. Embryonic industry.

b. Growth industry.

c. Shake out industry.

d. Mature industry.

e. None of the above.

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160. At what stages is the rivalry between companies intensified?

a. Beginning stage.

b. Growing stage.

c. Mature stage.

d. Shakeout stage.

e. None of the above.

161. How does the firm act in a shakeout industry environment?

a. Price out.

b. Maximum utility of resources.

c. Cutting additional expenditure.

d. High pricing.

e. Higher promotion.

162. When does the entry barrier increase and threat from potential competitors decrease?

a. Beginning stage.

b. Growing stage.

c. Mature stage.

d. Declining stage.

e. Shake out stage.

163. What is the advantage of companies that could survive in an industry by the time they mature?

a. Brand loyalty.

b. Low cost operation.

c. High market share.

d. High profitability.

e. Both (a) and (b) above.

Strategic Financial Management: An Overview

164. The non-financial objectives of the company include

a. Providing the employees with safe working conditions, training and career development opportunities.

b. Providing the management with higher salaries and perquisites at company's expenditures.

c. Undertaking breakthrough research and development initiatives.

d. (a) and (b) only of the above

e. All of (a), (b) and (c) above.

165. Which of the following leads to reduction in agency costs?

a. Keeping a part of management remuneration in the form of profit related bonus.

b. Conducting management audits.

c. Threat of takeovers.

d. (a) and (b) only of the above

e. All of (a), (b) and (c) above.

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166. Which of the following is/are **true**?

a. With the fall in interest rates, share prices fall.

b. With the fall in interest rates, share prices rise.

c. Interest rates do not affect share prices.

d. With the fall in interest rates, dividend returns to the investors fall.

e. Both (b) and (d) above.

167. Which of the following is/are **correct**?

a. When interest rates fall, corporates borrow for long periods and redeem loans, which entail higher rates of interest.

b. When interest rates are low, companies would borrow short-term funds at variable interest rate.

c. With the rise in interest rates, companies would substitute debt finance for equity finance.

d. Both (a) and (b) above.

e. Both (a) and (c) above.

168. Which of the following is **not** the primary reason for a company to go for non-growth strategy?

a. Lack of staff with requisite skill and loyalty.

b. High cost of additional funds in the market.

c. Pressure from public opinion.

d. Diseconomies of scale of a particular production set-up.

e. To maintain a acceptable quality of life.

169. The government issues gilts at a coupon rate of 12% with face value Rs.100. If the market rate of interest rises to14%, which of the following is **correct**?

a. There is a capital loss of 14.29%.

b. There is a capital gain of 14.29%.

c. The value of the gilt rises.

d. Both (b) and (c) above.

e. None of the above.

170. The process of financial planning **does not** involve which of the following?

a. Evaluation of strategic long term budgets.

b. Evaluation of tactical short-term budgets.

c. Determination of pricing policies, manpower requirements and production schedules.

d. Only (a) and (b) above.

e. All of (a), (b) and (c) above.

171. Which of the following is\are **correct**?

a. There is a positive relation between the firm's leverage ratio and the percentage of total executive compensation tied to performance.

b. The percentage of equity owned by large individual investors and the leverage are directly related.

c. A high level of leverage generally reduces profitability and managerial efficiency.

d. Both (a) and (b) above.

e. Both (b) and (c) above.

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172. The three stages of strategic management are:

a. Strategy formulation, strategy implementation, and strategy execution

b. Strategy formulation, strategy implementation, and strategy evaluation

c. Strategy formulation, strategy execution, and strategy assessment

d. Strategy assessment, strategy execution, and strategy evaluation

e. Strategy formulation, strategy assessment and strategy execution.

173. How often should strategic-management activities be performed?

a. Annually.

b. Monthly.

c. Quarterly.

d. Weekly.

e. Continuously.

174. Who is most responsible for developing, communicating, and enforcing the code of business ethics for a firm?

a. The Chief Executive Officer.

b. The top managenent.

c. Staff managers.

d. Line managers.

e. All managers.

175. In a large organization, strategic management activities occur at what level(s)?

a. Corporate and divisional only.

b. Divisional level only.

c. Corporate and functional level only.

d. Corporate, functional and divisional level only

e. Strategic business unit only.

176. The means by which long-term objectives will be achieved are

a. Strategies

b. Annual budgets

c. Mission statements

d. Vision statements

e. Long-term goals.

177. The most important benefit of strategic management could be

a. Order

b. Commitment

c. Profit

d. Growth

e. Understanding.

178. One of the reasons for poor or no strategic planning in organizations is:

a. Lack of prior good experience

b. Self-interest

c. Lack of foresight

d. Fear of success

e. Low expense

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179. Which of the following statements is least likely to characterize a planning approach to strategy development?

a. Definite and precise objectives are set.

b. Strategies are developed by negotiation and bargaining between interest groups.

c. Strategies are the outcome of rational, sequential and methodical practices.

d. Defined procedures for implementation and the achievement of strategic objectives are set.

e. Top management on the basis of business environment sets strategies.

180. Which of the following are **not** consistent with the overriding corporate goal of shareholder wealth maximization?

a. Sales maximization.

b. Maintenance of company profitability.

c. Keeping the shareholders' satisfied.

d. Exhibiting sociable responsibility.

e. Survival of the company.

181. Which of the following will **not** increase shareholder wealth?

a. Retention of current dividend to finance a beneficial project.

b. Giving non-pecuniary benefits to shareholders.

c. Reduction of managerial remuneration and perquisites.

d. Paying a higher dividend due to lack of suitable projects.

e. Taking over firms in other industries to lower unsystematic risk.

182. Which of the following statements is/are correct?

i. Maximization of annual profits maximizes shareholders' wealth.

ii. A financial manager should recognize the interdependence of investment, financing and financing decisions.

iii. Divorce of ownership and control leads to the agency problem.

a. Only (i) is correct

b. Only (ii) is correct

c. Both (i) and (ii) are correct

d. Both (ii) and (iii) are correct.

e. (i), (ii) and (iii) are correct.

183. Which of the following is **not** an offshoot of the agency problem?

a. Managers increasing their company's gearing level.

b. The acceptance of projects with increasingly short payback periods.

c. The diversion of funds into managers own pet project, to which they have a special preference for.

d. Managers selecting projects, which are relatively, low risk.

e. The acceptance of projects with increasingly short payback periods.

184. Which of the following are not usually considered to be costs associated with agency ?

a. Costs of constructing an 'optimal contract' for managers.

b. Costs associated with giving management share options (ESOPS)

c. Monitoring costs.

d. Costs of divergent behavior by managers

e. Costs of obtaining a listing on the stock exchange

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185. Which of the following statements about the gradual increase in institutional shareholding over the past two decades is/are **not true**?

i. In theory the increased concentration that has resulted from an increased level of institutional shareholding should lead to a reduction in the agency problem

ii. Of the three decision-making areas, companies' financing decisions have come under the most scrutiny from institutional shareholders.

iii. Now institutional shareholders account for the ownership of almost 80% of all UK listed shares.

a. Only (i) is correct

b. Only (ii) is correct

c. Both (ii) and (iii) are correct

d. Both (i) and (ii) are correct

e. (i), (ii) and (iii) are correct

186. Which of the following is **not** among the recommendations of the Cadbury Committee of 1992?

a. Companies should establish audit committees with at least three non-executive directors as members.

b. The positions of chairman and chief executive officer should be separate.

c. Companies should phase out executive share option schemes.

d. There should be full disclosure of directors' remuneration.

e. Directors' contracts should be no longer than 3 years duration.

187. Which of the following statements best describes the link between lower interest rates and investment?

a. Lower rates improve consumer confidence, raise consumption, and therefore encourage investment.

b. Lower rates reduce the cost of borrowing and therefore encourage investment for firms that finance their investment with loans.

c. Lower interest rates reduce the cost of capital for all firms and thus stimulate investment.

d. Lower interest rates represent loose monetary policy that boosts investment.

e. Both (b) and (c) above.

Firm's Environment, Governance And Strategy

188. The business environment of the firm does **not** consist of which of the following statements?

a. Internal governance and business strategy.

b. External corporate groups.

c. Internal Capital markets.

d. Ownership structure.

e. Management hierarchy.

189. Which of the following is/are true if a company has total assets worth Rs.100 lakh, financed by means of equity Rs. 70 lakh (book value) and 10% debt of Rs.30 lakh (book value), at the end of year 1. In the second year, the company gains Rs.12 lakh on assets. (Ignore taxes).

a. The ROA is 12%.

b. The ROE is 9%.

c. The ROE is 12.85%.

d. Both (a) and (b).

e. Both (a) and (c).

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190. A corporation in which you are a shareholder has just gone bankrupt. Its liabilities are far in excess of its assets. The shareholder then has to pay:

a. A proportionate share of bondholder claims based on the number of common shares that he owns

b. A proportional share of all creditor claims based on the number of common shares that he owns

c. A proportional share of all the claims against the organization based on the number of common shares that he owns

d. An amount that could, at most, equal what one originally paid for the shares of common stock in the corporation

e. Nothing.

191. A project's profitability index of 0.87 indicates that:

a. The present value of benefits is 87% greater than the project's costs

b. The project's NPV is greater than zero

c. The project returns 87 paise in present value for each rupee invested

d. The payback period is less than one year

e. The ratio of NPV to the initial investment is 87%.

192. Which of the following statements is **correct**?

i. If the IRR of a project is greater than the discount rate, k, its PI will be less than 1 and its NPV will be greater than 0.

ii. If the NPV of a project is greater than 0, its PI will equal 0.

iii. If the IRR of a project is 0%, its NPV, using a discount rate, k, greater than 0, will be zero.

iv. If the PI of a project is less than 1, its NPV should be less than 0.

v. If the mutually exclusive projects are of the same size, NPV and Modified IRR lead to the same result irrespective of variations in project life.

a. Only (iv)

b. (i) and (iii) only

c. (iv) and (v) only

d. (iii) and (iv) only

e. (iii), (iv) and (v) only

193. The discount rate at which two projects have identical ____ is referred to as *Fisher's rate of intersection.*

a. Present values

b. Profitability indexes

c. IRRs

d. Net present values

e. Back periods.

194. Two mutually exclusive investment proposals have "scale differences" (i.e., the cost of the projects differ). Ranking these projects on the basis of IRR, NPV, and PI methods, ____, give contradictory results.

a. Never

b. Always

c. Depending upon the case

d. Generally

e. Generally does not

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195. The method that provides correct rankings of mutually exclusive projects, when the firm is not subject to capital rationing is:

a. Profitability Index
b. Net Present Value
c. Discounted payback period
d. Internal Rate of Return
e. Annual capital charge.

196. All these are part of Porter's competitive forces in industry analysis except:

a. Potential entry of new competitors
b. Bargaining power of suppliers
c. Development of substitute products
d. Bargaining power of unions
e. Threat of substitutes.

197. Which institution enabled Mexico to export its way out of the severe 1994-peso crisis?

a. The World Bank.
b. European banks
c. NAFTA.
d. IMF.
e. ADB.

198. Research evidence shows that ownership concentration is associated with

a. Greater firm focus on mature and stable industries of the economy
b. Low levels of diversification
c. Greater managerial autonomy
d. Growth in revenues
e. Higher value of the firm.

199. Boards with more of external and independent members are most likely to select the new directors through

a. Their personal networks
b. HR consultants
c. Nominating committees
d. A profile that ensures uniformity across boards
e. Recommendation by the CEO of the firm.

200. Managerial employment risk is reduced by which of the following?

a. Higher level of diversification.
b. Decreased managerial responsibility.
c. Greater shareholder participation in managerial decision making process.
d. Strict adherence to the corporate governance norms.
e. Higher level of leverage.

201. Which of the following is **true** of corporate governance in view of today's global economy?

a. The Italian bank-centered governance approach is moving away from a share ownership approach.
b. In South Korea, principles of governance now provide incentives that align the interests of the company and its shareholders.
c. The Japanese system of governance is becoming less oriented on shareholders.
d. The Chinese approach is further centralizing operations by restricting local control.
e. The German system of governance is now moving towards aligning the shareholders interest with that of the managers' through executive compensation schemes.

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202. Manager takeover defenses include

a. Greenmail, poison pills, and white knights
b. White knights, golden parachutes, and poison pills
c. Poison pills, dark knights, and golden parachutes
d. Golden parachutes, greenmail, and poison pills
e. Dark knights, poison pill and greenmail.

203. Attributes of the Japanese corporate governance includes which of the following?

a. Low government intervention.
b. Extensive external market for corporate control.
c. Distant relationships between firms and government.
d. Passive, stable shareholders who exert little control.
e. Active shareholders' who exercise close watch over the internal governance of the organization.

204. Which of the following is **not** recommended for effective board governance?

a. Highly diverse background of board members.
b. Establishment of formal processes for the board's performance evaluation.
c. Ensure the CEO is also designated at the position of board chair.
d. Strengthen internal management and accounting control systems.
e. Giving ESOPs to the executives as incentives.

205. Which of the following is **not** an internal governance mechanism in the modern corporation?

a. Multileveled organizational structure .
b. Executive compensation.
c. Audit and cost control committees.
d. Ownership concentration.
e. Creditor governance covenants.

206. The means that the firm uses to understand its cost position and to identify the multiple means that might be used to facilitate the implementation of its business-level strategy is called

a. Its mission statement
b. Value chain analysis
c. The outsourcing decision tree
d. The Transaction cost chain
e. Either (b) or (d) above

207. When several resources are grouped together in a unique manner a firm can create a

a. Resource-based asset
b. Core competence
c. Competitive advantage
d. Either (a) or (b) above
e. All of the above.

208. Events occurring in the firm's external environment create conditions through which core competencies do all of the following except:

a. Stifle innovation
b. Sustain the firm's competitive advantage
c. Produce inertia
d. Become core rigidities
e. Either (a) or (d).

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209. The three factors that characterize difficult managerial decisions concerning resources, capabilities, and core competencies are

a. Complexity, uncertainty, and intraorganizational conflicts

b. Munificence, uncertainty, and interorganizational conflicts

c. Complexity, uncertainty, and interorganizational conflicts

d. Munificence, certainty, and intraorganizational conflicts

e. Inter as well as intra organizational conflicts and uncertainties.

210. Resources and capabilities lead to competitive advantage when they are

a. Well-managed

b. Valuable

c. Costly to imitate

d. Technically superior

e. (a), (c) and (d) only.

211. Which of the following is **not** an internal firm incentive to diversify?

a. An abundance of firm resources-'firm resources' or just 'resources' as given in the answer which one is correct.

b. Uncertain future cash flows.

c. Overall reduction in the firms risk.

d. Poor performance.

e. Cost minimization.

212. The more links among businesses; the more _________________ is the relatedness of the diversification.

a. Related

b. Linked

c. Constrained

d. Conjoined

e. Varied.

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Valuing Real Assets In The Presence Of Risk

213. A company has a beta (β) of 1.5.If the expected future cash flow of the portfolio is Rs. 12 million and the tangency portfolio has an expected return of 15%. The risk free rate of return is 10%. The present value of the future period cash flow is:

a. 10 million

b. 10.21million

c. 9.36 million

d. 9.31 million

e. 10.9 million.

214. The market value of the equity of Gamma ltd. is Rs.25 lakh. The expected annual pre-tax cash flows to the company is Rs.14.5 lakh with Rs.10 lakh of debt being employed at 9% coupon rate. The tax rate facing the company is 45%. What is the after tax cost of equity is:

a. 30%

b. 16%

c. 29.92%

d. 25.07%

e. 23.76%

215. The total value of Theta ltd. is Rs.100 lakh. The company has its total investments in all the projects using 40% equity and 60% debt. The debt carries an interest rate of 5% and the tax rate is 35%. The expected value of pre-tax cash flow is Rs.15 lakh. Which of the following is/are **correct**?

a. The after tax cost of debt is 3.25%.

b. The after-tax cost of equity is 19.5%.

c. The WACC is 9%.

d. Both (a) and (b) only.

e. Both (a) and (c) only.

216. The valuation of a financial asset is determined by

a. The present value of all the future cash flows associated with it

b. The current YTM on long term corporate bonds

c. Cost incurred for the preferred shareholders

d. The capital budgeting process

e. Only (a), (b) and (c) above.

217. The market required rate of return depends on

a. The present value of future cash flows

b. The yield to maturity

c. The markets perceived level of risk associated with the individual security

d. The valuation of the financial asset

e. The WACC.

218. Which of the following factors does **not** influence the investor's required rate of return?

a. The real required rate of return.

b. The inflation premium.

c. The risk premium.

d. The risk aversion factor.

e. (a), (b) and (c) but not (d).

219. The main problem with the capital budgeting process is

a. Determination of our position on the risk-return scale

b. Maximization of shareholders' wealth

c. Determination of the appropriate discount rate

d. Finding viable alternative investment opportunities

e. Approximation of the future cash flows.

220. The standard deviation

a. Is the square root of variance

b. It can be used to compare investments with the same expected return

c. It measures dispersion or variability around the mean or expected value

d. Both (a) and (c) only

e. (a), (b) and (c) only.

221. Which of the following are **untrue of the** coefficient of variation?

a. It eliminates the size difficulty resulting from standard deviation.

b. It measures the volatility of returns relative to that of the market.

c. It is calculated by dividing the standard deviation by the expected mean value.

d. The larger is the coefficient of variation, the greater is the risk

e. The lower it is, the lower is the risk level.

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222. Which of the following is **false** regarding beta?

a. It is widely used with portfolios of common stock.

b. It forms an important component of CAPM.

c. It is the measure of the volatility of returns relative to the expected value.

d. The higher the beta, the greater is the risk level.

e. Either (b) or (d) above.

223. Projects that increase the overall risk level of the firm

a. Will have a low standard deviation

b. Should be discounted at a rate higher than that of the cost of capital

c. Should be discounted at the firm's cost of capital

d. Should not be undertaken

e. Either (b) or (c) above.

224. The key to simulation analysis has been

a. Statistical analysis

b. The ability to classify investments according their risk classes

c. Risk adjusted interest rates

d. The development of the computer

e. All of (a), (b) and (c) but not (d).

225. Which of the following is **not** regarding the use of simulation techniques?

a. The computer randomly selects inputs from the probability distribution

b. Sensitivity analysis allows for "what if" questions

c. They generate a range of outcomes along with their standard deviations

d. It has limited acceptability in capital budgeting

e. (b) and (c) only.

226. A decision tree analysis

a. Should be the sole input for the decision making process

b. Is more accurate than simulation technique

c. Is a form of simulation analysis

d. Lays out the sequence of decisions and presents a graphical comparison

e. Should be used in conjunction with the simulation technique.

227. The portfolio effect is used to examine

a. The return on the portfolio

b. The risk of the portfolio

c. The impact of a given investment on the overall risk level

d. Either (a) or (b)

e. Either (a) or (c).

228. The efficient frontier represents

a. The difference between returns on investment

b. Optimal risk-return trade off

c. The correlation between profits and the portfolio effect

d. The correct investment for all firms to make

e. Both (b) and (c).

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229. The Capital Asset Pricing Model is a model for determining the equity rate of return based on the

a. The risky rate of return, the beta coefficient of the stock, and the return on the market leaders

b. The risk free rate of return, the beta coefficient, and the return on the market index

c. The risky rate of return, the alpha coefficient, and the return on the market leaders

d. The risk free rate of return, the beta coefficient, and the return on the market leaders

e. Call money marked rate of return.

230. A growth firm in a stable industry can normally absorb how much debt compared to a firm in a cyclical industry?

a. More debt.

b. Less debt.

c. Almost the same amount of debt.

d. Either (a) or (c).

e. Cannot be determined.

231. The cost of capital is best calculated with

a. Market value weights

b. Book value weights

c. Modigliani and Miller weights

d. (a) or (b) both

e. Cannot be calculated.

232. Regardless of the type of asset being acquired, the appropriate discount rate is

a. After-tax cost of debt

b. Required rate of return

c. WACC

d. Cost of equity capital

e. None of the above

233. As the firm requires more and more funds, the cost of each component of the capital structure may increase. These incremental changes are most correctly referred to as the:

a. Weighted Average Cost of Capital (WACC)

b. Marginal cost of capital

c. Cost of capital

d. Incremental cost of capital

e. Either (b) or (d).

234. According to the Capital Asset Pricing Model (CAPM), a well-diversified portfolio's rate of return is a function of

a. Unique risk

b. Reinvestment risk

c. Market risk

d. Unsystematic risk

e. None of the above.

235. Which statement is **not true** regarding the market portfolio?

a. It consists of all publicly traded financial assets.

b. It is the tangency point between the indifference curve and the Capital Market Line (CML).

c. All securities in the market portfolio are held in proportion to their market values.

d. It lies on the efficient frontier.

e. None of the above is true.

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236. According to the Capital Asset Pricing Model (CAPM) model, all fairly priced securities have

a. Positive betas

b. Positive alphas

c. Negative betas

d. Zero alphas.

e. Zero betas.

237. What is the expected return of a zero-beta security?

a. The risk-free rate.

b. Zero rate of return.

c. A negative rate of return.

d. The market rate of return.

e. Either (a) or (d).

238. In equilibrium, the marginal price of risk for a risky security must be

a. Less than the marginal price of risk for the market portfolio.

b. Greater than the marginal price of risk for the market portfolio.

c. Equal to the marginal price of risk for the market portfolio.

d. Adjusted by its level of non-systematic risk.

e. Either (c) or (d).

239. The market value of Blue Star Company's equity is Rs.15 lakh, and the market value of its risk-free debt is Rs.5 lakh. If the required rate of return on the equity is 20% and that on the debt is 8%, calculate the company's cost of capital. (Assume no taxes.)

a. 17%

b. 20%

c. 8.1%

d. 17.5%

e. Information insufficient to answer.

240. The beta of equity is 1.2. The debt-equity ratio of the company is 0.8. Calculate the beta of the assets of the firm. (Assume no taxes.)

a. 0.95

b. 0.48

c. 1.6

d. 0.67

e. 0.23

241. A project has an expected cash flow of Rs.300 in year 3. The risk-free rate is 5%, the market risk premium is 8% and the project's beta is1.25. Calculate the certainty equivalent cash flow for year 3.

a. Rs. 225.35

b. Rs. 197.25

c. Rs. 300

d. 338.46

e. None of the above

242. Which of the following is\are **true**?

i. The firm's cost of capital is the correct discount rate for any project undertaken by the company.

ii. Estimates of the company's cost of capital should be based on the beta of the firm's assets

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iii. Firms with cyclical revenues tend to have lower asset betas.

iv. Firms with high operating leverage tend to have higher asset betas.

v. Risky projects can be evaluated by discounting the expected cash flows at a risk-adjusted discount rate.

a. (i) (ii), (iii) only

b. (ii), (iv) and (v) only

c. (ii), (iii), (iv) and (v) only

d. Only (v).

e. (iv) and (v) only.

Real Options

243. Given the project cost of Rs.15 lakh, if the cash flows are evenly distributed over time and the estimated life of the project is 12 years, the annual cost of delay is

a. 8.33 %

b. 54.54%

c. 8%

d. 12%

e. Data insufficient.

244. The present value of the cash flows from the project is Rs.350 million. The initial investment needed to introduce the product is Rs.500 million. Variance of the underlying asset value is 0.05. The life of the patent is 20 years. Assume that the 20-year risk less rate of interest is 7%. Which of the following is/are **incorrect**?

a. The option is in the money.

b. The value of the option is Rs.51.02 million.

c. The dividend yield is 5%.

d. Both (b) and (c).

e. Only (b).

245. Which of the following is\are **correct**?

a. Equity can be viewed as an option because the equity investors have limited liability.

b. Equity investors will sometimes take bad projects (with negative NPV's) because they can add to the value of the firm.

c. The right to pursue the project will not be valuable if there is considerable uncertainty about the viability of the project.

d. The value of the project will increase as the volatility of the industry and the technology underlying it increases.

e. (a), (b) and (d) only.

246. The company has two issues of bonds outstanding, both with the same maturity and coupon rate, but with one difference one is callable and the other one is non-callable. The different between the two is:

i. The callable bonds will trade for a higher value than the non-callable bond

ii. The callable bonds will have a shorter duration than the non-callable bond

iii. The callable bond will have a higher yield than the non-callable bond

iv. The callable bond will be more sensitive to the interest rate changes, than the non-callable bonds.

v. As the interest rates increase, the values of the two bonds converge, and vice versa.

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Which of the following statement holds good?

a. Both (i) and (iv)

b. (ii), (iii) and (v) only

c. (i), (ii) and (iv), only

d. Both (ii) and (v)

e. (iii) and (v) only

247. The option to include complementary products and services to the existing product portfolio, when the market condition improves, can be dealt under which of the real option model?

a. Investment timing option.

b. Growth option.

c. Rainbow option.

d. Compound option.

e. Flexibility option.

248. Which of the following is the risk neutral approach of valuing real options?

a. Sensitivity analysis.

b. Decision tree approach.

c. Simulation analysis.

d. Discounted –cash flow (DCF) model.

e. Black-Scholes model.

249. Which of the following is **not** a kind of real option?

a. Abandonment option.

b. Call option.

c. Growth option.

d. Flexibility option.

e. Rainbow option.

250. Which of the following avoid double 'negative' **correct**?

a. The owner of the financial option cannot affect the value of the underlying asset, which is not so in case of real options.

b. As the exercise price of the option increases the value of the call option rises and the value of put falls.

c. The value of the option decreases with increase in the time to expiration.

d. Only (a) of the above.

e. Both (b) and (c) of the above.

251. Which of the following holds good with respect to the valuation of the real option?

a. The growth option is like a call option, while the abandonment option is a put option on the project.

b. One problem with using the decision tree analysis is the determination of appropriate rate for discounting the cash flows.

c. The decision tree approach coupled with the sensitivity analysis provides a good approach to valuing real options.

d. Only (a) and (c).

e. All of (a), (b), and (c).

252. An asset with future payoffs that is dependent on the result of an uncertain development is called :

a. An option contract

b. A convertible asset

c. A contingent claim

d. A riskless asset

e. A risky asset.

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253. A clause in an automobile lease contract giving the customer the option to purchase the car at a fixed price at the end of the lease is an example of

a. A European-type option

b. An embedded option

c. A call option

d. (a) , (b) only

e. (a) and (c).

254. Using the put-call parity relation to express the difference between the call and put premiums, the call will have a higher price than the put if

a. The underlying stock price equals the present value of option exercise price discounted at the risk-free rate

b. The underlying stock price is less than the present value of the stock price at expiration price discounted at the risk-free rate

c. The underlying stock price is less than the present value of option exercise price discounted at the risk-free rate

d. The underlying stock price is greater than the present value of option exercise price discounted at the risk-free rate.

e. Exercise price is greater than the stock price.

255. The difference between the current market value of an option and its intrinsic value is its

a. Contingent value

b. In-the-money value

c. Option value

d. Time value

e. Out of the-money value.

256. Rejecting an investment today forever might not be a good choice because

a. The size of the firm will decline

b. There are always errors in the estimation of the NPVs

c. The option value is negative

d. The company is foregoing future rights or option to the investment

e. May lead to economies of scale.

257. The opportunity to defer investing to a later date may have value because

a. The cost of capital may decline in the near future

b. Uncertainty may be reduced in the future

c. Investment costs fluctuate in time

d. Market conditions may change and increase the NPV of the project

e. A favorable change in the governmental policies is expected.

258. The option to build flexibility into production facilities

a. Typically is more expensive

b. Must consider the NPV of alternative uses

c. May be valuable by allowing the rearrangement to produce higher profitable goods

d. (b) and (c) only

e. All of (a), (b) and (c) above.

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259. Which of the following conditions might lead a financial manager to delay a positive-NPV investment project? Assume project NPV if undertaken immediately is held constant.

a. Investment required for the project increases.

b. The first cash inflow generated by the project is lower than previously thought.

c. Uncertainty about future project value increases.

d. The risk-free interest rate falls.

e. The life span of the project might have changed drastically.

260. In terms of a real option, the cash flows from the project play the same role as

a. The variance

b. The dividends

c. The exercise price

d. The stock price

e. Either (c) or (d).

261. A rational manager may be reluctant to commit to a positive Net Present Value project when:

a. The value of the option to wait is high

b. The opportunity cost of capital is high

c. The exercise price is high

d. The value of the option to abandon is high

e. The pay back period is very long.

262. Which of the following statement, best defines an option on real assets?

a. An investment in real estate.

b. The opportunity to invest in new production capacity.

c. The right but not the obligation to exchange the ownership of one set of cash flows for another.

d. The obligation but not the right to exchange the ownership of one set of cash flow for another.

e. Both (a) and (d) above.

263. Which of the following best describes the value principle underlying investments under uncertainty?

a. Value is to the best extent possible derived from the financial market.

b. Real option analysis is primarily concerned with payback time.

c. The value of a project is the expected value of all project cash flows.

d. Value of project is the value of other comparable projects.

e. Value cannot be determined till the time project is terminated.

264. Which phrase best describes the features in a real option analysis that is not addressed by a conventional DCF analysis?

a. Real option analysis incorporates the impact of uncertainty on cash flows and considers the timing and flexibility of decisions.

b. The project value in a DCF analysis is certain while in a real option analysis it is only an estimate.

c. A DCF analysis handles multiple future periods while a real option analysis can only handle one period.

d. Real options is an unrealistic measure.

e. The project value derived by real option is completely distorted.

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265. The value of the abandonment option of a development project can best be described as being?

a. Low.

b. Negligible.

c. High.

d. Nil.

e. Cannot be determined.

266. What impact does the number of project management decisions have on the project value?

a. The value increases as the number of decisions increases.

b. The value decreases as the number of decisions increases.

c. The number of decisions has no impact on the project value.

d. The effect on the project is negligible

e. Data not sufficient.

267. Which of the following is **not** an example of real options?

a. Making an investment to purchase a forklift for 15 years with the ability to return the forklift after 5 years.

b. Opening a new bakery in a retail mall with the option to extend the lease after one year.

c. Purchasing a new juice machine for 10 years period with an estimated salvage value of $500.

d. A croissant manufacturer buying a new croissant machine that also has the ability to produce danishes, apple turnovers, and cream puffs., though none of these are currently produced by the manufacturer.

e. Buying a wooden furniture worth Rs. 25000.

268. Which of the following is/are **true**?

i. The value of flexibility in manufacturing and service processes can be modeled using option pricing theory.

ii The stock of a bankrupt company can be viewed as a put option.

iii. As the stock price rises, the value of a put option falls.

a. (iii) only

b. (i) and (ii) only

c. (i) and (iii) only

d. (ii) and (iii) only

e. All of (i), (ii), and (iii) above.

Capital Structure

269. Sri Limited has an EBIT of Rs.12,00,000. Interest expenses amount to Rs.1,20,000 while the principal payments are Rs.2,00,000 per annum. The company tax rate is 40%. Given this information, the fixed charges coverage ratio for the company will be

a. 1.64

b. 1.84

c. 2.04

d. 2.64

e. 2.84.

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270. Which of the following statement(s) is **true**?

a. Risk that can be eliminated by diversification is called specific risk.

b. Risk that cannot be avoided, regardless of how much you diversify is known as market risk.

c. The variability of earnings before interest and taxes is referred to as business risk.

d. Both (b) and (c) above.

e. All of (a), (b) and (c) above.

271. Which of the following factors has an effect on business risk?

a. Demand for products manufactured by the firm.

b. Volatility in prices of the products manufactured by the firm.

c. Variability in input prices.

d. Both (b) and (c) above.

e. All of (a), (b) and (c) above.

272. Which of the following is **not** a feature of debt finance?

a. Dilution of control.

b. Low cost.

c. Financial risk.

d. Both (b) and (c) above.

e. None of the above.

273. Which of the following is a direct cost of bankruptcy?

a. Out of pocket expenses that arise in the course of going through a bankruptcy.

b. Shortfall in value arising from economic inefficiencies in operating a company when it is about to go bankrupt.

c. Fees and other compensation paid to third parties.

d. Both (a) and (c) above.

e. All of (a), (b) and (c) above.

274. Which of the following is **false** as per the MM approach?

a. The value of the firm is computed by discounting the future stream of operating income at the capitalization rate for that specific risk class.

b. Miller and Modigliani have assumed that all investors do not have homogenous expectations.

c. The expected yield on common stock is equal to the sum of the capitalization rate for a pure equity stream of that specific class and the premium based on the financial risk.

d. Both (a) and (c) above.

e. All of (a), (b) and (c) above.

275. Which of the following statements is **not true**?

a. According to Miller and Modigliani, the value of a levered firm cannot be more than that of an unlevered firm.

b. Miller and Modigliani advocate that leverage has no significance in a perfect capital market.

c. Cost of personal leverage is always lower than the cost of corporate leverage.

d. Personal leverage is governed by the principles of unlimited liability.

e. Arbitrage process will continue until the market reaches its equilibrium.

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276. Which of the following statements are **true**?

- a. The value of a levered firm is more than the value of an unlevered firm because of the presence of tax shield.
- b. The value of tax shield is lowered due to uncertainty in its utilization.
- c. The presence of personal taxes does not affect the value of the tax shield in any way.
- d. Both (a) and (b) above.
- e. All of (a), (b) and (c) above.

277. Identify the **correct** statement?

- a. The ROE of a levered firm is higher than the ROE of an unlevered firm when the ROI is lower than the cost of debt.
- b. The ROE of an unlevered firm is higher than the ROE of a levered firm, when the ROI is lower than the cost of debt.
- c. The ROE of a levered firm is higher than the ROE of an unlevered firm when the ROI is higher than the cost of debt.
- d. The ROE of an unlevered firm is higher than the ROE of a levered firm when the ROI is higher than the cost of debt.
- e. Both (b) and (c) above.

278. Identify the **false** statement?

- a. Maturity mismatch may introduce elements of risks like interest rate movements and market receptivity at the time of refinancing.
- b. A firm with a high capital intensity, relies more on long-term debt and equity.
- c. In a non-seasonal and non-cyclical business, investments in current assets are usually financed by short-term debt.
- d. The capital structure of a firm should be built conservatively if chances of obsolescence is high.
- e. Firms vulnerable to takeover place an excessive reliance on debt and retained earnings.

279. The Modigliani-Miller argument is that

- a. The value of the levered firm will be more than that of the unlevered firm.
- b. The value of the unlevered firm will be more than the levered firm.
- c. Either (a) or (b) may be true depending on other circumstances.
- d. Levered firms cannot enjoy a premium over unlevered firms as the investors will abolish the difference through personal leverage.
- e. Effects of leverage of the firm cannot be nullified through personal leverage.

280. Business risk refers to

- a. Variability of sales.
- b. Variability of the market value of the firm.
- c. Variability of cost of raw materials.
- d. Variability of the selling price of the products.
- e. All of (a), (c) and (d) above.

281. Which of the following statements is **true**?

- a. Operating leverage measures the sensitivity of EBT to changes in the quantity produced and sold.
- b. Operating leverage measures the sensitivity of PAT to changes in quantity produced and sold.
- c. Operating leverage measures the sensitivity of PBDT to changes in quantity produced and sold.
- d. Operating leverage measures the sensitivity of EBIT to changes in quantity produced and sold.
- e. Operating leverage measures the responsiveness of EPS to changes in EBIT.

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282. Degree of operating leverage

a. Is positive below the break even point.
b. Which is negative indicates a sales quantity lower than the break even sales.
c. Is undefined at the break even point.
d. Both (a) and (b) above.
e. Both (b) and (c) above.

283. Total leverage measures the relationship between

a. EBIT and sales
b. EPS and EBIT
c. Sales and EPS
d. PAT and sales
e. PBDT and sales.

284. The following data is available for M/s Realvalue Limited

Unit selling price	= Rs.150
Unit variable cost	= Rs.85
Total fixed costs	= Rs.2,50,000

When the output is 7000 units, the degree of operating leverage is

a. 1.5
b. 1.85
c. 2.20
d. 2.22
e. 2.3.

285. Sangeet Limited has a net operating income of Rs.75 lakh. The firm employs Rs.130 lakh of debt carrying 14% interest. The equity capitalization rate applicable is 16.5 percent. The market value of the firm under the net income approach is

a. Rs.274.24 lakh
b. Rs.374.24 lakh
c. Rs.474.24 lakh
d. Rs.574.24 lakh
e. Rs.674.24 lakh.

286. The following information is available for Rahul Limited.

Net operating income	Rs.60 lakh
Interest on debt	Rs.15 lakh
Cost of equity	17%
Cost of debt	13%

The average cost of capital for the firm is

a. 14%
b. 14.7%
c. 15.78%
d. 16.1%
e. 16.8%.

287. If t_c = 35 percent, t_{ps} = 12 percent and t_{pd} = 35 percent, the tax advantage per rupee of debt will be

a. 0.10 rupee
b. 0.11 rupee
c. 0.12 rupee
d. 0.125 rupee
e. 0.13 rupee.

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288. The following information is given about M/s Deepak Fertilizers Limited

Depreciation	Rs.20 lakh
EBIT	Rs.150 lakh
Interest on debt	Rs.15 lakh
Tax rate	35%
Loan repayment installment	Rs.20 lakh

The cash flow coverage ratio for this firm is

a. 2.17

b. 3.17

c. 3.71

d. 4.07

e. 7.01.

289. Suman Limited has an average cost of debt of 8 percent. The financial leverage ratio is 0.5 and the ROI is 14 percent. The ROE for the company if its tax rate is 40% is

a. 10%

b. 10.1%

c. 10.2%

d. 10.25%

e. 10.3%.

290. Shekar Limited has a target ROE of 17 percent. The financial leverage for the firm is 0.6 and its tax rate is 35 percent. If the average cost of debt is 8.5% what ROI should the firm earn to achieve the desired ROE.

a. 18%

b. 18.5%

c. 19%

d. 19.53%

e. 20%.

291. Which of the following is/are **correct**?

a. Value of the firm and cost of capital are directly related.

b. Value of the firm and cost of capital are inversely related.

c. The claim of preference shareholders is prior to that of equity shareholders.

d. Both (a) and (c) above.

e. Both (b) and (c) above.

292. Which of the following statements is **true**?

a. Equity shareholders face both financial risk as well as business risk.

b. The only risk faced by equity shareholders is financial risk.

c. Financial risk represents the risk faced by the debt holders of the firm.

d. A firm with a high degree of business risk can assume high financial risk.

e. Both (c) and (d) above.

293. According to MM analysis

a. Personal leverage and corporate leverage are perfect substitutes.

b. Personal leverage and corporate leverage are not perfect substitutes.

c. Arbitrage process ceases once the market attains equilibrium.

d. Both (a) and (c) above.

e. Both (b) and (c) above.

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294. A coverage ratio of 1.5 means that EBIT can fall by only _____ percent before earnings coverage is insufficient to service the debt

a. 21%

b. 25%

c. 33.33%

d. 35%

e. 37%.

295. The ultimate objective of any company is

a. Profit maximization

b. Wealth maximization

c. Sales maximization

d. Improving market share

e. Improving its reputation.

296. Ravileela Limited has taken a term loan of Rs.25 lakhs at an interest rate of 18% p.a. The cost of the term loan assuming that the tax rate is 35% is

a. 5.87%

b. 9.27%

c. 11.7%

d. 15%

e. 18%.

297. If the market value of debt of a firm is Rs.80 lakh, and that of equity is Rs.120 lakh and the costs of equity and debt are 17% and 15% respectively, the net operating income of the firm in case of a 100% dividend pay out and no taxes is

a. Rs.22.4 lakh

b. Rs.30.4 lakh

c. Rs.32.4 lakh

d. Rs.34.4 lakh

e. Rs.36.4 lakh.

298. Which of the following best describes a firm's cost of capital?

a. It is the weighted arithmetic average of the cost of various sources of long-term finance used by it.

b. The rate of return the firm must earn on its investments in order to satisfy the expectations of investors who provide long-term funds to it.

c. It is the weighted arithmetic average of the cost of various sources of long-term finance and short-term finance used by it.

d. The interest paid on its long-term liabilities

e. Both (a) and (b) above.

299. Which of the following is **true** for agency costs?

a. Separation of control and management gives rise to agency costs.

b. The hierarchical monitoring structure tends to reduce the agency costs within the firm.

c. The major source of agency costs is the alignment of the interests of shareholders and management.

d. The active market for corporate control is a good internal device to check agency costs.

e. The scope for agency cost increases in direct proportion to the stake of managers in a firm.

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300. Which of the following statements is **true**?

a. Retained earnings represent the profits ploughed back into the business.

b. Retained earnings are given lesser importance when a firm follows a residual dividend policy.

c. Retained earnings represent the extent to which the firm has invested in liquid assets out of its profits.

d. Retained earnings is the only principal source of finance for growing firms.

e. Retained earnings cannot be utilized by a firm for buy-back of its shares.

301. Which of the following long-term sources of finance puts maximum restraint on managerial freedom?

a. Retained earnings.

b. Equity capital.

c. Preference capital.

d. Debenture capital.

e. Term loans.

302. Which of the following correctly describes the relationship between EBIT and EPS?

a. $\text{EBIT} = \dfrac{(\text{EPS} - \text{I})(1-\text{t})}{\text{n}}$

b. $\text{EBIT} = \dfrac{\text{n.EPS}}{(1-\text{t})} + \text{I}$

c. $\text{EPS} = \dfrac{(\text{EBIT} - \text{I})(1-\text{t})}{\text{n}}$

d. $\text{EPS} = \dfrac{(\text{EBIT} - \text{I})}{\text{n}(1-\text{t})}$

e. $\dfrac{\text{EBIT}}{\text{EPS}} = \dfrac{\text{n}}{(1-\text{t})}$

303. Suppose EBIT is 56, tax rate is 30% and depreciation is 9.7, then gross cash flow and Net Operating Profit Less Adjusted Taxes (NOPLAT) will be

a. 48.9 and 39.2 respectively

b. 39.2 and 48.9 respectively

c. 29.5 and 39.2 respectively

d. 39.2 and 29.5 respectively

e. 65.7 and 45.99 respectively.

304. Suppose the previous year's and current year's Net Operating Profit Less Adjusted Taxes (NOPLAT) figures are Rs.78.6 crore and 90.5 crore respectively. The rate of return on new investment is 18%. The new investment is equal to

a. Rs.2.142 crore

b. Rs.66.11 crore

c. Rs.436.67 crore

d. Rs.502.78 crore

e. Cannot be calculated with the given data.

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305. The cost of debt remains more or less constant up to a certain degree of leverage but rises thereafter at an increasing rate. This proposition is based on

a. Net income approach on capital structure

b. Net operating income approach on capital structure

c. Traditional position/Traditional approach on capital structure

d. Modigliani and Miller Approach

e. Merton Miller's Argument.

306. A firm is trying to arrive at an ideal capital structure using ROI-ROE analysis, for its new investments. It should, to maximize its Return on Equity (ROE)

a. Leverage as much as possible, if its return on investment (ROI) is less than average cost of debt

b. Leverage as much as possible, as long as its ROI is equal to the average cost of debt

c. Leverage as much as possible, if return on its investments is greater than average cost of debt

d. Be indifferent to leverage as long as return on its investments is more than the average cost of debt as this will automatically maximize ROE

e. Be indifferent to leverage as long as ROI is less than the average cost of capital as this will automatically maximize ROE.

307. Which of the following is **true** regarding sound capital structure of a company?

a. Minimum use of leverage at minimum cost.

b. Use of debt should be avoided as it adds to financial risk of the company.

c. The capital structure should not change over a period of time.

d. The capital structure should be determined within the debt capacity of the company and this capacity should not be exceeded.

e. The risk of loss of control of the company due to capital structure is a major concern in a closely held company.

308. Which of the following concepts explains the relationship between shareholders and managers?

a. Valuation

b. Value based management

c. Agency consideration

d. Miller-Modigliani

e. Shareholder wealth maximization.

309. Which of the following is **not** an internal device for containing agency costs?

a. Separation of management and control.

b. Linking managerial compensation to shareholder returns.

c. Development of a market for corporate control.

d. Establishment of systems for performance monitoring and responsibility accounting.

e. None of the above.

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310. According to the net income approach to the capital structure, the implications of increase in leverage are

a. The cost of debt remains constant while cost of equity and overall capitalization rate decrease

b. The cost of debt increases while cost of equity and over-all capitalization rate remain constant

c. The cost of debt and overall capitalization rate increase while cost of equity remains constant

d. The overall capitalization rate decreases while cost of equity and cost of debt remain constant

e. None of the above.

311. According to proposition II of Modigliani and Miller, if the overall capitalization rate of a firm is 12%, cost of debt is 10% and debt-equity ratio is 0.5, the expected yield on the equity of the firm should be

a. 12%

b. 13%

c. 14%

d. 22%

e. None of the above.

312. According to Merton Miller's argument, which of the following statements is/are **true**?

i. If the corporate tax rate exceeds the marginal personal tax rate on debt income, companies will use only debt capital.

ii. Companies will always prefer debt capital irrespective of the levels of corporate and personal taxation.

iii. Companies use only equity capital when there are no personal taxes.

a. Only (i) above

b. Only (ii) above

c. Only (iii) above

d. Both (i) and (iii) above

e. None of the above.

313. The earnings of a company for the year ending March, 2000 are Rs.10 lakh and the equity support required for financing its investments is Rs.5 lakh. If the number of equity shares of the company is Rs. 2 lakh, calculate the dividend that can be paid according to the Residual Dividend Approach.

a. Rs.7.50

b. Rs.5.00

c. Rs.2.50

d. Rs.2.00

e. None of the above.

314. All other factors remaining constant, based on the relationship between Return on Investment (ROI) and Return on Equity (ROE), the ROE should

a. Increase with an increase in debt

b. Increase with an increase in ROI

c. Increase with an increase in pre-tax cost of debt

d. Increase with an increase in tax rate

e. Both (a) and (b) above.

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315. The influence of ROI and financial leverage on ROE is given as

a. ROI = [ROE + (RoI – r)D/E . (1– t)]

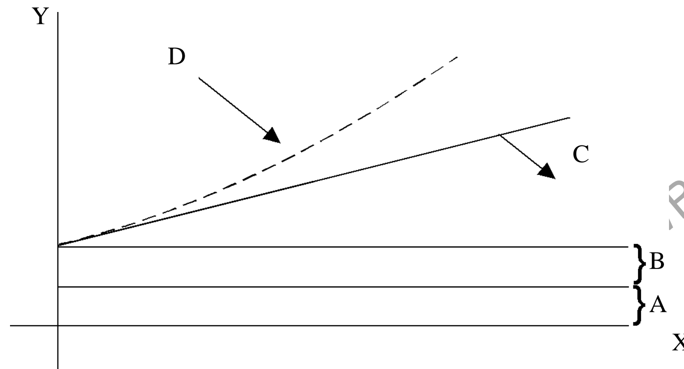
b. ROE = ROI + [(RoI – r)D/E(1 – t)]

c. ROE = [ROI + (RoI – r)D/E](1– t)]

d. ROI = ROE + [(RoI – r)D/E(1– t)]

e. None of the above.

316. The following figure shows the relationship between the required rate of return and the leverage ratio:



Which of the following is **true**?

a. Leverage is represented on the Y- axis.

b. 'A' denotes the risk-free rate of interest.

b. B denotes the premium for financial risk.

d. Line C denotes increase in value of the firm with increased leverage.

e. Line D denotes increase in cost of equity with increased leverage in the presence of bankruptcy costs.

317. Suppose ROE = 18%, total asset turnover ratio is 2.0 and total asset to equity is 2, then net profit margin will be equal to

a. 36.00 percent

b. 18.00 percent

c. 9.00 percent

d. 4.50 percent

e. Cannot be determined.

318. A company, which in the tax bracket of 45% is considering borrowing money at 10%. Which of the following is\are **true**?

a. The after-tax interest rate on debt is 5.5%.

b. The after-tax interest rate if only half of the interest expense is allowed as a tax deduction, is 2.75%.

c. The after-tax interest rate if only half of the interest expense is allowed as a tax deduction, is 2.25%.

d. Both (a) and (b).

e. Both (a) and (c) above.

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319. Based on your understanding of free-cash flow hypothesis, which of the following is\are **incorrect**?

a. A firm with low growth prospects, poor projects, high leverage and good earnings has high likelihood of being taken over.

b. A firm with low-growth prospects, poor projects, low leverage and good earnings has very high prospects of being taken over.

c. A firm with high-growth prospects, good projects, low leverage and high earnings has moderate chances of being taken over.

d. A firm with high growth prospects, good projects, high leverage and low earnings has fairly low chances of being taken over.

e. Both (c) and (d).

320. The relationship between the ROE and ROI is expressed as

a. ROE = {ROI+(ROI–k_d) D\E}(1–t)

b. ROI = {ROE+(ROE–k_d) D\E}(1–t)

c. The ROE of the unleveled firm is higher than the ROE of a leveraged firm when ROI is less than the cost of capital,

d. Even if ROI = k_d, ROE would be different at different levels of leverage,

e Both (a) and (c) only.

321. Which of the following statements is **correct**?

a. Both capital budgeting and strategic planning are bottom-up processes.

b. Both capital budgeting and strategic planning are top down processes.

c. Capital budgeting is a top-down process, while strategic planning is a bottom-up process.

d. Strategic planning is a top-down process while capital budgeting is a bottom-up process.

e. It depends upon the policies of the company whether it is a top down process or a bottom up exercise.

322. Which of the following capital expenditure might not feature in a capital budget?

a. Purchase of a new plant.

b. Purchase of a new machine.

c. Investment in information technology.

d. Both (a) and (b) only.

e. Both (c) and (d) only.

323. A firm has an average investment of Rs.1000 during the year. During the same time the firm has an after tax earnings of Rs.120. If the cost of capital is 10%, what is the net return on investment for the company?

a. 10%.

b. 12%.

c. 2%.

d. 8%.

e. 8.5%.

324. Which consulting firm first implemented and popularized Economic Value Added (EVA)?

a. Stern-Stewart.

b. Anderson Counting.

c. McKinsey and Company.

d. Ernst and Young.

e. Lehman brothers.

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325. Which of the following is\are not **true**?

a. Economic Income = cash flow + change in PV.

b. EVA is used to measure NPV.

c. The annual capital budget contains a list of proposed new projects and other projects from earlier years that are still incomplete.

d. The annual capital budget contains a list of proposed new projects for the coming year only.

e. (a) , (b) and (c) but not (d).

326. The following are disadvantages of using EVA as a measure of performance except:

a. EVA does not measure present value.

b. EVA rewards taking project with quick paybacks and penalizes taking projects with longer payback periods.

c. EVA is difficult to apply for start up ventures.

d. EVA reduces intensive monitoring by top management

e. (a), (b) and (c) only.

327. Rakesh Mohan Brothers is evaluating two independent capital budgeting projects (A and B) by making use of the risk-adjusted discount rate method of project analysis. Projects A and B have internal rates of return of 16 percent and 12 percent, respectively. The RADR appropriate to Project A is 18 percent, while Project B's RADR is 10 percent. The company's overall WACC is 14 percent. Rakesh Mohan Brothers should __

a. Accept Project A and accept Project B

b. Accept Project A and reject Project B

c. Reject Project A and accept Project B

d. Reject Project A and reject Project B

e. Data is insufficient to answer the question.

328. Theta Ltd. is a debtless company with assets of Rs. 30 lakh and EBIT of Rs. 16 lakh. If the firm's tax rate is 34%, calculate its after-tax cash flow.

a. 2.40 lakh

b. 3.30 lakh

c. 3.96 lakh

d. 10.56 lakh

e. 10.42 lakh.

329. If companies are unsure of making taxable profits in the future

a. Safe, profitable companies will tend to issue more debt than risky, unprofitable companies

b. The total amount of debt issued by the firm will be higher than that predicted by Miller's theory of debt and taxes.

c. The equilibrium interest rate on corporate debt will be higher than that hypothesised by Merton Miller

d. Both (a) and (b)

e. Both (a) and (c).

330. The chance of bankruptcy is inversely related to the value of the firm because:

a. Increased bankruptcy risk lowers firm value

b. Reorganization is costless but risk is not

c. A bankruptcy has real costs associated with it

d. Value enhancing strategies can no longer be used

e. Loss of interest and depreciation tax shield to the firm.

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331. Which of the following is the possible consequence of financial distress?

a. Debt holders, who might get only a part of their money back, are likely to want the company to take more risks.

b. Equity investors might want the company to cut its dividend payments to conserve cash.

c. Equity investors would like the firm to move toward riskier business lines.

d. Managers might like to go in for riskier projects.

e. Equity investors would like the firm to settle up with creditors as fast as possible.

332. The trade-off theory of capital structure predicts that

a. Unprofitable firms should borrow more than profitable ones

b. Safe firms should borrow more than risky ones

c. Fast growing firms should borrow more than mature firms

d. Highly profitable start-ups should employ high levels of leverage

e. Increasing leverage leads to an increase in the value of the firm.

333. According to the pecking order theory of capital structure

a. If two firms are equally profitable, the more rapidly growing firm will borrow more, other things held constant

b. Firms prefer equity to debt financing

c. Firms prefer debt to equity financing

d. Risky firms will borrow less

e. Risky firms will borrow more.

334. Financial slack refers to

a. Cash and marketable securities and readily saleable real assets

b. Ready access to the debt markets

c. Ready access to the equity markets

d. Both (a), and (c) only

e. Both (b) and (c).

335. Which of the following is or are **true**?

a. The tax incentives to issue debt are highest for profitable companies, which are sure to pay taxes in the future.

b. The corporate tax shield on interest payments is worth more to some firms than to others.

c. Bankruptcy not only has direct costs but also indirect costs.

d. Both (a) and (c) only.

e. Both (b) and (d).

336. A significant assumption of the net operating income is that

a. Debt and equity levels do not change

b. Dividends increase at a constant rate

c. k_o remains constant regardless of changes in leverage

d. Interest expense and taxes are included in the calculation

e. k_o decreases up to a certain point of time, and then increases at an increasing rate, with increasing levels of leverage.

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337. The traditional approach towards the valuation of a company assumes that

a. The overall capitalization rate holds constant with changes in financial leverage

b. There is an optimum capital structure

c. Total risk is not affected by changes in the capital structure

d. Markets are perfect

e. Investors are rational.

338. Two firms that are identical except for their capital structure and are selling in the market at different values. According to M&M

a. One will be at greater risk of bankruptcy

b. The firm with greater financial leverage will have the higher value

c. This proves that markets cannot be efficient

d. This will not continue because arbitrage will eventually cause the firms to sell at the same value

e. Both (b) and (d).

339. What is the value of the tax shield if the value of the firm is Rs.5 million, its value if unleveled would be Rs.4.78 million, and the present value of bankruptcy and agency costs is Rs.360,000?

a. Rs.140,000.

b. Rs.220,000.

c. Rs.360,000.

d. Rs.580,000.

e. None of the above

340. As pr the concept of financial signaling, management behavior results in new debt issues being regarded as "____ news" by investors.

a. Good

b. Bad

c. Risk-aggressive

d. Non-event

e. Risk-neutral.

341. The cost of capital for a firm — when we allow for taxes, bankruptcy, and agency costs

a. Remains constant with increasing levels of financial leverage

b. First declines and then ultimately rises with increasing levels of financial leverage

c. Increases with increasing levels of financial leverage

d. Decreases with increasing levels of financial leverage

e. Either (b) or (c).

342. If a firm has a DOL of 5 at Q units, this means that if:

a. Sales rise by 5%, EBIT will rise by 5%

b. Sales rise by 1%, EBIT will rise by 1%

c. Sales rise by 5%, EBIT will fall by 25%

d. Sales rise by 1%, EBIT will rise by 5%

e. Sales rise by 5%, EBIT will rise by 1%.

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343. Which of the following can be used as a quantitative measure of relative "financial risk"?

a. Coefficient of variation of earnings per share (CV_{EPS})

b. Coefficient of variation of operating income (CV_{EBIT})

c. ($CV_{EPS} - CV_{EBIT}$)

d. ($CV_{EPS} + CV_{EBIT}$)

e. ($CV_{EPS} \pm CV_{EBIT}$).

344. The further a firm operates above its operating break-even point, the closer its degree of operating leverage (DOL) measure approaches _____

a. Minus one

b. Zero

c. One

d. Infinity

e. Either infinity or one, depends.

345. Which of the following best describes the situation in which a firm is having problem meeting its financial obligations?

a. Business risk.

b. Legal bankruptcy.

c. Technical bankruptcy.

d. Financial distress.

e. Financial risk.

346. Which of the following best describes when the value of a firm's assets equals the value of its debt, i.e. the firm's equity has no value?

a. Liquidation.

b. Default.

c. Technical insolvency.

d. Legal bankruptcy.

e. Economic bankruptcy.

347. A company has a WACC of 18 %, a cost of debt of 16% and a cost of equity of 22%. If there is an increase debt-to-equity ratio to 4 : 1, what will be the change in its cost of capital? (Ignore taxes).

a. It will remain at 22%.

b. It will change to 44%.

c. It will change to 17.29%.

d. It will change to 16%.

e. It will change to 20%.

Industry Analysis, Financial Policies and Strategies

348. Which of the following actions is likely to reduce agency conflicts between stockholders and managers?

a. Paying managers a large fixed salary.

b. Increasing the threat of corporate takeover.

c. Placing restrictive covenants in debt agreements.

d. Statements (a) and (c) are correct.

e. Statements (b) and (c) are correct.

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349. Which of the following actions are likely to reduce the agency problem between stockholders and managers?

a. Government passes a law that severely restricts hostile takeovers.

b. A manager receives a lower salary but receives additional shares of the company's stock.

c. The board of directors has become more vigilant in its oversight of the company's management.

d. Statements (b) and (c) are correct.

e. Statements (a) and (c) are correct.

350. Which of the following mechanisms is used to motivate managers to act in the interest of shareholders?

a. Bond covenants.

b. The threat of a takeover.

c. Pressure from the board of directors.

d. Statements (a) and (b) are correct.

e. Statements (b) and (c) are correct.

351. Which of the following is likely to encourage a firm's managers to make decisions that are in the best interest of shareholders?

a. Executive compensation comes primarily in the form of stock options.

b. The state legislature recently passed a law that makes it more difficult to successfully complete a hostile takeover.

c. Institutional investors such as mutual funds and pension funds hold large amounts of the firm's stock.

d. Statements (a) and (b) are correct.

e. Statements (a) and c) are correct.

352. Separation of ownership and control is a problem especially common for

a. Small, privately held corporations

b. Non-profit businesses

c. Large, publicly held corporations

d. Proprietorships

e. Limited partnerships.

353. In terms of increasing risk to the investor, the proper ranking would be

a. Common stock, preferred stock, secured debt

b. Long-term government debt, subordinated debt, common stock

c. Long-term government debt, secured debt, preferred stock

d. Secured debt, common stock, preferred stock

e. Subordinated debt, preferred stock and common stock.

354. In terms of decreasing return to the investor, the proper ranking would be

a. Common stock, long-term government debt, preferred stock

b. Long-term government debt, common stock, preferred stock

c. Preferred stock, common stock, secured debt

d. Common stock, secured debt, treasury bills

e. Common stock, long-term government debt, preferred stock.

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355. A _________ is a merger between firms operating at different but related levels in the production and marketing of a product.

a. Conglomerate merger

b. Cooperative

c. Joint venture

d. Vertical merger

e. Horizontal merger.

356. The person who assumes full co-ownership of a business, including unlimited liability is a

a. sole proprietor

b. stockholder

c. shareholder

d. limited partner

e. general partner.

357. Pepsi Co was at one time involved solely in the soft-drink industry. Later, however, it decided to pursue a diversification strategy and enter the area of fast food. Part of this plan was to purchase companies such as Tack Bell, Pizza Hut, and Kentucky Fried Chicken. To implement this strategy, PepsiCo adopted several small-scale short range plans that gave it flexibility and quicker feedback. Such plans, which are narrow in scope and are developed to achieve the overall strategy, are known as

a. Policies

b. Standard operating procedures

c. Mission objectives

d. Intermediate strategies

e. Tactical plans.

358. State which of the following is/are **incorrect**?

i. The goal of shareholder wealth maximization implies that managerial decisions maximize only the current quarter's expected profits of the firm.

ii. An example of an agency problem is a store manager, who avoids taking a risk, so that he cannot be blamed for making a bad decision.

iii. Decisions that do not affect the amount of revenues and costs, but change the timing of receipts and disbursement will not affect the value of the firm.

iv. The amount of profits is entirely under the control of the manager.

a. (ii) only

b. (i) and (iii) only

c. (ii) and (iii) only

d. (i) and (iv) only

e. (i), (iii) and (iv) only.

359. The Russian Republic has continued its sale of formerly state-run enterprises. When a steel factory is sold, the value should be based:

a. Mostly on the past output levels assigned to it by central planners

b. Primarily on the future earning potential in a competitive economy

c. On the cost of the buildings, adjusted by appropriate depreciation measures

d. In comparing the facilities with equivalent facilities in the United States

e. Both (a) and (b).

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360. The agency problem shows up in many different situations within a firm. Which is **not** a good example of this problem?

a. Firm managers sometime want to relax on the job.

b. Diversified stockholders are more eager to accept risks than are firm managers.

c. Firm managers receive cash bonuses based on the performance of the firm.

d. Employees sometime take items from the store in which they work.

e. Both (a) and (d) above.

361. Executive compensation should

a. Be an increasing function of the firm's expenses

b. Be an increasing function of the sales revenue received by the firm

c. Create incentives so that managers act like owners of the firm

d. Avoid making the executives own shares in the company

e. Either (b) or (c) but not (d).

362. Which of the following may be an example of an agency problem?

a. Time not spent on actual business by an employee on an out-of-state business trip.

b. Output of a piece rate garment worker.

c. The job performance of a parking lot attendant.

d. Work performance of a manager of a card shop, who also owns the card shop.

e. Both (a) and (d) above.

363. To reduce agency costs, firms incur costs in all these areas except

a. Compensation inducements to executives to take actions that shareholders want

b. Payment of payroll taxes

c. Expenditures to monitor the actions of managers, including internal audits

d. Bonding expenditures to protect the owners from managerial dishonesty

e. Giving ESOPs to the executives of the company.

364. In the shareholder wealth maximization model, the value of a firm's stock is equal to the present value of all expected future _____discounted at the stockholders' required rate of return.

a. Cash flows

b. Revenues

c. Outlays

d. Costs

e. Sales.

365. Agency problems between managers and shareholders can be reduced by

a. Paying managers based on the profitability of the firm

b. Requiring managers to own shares of the company

c. Paying managers stock options, which improve in value as the stock price rises

d. Relating managerial compensation to the sales revenue of the firm

e. (a), (b), (c) but not (d).

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366. If shareholders do not mind their firm being taken over by merger or acquisition at high prices when managers prefer to fight takeovers, what can shareholders do?

a. Offer a Christmas bonus of $500 every year to management.

b. Offer free life insurance policies to all employees.

c. Offer a golden parachute contract (a very large severance package) if management loses their position in a takeover.

d. Offer an extra week of paid vacation to employees who have worked at this company for over five years.

e. Taking legal actions against the managers.

367. The moral hazard problem leads to managerial compensation contracts based on a performance measure that is correlated with managerial effort (that is, net income or share price). Why does moral hazard lead to such contracts?

a. Without such contracts, the manager may engage in insider trading.

b. Without such contracts, the manager would exert minimal effort.

c. Without such contracts, the manager would use earnings management to cover up shirking.

d. Without such contracts, the (risk averse) manager bears compensation risk.

e. Both (b) and (c) of the above.

368. Which of the following is **not** one of the questions that need to be answered for the purpose of industry and competitive analysis?

a. What is competition like and how strong are each of the various competitive forces?

b. What strengths, weaknesses, opportunities, and threats are evident in the industry environment?

c. The companies are in the strongest/weakest competitive positions and what strategic moves are rivals likely to make next?

d. What are the key factors for competitive success in this industry?

e. What is causing the industry's competitive structure and business environment to change?

369. In identifying an industry's dominant economic traits, there is a need to consider such things as

a. Market size and growth rate, the scope of competitive rivalry, the number of buyers and sellers and their relative sizes, whether the industry's products are standardized or differentiated, the presence of scales, economies and experience curve effects, and the pace of technological change

b. What the industry's key success factors are

c. Which competitors are in which strategic groups

d. The extent and importance of seller-supplier collaborative partnerships and strategic alliances, the extent and importance of seller-buyer collaborative partnerships and strategic alliances partnerships, the strength of competitive pressures from producers of substitute products, the bargaining leverage of sellers and buyers, and the threat of additional entry into the industry

e. Both (a) and (d) of the above.

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370. Which of the following is not among the factors that determine whether competitive rivalry among participating firms is strong, moderate, or weak?

a. Whether demand for the product is growing rapidly or slowly.

b. Whether customers' costs to switch brands is low or high.

c. How active industry rivals while initiating fresh competitive moves and while using the various weapons of competition try to improve their market standing and sales volumes.

d. Whether the number of rivals is relatively small (less than 8) and whether there are big differences in their sizes and competitive capabilities.

e. Whether the industry is characterized by significant scale economies and experience curve effects.

371. The seriousness of the competitive threat of entry in a particular industry depends on

a. Whether industry demand is growing rapidly or slowly.

b. The number of customers for the industry's product (the greater the number of customers, the greater the threat of entry

c. Whether barriers to entry are high or low, the expected reaction of incumbent firms to new entry, and whether a newcomer can reasonably expect to earn attractive profits

d. How many competitors already exist in the industry

e. Whether current industry profitability is above-average and the percentage of companies in the industry that are currently earning above-average profits.

372. Which of the following are generally considered to be barriers entering a market or industry?

a. The lack of sizable scale economies and experience curve effects and low levels of brand loyalty on the part of customers.

b. The presence of more than 20 rivals already in the industry.

c. A product that is pretty much standardized from rival to rival.

d. Relatively large capital requirements and the fact that firms in the industry hold key patents and/or possess significant proprietary technology and/or have skills and know-how not readily available to a newcomer.

e. The absence of tariffs, import quotas, trade restrictions, and/or government-mandated regulations.

373. Which of the following is **not** among the most common types of driving forces?

a. Product innovation, marketing innovation, increasing globalization of the industry, and reductions in uncertainty and business risk.

b. Changes in the long-term industry growth rate, shifts in buyer composition and the appearance of new ways of using the product.

c. Ups and downs in interest rates and the stock market, changes in the number of seller-supplier collaborative alliances, and changes in overall industry profitability.

d. The Internet, technological change, and the diffusion of technical know-how across more companies and more countries.

e. Changes in cost and efficiency, the entry or exit of major firms, and shifts in buyer preferences away from differentiated products to more standardized products.

374. An industry's key success factors

a. Can be determined from an industry's dominant economic and business characteristics

b. Concern the particular strategy elements, product attributes, resources, competencies, competitive capabilities, and business outcomes that spell the difference between profit and loss and, ultimately, between competitive success and failure

c. Are seldom good candidates for being the cornerstones of a company's strategy

d. Determine whether the industry is attractive or unattractive over the long term

e. Usually relate to technology and manufacturing-related characteristics and rarely to distribution or marketing characteristics.

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375. Competitive jockeying among rival firms

a. Is typically strong, even fierce, in attractive industries and moderate, even country-clubbish, in unattractive industries

b. Is usually more vigorous when entry barriers are high and exit barriers are low

c. Tends to be weaker when industry driving forces are strong

d. Tends to create an economic battlefield as some companies initiate fresh actions and moves and as their rivals react and respond

e. Causes the success of any one firm's strategy to be pretty much disconnected from what strategies and actions its rivals employ.

376. Which one of the following statements is **false**?

a. An industry's economic features help frame the window of strategic approaches a company can pursue.

b. A company's competitive strategy is increasingly effective the more it provides good defenses against the five competitive forces, shifts competitive pressures in ways that favor the company, and helps create sustainable competitive advantage.

c. Driving forces analysis has two steps: identifying what the driving forces are and assessing the impact they will have on the industry.

d. Environmental scanning is a powerful technique for identifying what economic traits, competitive forces, and driving forces are most likely to dominate the industry in the future.

e. A company that is uniquely well-situated in an unattractive industry may still be able to earn unusually good profits.

Dividend Policy

377. Sterling Limited has earnings per share of Rs.3.5 for year t. Its dividend per share for year t-1 was Rs.1.5. If the target pay out ratio and the adjustment rate for Sterling Limited are 0.5 and 0.4 respectively, the dividend per share for the company for year t will be

a. 1.56

b. 1.6

c. 1.66

d. 1.676

e. 1.76.

378. Which of the following statements is **false** regarding payment of dividends?

a. Where dividends proposed exceeds 10 percent but not 12.5 percent of the paid-up capital of a company, the amount to be transferred to the reserves shall not be less than 2.5 percent of the current profits.

b. Where dividends proposed exceeds 10 percent but not 12.5 percent of the paid-up capital of a company, the amount to be transferred to the reserves shall not be less than 5 percent of the current profits.

c. Where dividends proposed exceeds 12.5 percent but not 15 percent of the paid-up capital of a company, the amount to be transferred to the reserves shall not be less than 5 percent of the current profits.

d. Where dividends proposed exceeds 15 percent but not 20 percent of the paid-up capital of a company, the amount to be transferred to the reserves shall not be less than 7.5 percent of the current profits.

e. Where dividends proposed exceeds 20 percent, the amount to be transferred to the reserves shall not be less than 10 percent of the current profits.

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379. Which of the following statements is **false**?

a. With the exception of bonus shares, companies can pay only cash dividends.

b. Dividends can be declared for past years for which the accounts have been closed.

c. In case there is an inadequacy of profits in any year, dividend may be paid out of the accumulated profits of previous years.

d. Where the dividend proposed exceeds 20 percent of paid-up capital, the amount to be transferred to reserves shall not be less than 10 percent.

e. All of (a), (b), (c) and (d) above.

380. Once a dividend declaration is made, dividend warrants should be posted within

a. 40 days of declaration

b. 42 days of declaration

c. 45 days of declaration

d. 49 days of declaration

e. 50 days of declaration.

381. Which of the following statements holds good in case of a bonus issue of shares?

a. When a company issues additional equity capital, shares issued to existing shareholders are called bonus shares.

b. The proportional ownership of shareholders changes when there is a bonus issue.

c. A bonus issue leads to a decrease in book value per share.

d. The earnings per share and the market price per share increases when there is a bonus issue.

e. The nominal rate of dividend tends to increase when there is a bonus issue.

382. Which of the following is **false** regarding a stock split?

a. The par value of share remains unchanged in case of a stock split.

b. There is no capitalization of reserves in case of a stock split.

c. The shareholders proportional ownership remains unchanged in case of a stock split.

d. A stock split leads to the market price per share being brought within a more popular trading range.

e. In the event of a stock split, the market price per share declines.

383. Which of the following is **true** regarding a share repurchase?

a. The buy-back provides liquidity to the scrip and presents an exit opportunity (often at a premium to the prevailing market price) to the investors who wish to off load their holdings.

b. Under the Dutch auction tender offer, the firm does not fix any pre-determined price but announces the number of shares it proposes to buy-back.

c. The advantage of fixed price tender offer is that it provides an equal opportunities to all the shareholders to participate in the repurchase program.

d. Both (a) and (b) above.

e. All of (a), (b) and (c) above.

384. Which of the following factors influence the pay out ratio of a firm?

a. Funds requirement.

b. Liquidity position of the firm.

c. Access to external sources of financing.

d. Both (a) and (b) above.

e. All of (a), (b) and (c) above.

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385. Which of the following is **false** as per the Walter model?

a. The firm has a perpetual life span.

b. The only source of finance available to the firm is retained earnings.

c. The dividend policy of a firm is irrelevant if the IRR is greater than its cost of capital.

d. Both (b) and (c) above.

e. None of the above.

386. Which of the following statements is/are **false**?

a. A bonus issue involves issue of new shares by capitalizing reserves.

b. In a bonus issue, shares are issued to shareholders pro rata to their existing holdings.

c. A bonus issue can be made out of revaluation reserves.

d. In a bonus issue, the net worth of the company remains constant, but there is a change in its composition.

e. A bonus issue, basically aligns the share capital of a company with the total shareholders funds.

387. Which of the following statements are **true**?

a. When a company wants to reduce the number of outstanding shares, it can resort to a reverse stock split.

b. Stock splits have no implications on the proportion of an individual stakes in the company.

c. A stock repurchase is considered to have a greater signalling power than regular dividend pay-out.

d. Both (a) and (b) above

e. All of (a), (b) and (c) above.

388. Which of the following sources **cannot** be used for payment of dividend?

a. Current profits after providing for depreciation.

b. Profits for any previous financial year or years.

c. Capital

d. Both (b) and (c) above.

e. Either (b) or (c) above.

389. Which of the following is **false** with regard to bonus shares?

a. A bonus issue of shares cannot be made unless the partly-paid shares, if any, existing are made fully paid-up.

b. No bonus issue shall be made which will dilute the value of rights of the holders of debentures, convertible fully or partly.

c. A bonus issue should be made within 12 months of a public issue.

d. Both (a) and (c) above.

e. All of (a), (b) and (c) above.

390. According to the Gordon model, when the rate of return is greater than the discount rate

a. The share price falls as the dividend pay-out decreases.

b. The share price rises as the dividend pay-out increases.

c. The share price rises as the dividend pay-out decreases.

d. The share price and dividend pay-out are independent.

e. The share price just increases sharply and later increases at a declining rate as the pay-out increase.

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391. Which of the following reserves **cannot** be used for issue of bonus shares?

a. Dividend equalization reserve.

b. Contingency reserve.

c. Debenture redemption reserve.

d. Revaluation reserve.

e. Both (a) and (d) above.

392. Which of the following statements is **false** regarding a rights issue of shares?

a. Rights can be exercised only during a fixed period.

b. Rights are not negotiable.

c. The subscription price is left to the discretion of the company.

d. The number of rights that a shareholder gets is an equal to the number of shares held by him.

e. All of (a), (b) and (d) above.

393. Which of the following is **correct**?

a. The floatation costs of a rights issue is higher than a public issue.

b. A rights issue is generally made at a lower price than a public issue.

c. The wealth of existing shareholders, *per se,* is not affected by the rights offering, provided the existing shareholders exercise their rights in full or sell their rights.

d. Both (b) and (c) above.

e. Both (a) and (c) above.

394. The following information is available for M/s Radhika Constructions Limited.

Earnings per share	Rs.3.50
Rate of return on investments	17%
Rate of return required by shareholders	14%

The price per share as per the Walter model if the payout ratio is 25 percent will be

a. Rs.25

b. Rs.27

c. Rs.28

d. Rs.29.01

e. Rs.29.75.

395. The following information is available for M/s Suraj Chemicals Limited.

Earnings per share Rs.4.

Rate of return required by shareholders 15 percent.

Assuming that the Gordon valuation model holds, the rate of return that should be earned on investments to ensure that the market price is Rs.60, when the dividend pay out is 45 percent is

a. 15.2%

b. 20.89%

c. 21.8%

d. 23.2%

e. 23.8%.

396. Dividends **cannot** be paid out of

a. Current profits before providing for depreciation

b. Past reserves created out of profits

c. Monies provided by the Central Government

d. Capital profits, even if the articles permit such distribution

e. None of the above.

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397. Where a company fails to transfer the unclaimed dividend to the unpaid dividend account, it will have to pay interest at the rate of _____ from the date of default.

a. 5% p.a

b. 10% p.a

c. 12% p.a

d. 14% p.a

e. 30% p.a.

398. A final dividend once declared

a. Creates a debt in favor of the shareholders in whose favor it is declared.

b. Can be revoked with the consent of the shareholders.

c. Cannot be revoked even if it is illegally declared.

d. Both (a) and (b) above.

e. Both (a) and (c) above.

399. Which of the following is **correct** for a firm with EPS of Rs.2 per share and a pay out ratio of 25 percent?

a. Book value of the shares will remain unchanged.

b. Book value per share of equity will increase by Rs.0.5.

c. Book value per share of equity will increase by Rs.1.5.

d. Book value per share of equity will decrease by Rs.0.5.

e. Book value per share of equity will decrease by Rs.1.5.

400. The Graham Dodd model gives

a. 3 times more weightage to dividends than retained earnings.

b. 3 times more weightage to retained earnings than dividends.

c. same weightage to both dividends and retained earnings.

d. 4 times more weightage to dividends in relation to retained earnings.

e. 4 times more weightage to retained earnings in relation to dividends.

401. According to Myron Gordon, the growth rate of a firm is a product of its

a. Dividend pay out and return on equity

b. Dividend pay out and return on investments

c. Retention ratio and return on investments

d. Retention ratio and return on equity

e. None of the above.

402. In accordance with the Efficient Market Hypothesis

a. Stock splits and Bonus Issues are of absolutely no consequence to investors

b. Investors prefer corporate diversification through mergers etc. to personal diversification through investment portfolios

c. Timing of security issues is of the utmost importance

d. Selling large quantities of securities will automatically depress prices because of excess supply over demand

e. New issues should preferably be underpriced to enhance shareholder wealth.

403. The bill allowing companies to buy-back their own shares allows

a. Companies to control its share prices through frequent market operations

b. Companies to extinguish a part of their share capital and hence reduce capital base

c. Promoters to increase their stake and hence prevent takeovers

d. Both (a) and (c) above

e. Both (b) and (c) above.

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404. Which of the following is **true**?

a. Debt is a better alternative than equity below the EBIT indifference point.

b. Debt is a better alternative than equity when the firm's return on investment is lesser than the cost of debt.

c. The par value of a share gets reduced in the case of a bonus issue.

d. There is no change in the wealth of a shareholder who chooses to exercise his rights in a rights issue.

e. Stock splits reduce the liquidity of a company's stock.

405. Which of the following is **false**?

a. Most companies have a target pay out ratio.

b. Managers and investors seem more concerned with dividend changes rather than dividend levels.

c. Managers often increase dividends temporarily when earnings are temporarily high for a year or two.

d. Companies with growth prospects have dividend as a residual decision.

e. Pay out ratios and dividend growth rates do not affect the P/E ratio of a company.

406. Under Walter's model of dividend relevence, it is assumed that

a. New debt is not raised

b. New equity is not raised

c. Retained earnings represent the only source of finance for the firm

d. Both debt and equity can be raised

e. The firm does not use retained earnings to finance its investments.

407. Which of the following statements is **true**?

a. Managers and investors seem more concerned with dividend levels rather than dividend changes.

b. Companies undertaking substantial share repurchases usually finance them with an offsetting reduction in cash dividens.

c. Managers often increase dividends temporarily when dividends are unexpectedly high for a year or two.

d. A company generally cannot pay dividend if it is insolvent.

e. Both (c) and (d) of the above.

408. Which of the following statements is **true**?

a. The promoter's stake in the company gets reduced in a stock split

b. The market price per share comes down after a stock split

c. In India, stock dividends can be paid in lieu of bonus shares

d. Residential dividend approach is preferred by shareholders

e. Both (a) and (d) of the above.

409. Which of the following statements is/are **true?**

a. Dividends for any previous year for which accounts have been closed cannot be revised.

b. Issue of bonus shares results in an increase in the share capital of the company.

c. A bonus issue always results in a decrease in the face value of the shares of the company.

d. An issue of rights, always results in a change in the book value per share.

e. Both (a) and (b) above.

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410. Which of the following statements is/are **true**?

i. A bonus issue results in reduction of book value per share.

ii. A bonus issue results in an increase in the relative voting rights of the promoter group.

iii. A rights issue always results in a reduction in the book value per share.

a. Only (i) above

b. Only (ii) above

c. Only (iii) above

d. Both (i) and (ii) above

e. All of (i), (ii) and (iii) above.

411. The income generated by a division of a company is Rs.10 lakh, the investment on the division is Rs.50 lakh and the imputed interest rate on investment is 10%. The residual income from the division is

a. Rs.5 lakh

b. Rs.10 lakh

c. Rs.15 lakh

d. Rs.40 lakh

e. Rs.50 lakh.

412. Which of the following statements is/are **true**?

i. A bonus issue involves capitalization of reserves, while stock split does not.

ii. The face value of shares is reduced in a stock split, while it remains the same in a bonus issue.

iii. Stock splits are subject to SEBI guidelines, while bonus issues are not.

a. Only (i) above

b. Only (ii) above

c. Only (iii) above

d. Both (i) and (ii) above

e. Both (ii) and (iii) above.

413. Asymmetric information refers to the fact

a. That borrowers typically have more information than lenders

b. That lenders typically have more information than borrowers

c. That banks won't give depositors all the information about their accounts

d. That lenders have an incentive to withhold information from borrowers

e. That buyers typically have more information than sellers.

414. Financial Intermediaries

a. Reduce diversification available to individuals.

b. Transform long-term debt into short-term assets.

c. Provide a way for investors to share risk.

d. Increase the riskiness of investments for depositors

e. Transform short-term assets into long-term debt.

415. Asymmetric information occurs when

a. Each party has equal information

b. Each party in a transaction gains from the transaction

c. One party in a transaction has more influence than another

d. One party in a transaction has more information than another

e. One party in a transaction gains, the other loses.

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416. The principal-agent problem

a. Occurs because owners have complete information about managers

b. Eliminates costly state verification

c. Is a type of moral hazard.

d. Is not related to asymmetric information.

e. Both (c) and (d) of the above.

417. When interest rates are high, lenders may not want to make loans because of:

a. Moral hazard

b. Costly state verification

c. The principal-agent problem

d. Adverse selection

e. Both (b) and (d) of the above.

418. The financial crises that occurred in Mexico and East Asia during the 1990's

a. Were begun when foreign currency traders staged a speculative attack on their currencies.

b. Were caused primarily by hyperinflation

c. Were caused in large part by inadequate bank supervision and massive loan losses

d. Were caused in large part by their governments' severe budget deficit problems

e. Would to ineffectual governmental control on the hedge funds flowing into their country.

419. How can the collapse of major corporations such as Enron and MCI WorldCom contribute to financial crises?

a. The collapse of these companies could encourage other firms to declare bankruptcy.

b. The crash of their stock prices could reduce the value of the shares held by banks.

c. The collapse of their stock prices could deter banks from underwriting future corporation stock issues and reduce financial activity.

d. The collapse of these companies could wipe out investor wealth and increase loan defaults and market uncertainty.

e. The collapse of these companies highlights the growing practice 0f creative accounting among firms.

420. Security prices impounding all relevant information for determining value are said to be

a. Nearly efficient

b. Strongly efficient

c. Semi-strong

d. Weakly efficient

e. Either (c) or (d).

421. In the studies demonstrating that the risk-adjusted returns on small firms' equities are significantly higher than those on large firm's equities, the definition of size is indexed by

a. Asset base

b. Market capitalization

c. Number of employees

d. Sales

e. Employee productivity.

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422. Studies on the effects of earnings announcements on stock and futures prices demonstrate that

a. Futures prices adjust more slowly than stock prices

b. Futures prices are unaffected

c. Opportunities for profitable trading are eliminated within half an hour

d. Stock prices and futures prices move in lock step

e. None of the above.

423. Financial research and investment strategies making use of only the historical record of asset prices is termed

a. Filter-rule based investment

b. Growth investment

c. Technical analysis

d. Value investment

e. Fundamental analysis.

424. The higher returns associated with trading based on inside information is an example of a more general market problem identified as

a. A market for lemons

b. Informational asymmetry

c. Moral hazard

d. Adverse selection

e. Market inefficiency.

425. The classical empirically based method to test the semi strong efficient hypothesis is to see how the market reacts to the public release of information that should be relevant to the pricing of securities. Such methods are termed

a. Event studies

b. Serial correlation

c. Spot-futures linking

d. Information signaling

e. Information asymmetry.

426. To say that there is "asymmetric information" in the issuing of common stock or debt means that

a. Investors have nearly perfect information

b. The markets have nearly perfect information

c. Investors have more accurate information than management has

d. Management has more accurate information than investors have

e. Management and investors have equal information.

427. The problem of managers making huge profits from "insider trading" would not exist if there were no

a. Information asymmetry

b. Riskless investments

c. Government regulations

d. Project cash flows

e. Stock exchanges.

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428. Information asymmetry is one reason why a company's __________ may not reflect management's assessment of the company's true value.

a. Cash

b. Retained earnings

c. Stock price

d. Accounting statements

e. Taxes.

429. A difficulty for stockholders in large corporations is that they have less information about the company than the managers of the company. This problem is called information

a. Shortage

b. Anathema

c. Hoarding

d. Asymmetry

e. Deficit.

430. Which of the following is a key factor that influence dividend pay-out of a firm?

a. Access to finance.

b. Government policies.

c. Return on investment.

d. Marginal cost of capital.

e. Return on equity.

431. Which of the following statements best describes the empirical evidence on mergers and acquisitions?

i. On the announcement day, there is significant wealth gain (compared to stock price just before the announcement) to acquiring firms' shareholders, while the wealth gain to the target shareholders is small or negative.

ii. On the announcement day, there is significant wealth gain (compared to stock price just before the announcement) to target firms' shareholders, while the wealth gain to the acquiring firms' shareholders is small or negative.

iii. The long-term performance of the merged firms depends on the method of payment in M&A.

iv. Combining the short-term and long-term evidence, we can conclude that the market seems to have the wrong initial guess (whether it is high or low) about merger synergy but later on reverses the initial guess.

v. Combining the short-term and long-term evidence, we can conclude that the market seems to have the correct initial guess (whether it's high or low) about merger synergy, but magnitude of the positive or negative reaction is too small (compared to the actual long-term performance.

a. (ii) only

b. (i) and (iii) only

c. (i) and (iv) only

d. (ii) and (iii) only

e. (i), (iii) and (iv) only

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432. Which of the following statements best describes the signaling model of IPO under pricing?

a. In addition to the proceeds from IPO, the owners of the firms also care secondary market price (of the stock) and proceeds of seasoned issuance.

b. Because the prices in secondary markets reflect the true value of firms, good firms that under priced their issues in the IPO market expect to have a larger proceeds in the secondary issuance, which will help to recoup the losses during the IPO

c. A good firm's owner can signal to the outsiders by under pricing the issue and selling the entire firm during IPO.

d. (a) and (b) only

e. (a) and (c) only

433. Which of the following is **true**?

a. Empirical studies show that stock prices generally decrease following increases in current dividends. According to the signaling theory, this finding is necessarily inconsistent with the indifference proposition.

b. Empirical studies show that stock prices generally decrease following increases in current dividends. According to the signaling theory, this finding is not necessarily inconsistent with indifference proposition.

c. Empirical studies show that stock prices generally increase following increases in current dividends. According to the signaling theory, this finding is necessarily inconsistent with the indifference proposition.

d. Empirical studies show that stock prices generally increase following increases in current dividends. According to the signaling theory, this finding is not necessarily inconsistent with the indifference proposition.

e. Either (c) or (d)

434. Apple Computer initiated a cash dividend and stock split in 1987 to

a. Signal the stock market about their potential growth and positive NPV prospects

b. Confirm the large gains in sales

c. Satisfy a market hungry for cash rewards

d. (a) and (b)

e. (a) and (c).

435. The tendency for a person to make an agreement and then behave after the agreement in a way to increase his or her benefits and harm the other party to the agreement is called

a. Adverse selection

b. Moral hazard

c. The cost of contracting

d. Signaling

e. Agency problem.

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Decision Support Models

436. Which of the following statements is **true** regarding the Marakon approach?

a. Shareholder wealth creation is measured as the difference between the market value and the book value of a firm's equity.

b. The firm maintains value if market value of equity equals the book value of equity.

c. The market to book value ratio is a function of the return on equity, the growth rate of dividends and the cost of equity.

d. Both (a) and (b) above.

e. All of (a), (b) and (c) above.

437. As per the Marakon approach which among the following that shapes market economics can be termed as a direct force?

a. Supplier pressures.

b. Regulatory pressures.

c. Customer pressures.

d. Threat of entry.

e. Intensity of indirect competition.

438. Which of the following statements is **false** regarding the Marakon approach?

a. In cases where successful product differentiation is not possible, superior profitability of a firm may arise mainly from a relative economic cost advantage.

b. The competitive position of a firm is shaped by product differentiation and economic cost position.

c. The competitive strategy of a firm defines the product markets in which it will compete.

d. The Marakon approach has been criticized as return on equity is based on accrual accounting whereas the cost of equity is a market based measure.

e. None of the above.

439. Which of the following is **false** regarding the Marakon model?

a. The Marakon model structure is quite comprehensive as it provides a holistic perspective of the process of value creation.

b. This model has been criticized on the ground that the return on equity and cost of equity (which the model considers for measuring the value of a firm) are not comparable.

c. The book value of equity reflects how productively the firm has employed the capital contributed by the shareholder.

d. A firm is said to have maintained value when the market value of equity equals book value of equity.

e. None of the above.

440. Which of the following statements are **false**?

a. The participation strategy of a firm spells out the means the management will employ to build competitive advantage.

b. The participation strategy of a firm defines the product markets in which it will compete.

c. The growth rate in dividends cannot be considered as a key financial determinant of value.

d. Both (a) and (c) above.

e. None of the above.

441. Alcar approach to value based management

a. Is based on seven factors called value drivers

b. Is based on the discounted cash flow technique

c. Avoids accounting based measures like return on equity and book value

d. Both (a) and (b) above.

e. All of (a), (b) and (d) above.

442. Which of the following is **not** a 'value driver' as per the Alcar approach?

a. Income tax rate.

b. Operating profit margin.

c. Dividend pay out.

d. Cost of capital.

e. Investment in working capital.

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443. Which of the following is considered to be a short coming of the Alcar approach?

a. Employment of discounted cash flow framework.

b. Measurement of profitability in terms of profit margin on sales.

c. Requirement of a fairly involved computer program.

d. Both (b) and (c) above.

e. All of (a), (b) and (c) above.

444. Maximization of value is generally reflected in

a. Maximization of PAT

b. Maximization of market share

c. Maximized discounted cash flows

d. Achievement of customer satisfaction

e. Both (b) and (c) above.

445. Which of the following is analyzed at the generic level as per the McKinsey approach?

a. Return on invested capital in terms of operating margin and invested capital.

b. Product Mix.

c. Customer Mix.

d. Capacity Utilization.

e. Operating Leverage.

446. Which of the following are **true** regarding corporate financial models?

a. Corporate financial models help management to analyze the interrelationships between investment and financing alternatives available to the firm.

b. Financial models help management to project the financial future of the company under various assumptions.

c. They help management to decide among various alternatives.

d. Both (a) and (b) above.

e. All of (a), (b) and (c) above.

447. Which of the following suggestions is likely to improve financial modeling in practice?

a. A bottom-up approach wherein the inputs of lower and higher level management are treated together.

b. Avoiding cluttering the model with excessive detail.

c. Injection of greater financial theory in otherwise accounting dominated models.

d. Both (b) and (c) above.

e. All of (a), (b) and (c) above.

448. Successful use of corporate planning models is possible when which of the following conditions exist?

a. The presence of a well defined budgetary and planning system.

b. Involvement of potential users of the model in the development of the model right from the beginning.

c. The availability of adequate good quality data for developing and running the model.

d. Both (a) and (b) above.

e. All of (a), (b) and (c) above.

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449. Which of the following is **not** an assumption of the extended probabilistic analysis?

a. Sales consist of credit and cash sales.

b. The duration of recession is variable.

c. The daily sales during the recession is variable.

d. While the interest burden associated with debt is inescapable, the principal repayment obligation can be deferred till the recession lasts.

e. Both (c) and (d) above.

450. As per the Alcar approach on shareholder value, the equation "(cash flow before new investment/cost of capital) Market value of debt" represents

a. The total shareholder value

b. The residual value

c. The pre-strategy value

d. The operating flow stream

e. The value created by the strategy.

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451. Which of the following statements regarding Marakon approach is/are **true**?

i. The market value of the firm will be higher if its market value to book value ratio increases.

ii. The market value to book value ratio will be greater than 1.00 only if the return earned on investments is greater than the cost of capital.

iii. When the return on investments is equal to cost of capital the market value of the firm is equal to book value.

a. Only (i) above

b. Only (ii) above

c. Only (iii) above

d. Both (i) and (ii) above

e. All of (i), (ii) and (iii) above.

452. The following details about Inca Ltd. are available

Return on equity 10%
Dividend growth rate 5%
Cost of equity 8%

From the above, one can conclude that

a. The market to book ratio is less than 1

b. The management does not seem to be creating any value for its shareholders

c. Since there is a positive spread between the return and cost of equity, the higher the growth rate, the greater will be the value created

d. Information on current market price of the company is also necessary, before one can come to any meaningful conclusion

e. Growth rate in dividend should be at least equal to, if not greater than the cost of equity if the company has to provide value to its shareholders.

453. Which of the following statements is/are **true** regarding Marakon approach to value based management?

a. The key financial determinants of value are the spread and the growth rate of sales.

b. Spread is defined as the difference between the return on equity and cost of equity.

c. The competitive position of the firm is determined by product differentiation and economic cost position.

d. The competitive position of the firm defines the product markets in which it will compete.

e. Both (b) and (c) above.

454. Which of the following value drivers is to be considered at the business unit level as per the McKinsey Approach?

a. Return on invested capital
b. Capacity utilization
c. Operating leverage
d. Cost per unit
e. Operating margin.

455. Which of the following is an assumption underlying extended probabilistic analysis to determine the debt capacity?

a. All sales are made for cash only.
b. The duration of a recession is predictable with certainty.
c. The firm can postpone both interest on debt and principal repayments during periods of recession.
d. All sales are made on credit only.
e. Both (a) and (c) above.

Financial Statement Analysis

456. Which of the following is **not** a current asset?

a. Pre-paid expenses.
b. Short-term loans and advances.
c. Marketable securities
d. Both (a) and (b) above
e. None of the above.

457. Which of the following is the least liquid among current assets?

a. Cash.
b. Debtors.
c. Inventories.
d. Short-term securities
e. Prepaid expenses.

458. Which of the following statements is **false**?

a. A firm with a high proportion of current assets in the form of cash and accounts receivable is more liquid than one with a high proportion of current assets in the form of inventories though both the firms have the same current ratio.
b. Working capital gap is equal to current assets less current liabilities other than bank borrowings.
c. The interval measure shows how the current assets of the firm will suffice to meet its operating expenditure.
d. Liquidity ratios are generally based on the relationship between current assets and current liabilities.
e. Quick assets are defined as current assets excluding inventories.

459. Which of the following statements is **true**?

a. Turnover ratios are also called as asset management ratios.
b. A high inventory turnover ratio may be caused by a low level of inventory which may result in frequent stockouts and loss of sales and customer goodwill.
c. An average collection period which is shorter than the credit period allowed by the firm may mean efficiency of credit management or excessive conservatism in credit granting.
d. Both (a) and (b) above.
e. All of (a), (b) and (c) above.

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460. Average collection period is given by the formula

a. Receivables/Average sales

b. Receivables/Total sales

c. Receivables/Total credit sales

d. Receivables/Average sales per day

e. Total sales/Receivables.

461. Which of the following statements is **false**?

a. Turnover ratios are also referred to as asset management ratios.

b. When the fixed assets of the firm are old and substantially depreciated, the fixed assets turnover ratio tends to be high because the denominator of the ratio is very low.

c. A high fixed assets turnover ratio indicates inefficient use of assets.

d. Gross profit margin ratio shows the margin left after meeting manufacturing costs.

e. None of the above.

462. The current ratio is obtained by

a. Dividing quick assets by total liabilities

b. Dividing current assets by total liabilities

c. Dividing current assets by current liabilities

d. Dividing quick assets by current liabilities

e. Dividing quick assets by long-term liabilities.

463. Which of the following are **not** considered for arriving at current liabilities?

a. Short-term funds from banks.

b. Trade creditors.

c. Accrued expenses.

d. Provisions.

e. None of the above.

464. Cost of goods sold does **not** include

a. Processing charges

b. Administrative expenses

c. Financing costs

d. Both (b) and (c) above

e. All of (a), (b) and (c) above.

465. Gross profit margin ratio

a. Reflects the efficiency of all the functions of a firm

b. Reflects the efficiency of operations of a firm

c. Shows the margin left after meeting manufacturing costs

d. Both (a) and (c) above

e. Both (b) and (c) above.

466. Which of the following can be considered as shortcomings of financial statement analysis?

a. It is difficult to use ratio analysis in case of large diversified companies.

b. Financial statement analysis can be vitiated where price level changes are not taken into account.

c. Comparative financial statement analysis may be vitiated where there are variations in accounting policies.

d. Both (a) and (b) above.

e. All of (a), (b) and (c) above.

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467. The current assets and liabilities of M/s Sriven Limited are 2500 and 1800 respectively. The amount it can borrow on a short-term basis without reducing the current ratio below 1.10 is

a. Rs.2,500

b. Rs.2,050

c. Rs.5,200

d. Rs.5,250

e. Rs.6,250.

468. The following information is available for M/s Srujan Limited

Current ratio	1.5
Acid-test ratio	1.25
Current liabilities	2,400
Inventory turnover ratio	7

The sales for the firm will be

a. Rs.1,200

b. Rs.2,200

c. Rs.3,200

d. Rs.4,200

e. Rs.5,200.

469. Which of the following best describes working capital gap?

a. Current assets less current liabilities.

b. Current assets less current liabilities other than bank borrowings.

c. Quick assets less current liabilities.

d. Quick assets less current liabilities other than bank borrowings.

e. Current assets less short-term bank borrowings.

470. Which of the following is a structural ratio?

a. Fixed charges coverage ratio.

b. Return on equity.

c. Debt-assets ratio.

d. Return on capital employed.

e. None of the above.

471. Which of the following is **false** regarding interest coverage ratio**?**

a. EBIT is taken as the numerator of this ratio as interest payment is not affected by tax.

b. A high ratio indicates that the firm has defaulted on its payments.

c. This ratio is not a reliable measure as source of interest payment is cash flow before interest and taxes and not EBIT.

d. Both (a) and (c) above.

e. Both (b) and (c) above.

472. The following data is available for M/s Pankaj Limited

Unit selling price	Rs.140
Unit variable cost	Rs.80
Total fixed costs	Rs.1,50,000
Output	4500 units

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The percentage change that will occur in the EBIT if the output increases by 10 percent will be

a. 10.25
b. 10.5
c. 20.25
d. 22.22
e. 22.5.

473. The following data is available for M/s Reliance Limited

Interest	Rs.1,25,000
Tax rate	35 percent
Preference dividend	Rs.75,000
EBIT	Rs.5,50,000

The degree of financial leverage for the firm will be

a. 1.52
b. 1.57
c. 1.77
d. 1.79
e. 1.80.

474. Which of the following risks is measured by capital structure ratios?

a. Liquidity risk.
b. Financial risk.
c. Market risk.
d. Firm's total risk.
e. Both (b) and (d) above.

475. If the return on equity is 30%, the dividend pay out ratio 50% and the dividend per share Rs.2, the EPS will be

a. Rs.2
b. Rs.4
c. Rs.6
d. Rs.8
e. Rs.10.

476. The appropriate profitability measure to be considered for calculating IRR will be

a. EBIT
b. EBT
c. EBDIT
d. PAT
e. EBDIT – Other income.

477. If the expression 1/(1 – x) represents the total assets/equity ratio, then x is

a. Debt asset ratio
b. Debt equity ratio
c. Total asset turnover ratio
d. Return on equity
e. Return on assets.

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478. Trade creditors of a company are mostly interested in the company's

a. Liquidity ratios

b. Leverage ratios

c. Activity ratios

d. Profitability ratios

e. Valuation ratios.

479. The efficiency with which the firm utilizes its assets can be assessed by studying its

a. Liquidity ratios

b. Leverage ratios

c. Activity ratios

d. Profitability ratios

e. Valuation ratios.

480. Consider the following information relating to a company

Networth	:Rs.250 crore
Total assets	:Rs.600 crore
Long-term debt	:Rs.200 crore
Current liabilities	:Rs.150 crore.

The debt ratio of the company is

a. 0.333

b. 0.487

c. 0.583

d. 1.000

e. None of the above.

481. The variability of EPS resulting from the use of leverage is known as

a. Operating risk

b. Financial risk

c. Total risk

d. Liquidity risk

e. Solvency risk.

482. Which of the following statements is **not true**?

a. Receivables are more liquid than inventories.

b. Higher the current ratio, larger is the amount of rupees available per rupee of current liability.

c. Lower the quick ratio, higher is the safety of funds of short-term creditors.

d. A very high current ratio indicates poor management of resources.

e. The acid test ratio is a better measure of the short-term liquidity of the firm than the current ratio.

483. MM Ltd. has a cost of equity of 18%, post–tax cost of debt of 12% and weighted average cost of capital of 15%. Its debt to equity ratio is

a. 1:1

b. 1.5:1

c. 1.75:1

d. 2:1

e. Cannot be determined from given data.

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Financial Distress and Restructuring

484. Which of the following best defines a sick industry as per SICA?

a. An industrial company (being a company registered not less than five years) which has at the end of any financial year accumulated losses equal to or exceeding its paid-up capital.

b. An industrial company (being a company registered not less than three years) which has at the end of any financial year accumulated losses equal to or exceeding its paid-up capital.

c. An industrial company (being a company registered not less than five years) which has at the end of any financial year accumulated losses equal to or exceeding its net worth.

d. A company whose accumulation of losses at the end of any accounting year resulted in the erosion of fifty percent or more of its peak net worth in the immediately preceding four accounting years.

e. A company whose accumulation of losses at the end of any accounting year resulted in the erosion of seventy five percent or more of its peak net worth in the immediately preceding four accounting years.

485. As per RBI a small scale industrial unit will be classified as sick when

a. Any of its borrowal accounts has become a doubtful advance

b. There is an erosion in net worth due to accumulated cash losses to the extent of 50 percent or more of its peak net worth during the preceding 2 accounting years

c. There is erosion in net worth due to accumulated cash losses to the extent of 50 percent or more of its peak net worth during the preceding 3 accounting years

d. Both (a) and (b) above

e. Both (a) and (c) above.

486. Which one of the following is an external factor leading to bankruptcy?

a. Labor unrest.

b. Shortage of key inputs.

c. Weak budgetary control.

d. Mismanagement.

e. Both (b) and (c) above.

487. As per the Beaver model which ratio was found to be the best predictor of failure of a firm?

a. Liquidity ratio.

b. Ratio of cash flow to total debt.

c. Debt service coverage ratio.

d. Net profit margin ratio.

e. Interest coverage ratio.

488. As per Altman's Z score model, a healthy firm should have a Z score

a. Of 1.81

b. In the range of 1.81 and 2

c. Less than 2.9

d. More than 2.9

e. More than 2.99

489. In the Indian context, the decision to liquidate/ organize a firm vests with

a. BIFR

b. Company Law Board

c. Registrar of companies

d. SEBI

e. Board of directors of the company.

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490. Which of the following statements is **correct**?

a. Members voluntary winding up is possible only when the company is solvent.

b. Winding up without the intervention of the court is called voluntary winding up

c. Voluntary winding up commences when a petition for winding up is presented to the court.

d. Both (a) and (b) above

e. All of (a), (b) and (c) above.

491. Which of the following is **not** a ground for compulsory winding up by court under Section 433?

a. Suspension of one of the business which the company is carrying on.

b. Unable to carry on business because of deadlock in management.

c. Number of members of the company fall below the statutory minimum.

d. Inability to pay debts.

e. Failure to hold the statutory meeting.

492. Which of the following is **true**?

a. Creditors voluntary winding up is based on the assumption that the company is insolvent.

b. The chief power to appoint a liquidator in case of a creditors voluntary winding up rests with the Registrar of Companies.

c. In a compulsory winding up, the official liquidation is appointed by the court.

d. Both (a) and (c) above.

e. Both (b) and (c) above.

493. According to the Wilcox model, the best indicator of the financial health of a firm is

a. The profitability ratios

b. The coverage ratios

c. Net liquidation value of the firm

d. Market capitalization of the firm

e. Share price of the firm.

494. Which of the following ratios is **not** applied in LC Gupta model for prediction of bankruptcy?

a. EBDIT/Net sales.

b. Operating cash flow/Total assets.

c. Net worth/Total debt.

d. Working capital/Total assets.

e. Operating cash flow/Sales.

495. Which of the following ratios has the least weightage in Altman's Z-score?

a. Working capital/Total assets.

b. Retained earnings/Total assets.

c. EBIT/Total assets.

d. Market value of equity / Book value of debt

e. Sales/Total assets.

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Working Capital Management

496. The following information is available for M/s Right Limited. Current Assets: Rs.100 mln, Net fixed assets: Rs.60 mln, Total Assets: Rs.160 mln, EBIT: Rs.20 mln. ROI: 16%. The working capital leverage for a 15% reduction in current assets is equal to

a. 0.56

b. 0.69

c. 0.88

d. 0.89

e. 0.98.

497. The following information is given regarding M/s Sindhuja Limited. Sales per day: Rs.2.75 million. Cash balance requirement: Rs.10 mln. Weighted operating cycle: 55 days. The working capital requirement of the firm will be

a. Rs.151.25 mln

b. Rs.161.25 mln

c. Rs.165 mln

d. Rs.168.75 mln

e. Rs.170.15 mln.

498. Which of the following is **true** regarding 'simulation'?

a. It is a powerful tool to assess the outcome of changes in exogenous variables.

b. It aids the financial manager in assessing the value of information.

c. It helps the financial manager develop an informed judgment about the expected value and the variability of cash balance at the end of each period.

d. Both (a) and (b) above.

e. All of (a), (b) and (c) above.

499. Rakesh Limited requires Rs.3 million in cash for meeting its transaction needs over the next six months its planning horizon for liquidity decisions. The company currently has the amount in the form of marketable securities. The cash payment will be made evenly over the six month period. Rakesh Ltd. earns 12% annual yield on its marketable securities. Conversion of marketable securities into cash entails a fixed cost of Rs.1,000 per transaction. The optimal conversion size as per the Baumol model will be

a. Rs.3,15,628

b. Rs.3,16,228

c. Rs.3,17,678

d. Rs.3,18,428

e. Rs.3,18,838.

500. Which of the following statements is **true**?

a. The Baumol model applies the economic order quantity concept to determine the cash conversion size.

b. As per the Miller and Orr model, cash balance changes form a normal distribution as the number of periods increase.

c. In Baumol's model a higher interest rate implies a lower cash conversion size.

d. Both (a) and (b) above.

e. All of (a), (b) and (c) above.

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501. The following information is given about M/s Palace Limited.

Annual yield available on marketable securities is 11 percent.

Fixed cost of effecting a marketable securities transaction is Rs.175.

Standard deviation of change in daily cash balance is Rs.6,000.

Minimum cash balance is Rs.55,000.

The upper control limit for the firm using the Miller and Orr model is

a. Rs.1,29,740

b. Rs.1,31,540

c. Rs.1,34,740

d. Rs.1,35,640

e. Rs.1,42,240.

502. Which of the following statements is **false**?

a. Working capital leverage reflects the sensitivity of return on investment to changes in the level of net current assets.

b. The operating cycle analysis focuses only on the time dimension of investment.

c. The weighted operating cycle takes into account differential magnitudes of investment at different stages of the operating cycle.

d. Discriminant analysis is a statistical tool used for receivables management.

e. Both (c) and (d) above.

503. Cash budgets prepared by firms help in which of the following?

a. Estimating cash requirements.

b. Developing credit policies.

c. Checking the accuracy of long-term forecasts.

d. Both (a) and (b) above.

e. All of (a), (b) and (c) above.

504. Which of the following statements is/are **false**?

a. In a simulation exercise, parameters are variables that are kept constant.

b. In a simulation exercise, the larger the number of runs, the end result will be more accurate.

c. Discriminant analysis can be used only with two independent variables.

d. Discriminant analysis can also be used for monitoring existing debtors.

e. Discriminant analysis helps in classifying prospective debtors as good or bad.

505. Which of the following is **not** an assumption of the Baumol model of cash management?

a. More cash expenses are incurred towards the end of the planning period.

b. All cash surplus is initially parked in short-term securities.

c. The cash requirement for the period under consideration is known in advance.

d. Securities for a particular sum are converted into cash at a regular frequency.

e. There are two costs involved-holding costs and transaction costs.

506. Which of the following statements is/are **false**?

a. JIT system is also known as stockless production systems.

b. As per the JIT system inventory is treated as an asset.

c. The objective of JIT is to produce parts in a lot size of 1.

d. Both (b) and (c) above.

e. None of the above.

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507. Which of the following statements is/are **false**?

a. Current assets have a short life span.

b. Current assets can be transformed from one form to another swiftly.

c. Investment in current assets is irreversible.

d. Determining the optimal level of current assets involves a trade off between carrying costs and shortage costs.

e. Permanent current assets are those assets which the firm requires even at the bottom of its sales cycle.

508. Which of the following is a carrying cost?

a. Interest on capital locked up in inventory

b. Expenses on receiving and placing purchased items in storage.

c. Expenses incurred on transport of purchased items.

d. Both (b) and (c) above.

e. All of (a), (b) and (c) above.

509. Which of the following is **false** regarding a simulation model?

a. A simulation model seeks to maximize a certain objective function subject to various constraints.

b. A simulation model seeks to answer `what if' questions.

c. Under simulation it is difficult to model the project and specify the probability distribution of exogenous variables.

d. Simulation as a tool is inherently imprecise.

e. Simulation compels the decision maker to explicitly consider the interdependencies and uncertainties characterizing the project.

510. Which of the following are the measures used for effective control of receivables?

a. Bad debt losses.

b. Average collection period.

c. Ageing Schedule.

d. Both (b) and (c) above.

e. All of (a), (b) and (c) above.

511. Inventory is treated as the root of all evils in

a. Just in time system

b. Strategic costing

c. Material requirements planning

d. Life cycle costing

e. EDI and bar coding.

512. The selling price per unit of a company is Rs.10.00 and the cost of production is Rs.6.00. If the proportion of credit sales in total sales is 75%, the weightage of debtors stage in weighted operating cycle should be

a. 0.45

b. 0.60

c. 0.75

d. 1.00

e. None of the above.

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513. Which of the following is/are not **true** regarding the Baumol Model?

a. Securities are converted into cash at a regular frequency.

b. Expenditure of cash takes place evenly over the planning period.

c. Holding costs change at a fixed rate.

d. Transaction costs are known and fixed.

e. Both (b) and (c) above.

514. The current assets of a company are Rs.50 lakh, out of which inventory contributes around Rs.30 lakh. If the daily cash expenses of the company on operations are Rs.2 lakh, the interval measure is

a. 10 days

b. 15 days

c. 25 days

d. 40 days

e. No of the above

515. The average daily sales of a company are Rs.3.5 lakh. The company generally keeps a cash balance of Rs.50,000. If the weighted operating cycle of the firm is 50 days, its working capital requirement will be

a. Rs.25 lakh

b. Rs.75 lakh

c. Rs.165 lakh

d. Rs.175.50 lakh

e. None of the above.

Strategic Cost Management

516. Product differentiation can be achieved through

a. Dealer network

b. Superior customer service

c. Tight cost control

d. Both (a) and (b) above

e. All of (a), (b) and (c) above.

517. Which of the following statements is/are **false**?

a. No individual firm is likely to span the entire value chain.

b. Value chain analysis is essential to determine exactly where in the chain customer value can be enhanced or costs lowered.

c. Value chain analysis requires an internal focus.

d. Both (a) and (c) above

e. None of the above.

518. Which of the following statements is/are **correct**?

a. ABC is based on historical costs.

b. ABC makes a differentiation between variable and fixed costs.

c. ABC is only as accurate as the quality of the cost drivers.

d. Both (a) and (c) above

e. All of (a), (b) and (c) above.

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519. Which of the following statements is/are **false**?

a. Target costs are predetermined costs calibrated from an internal analysis by industrial engineers.

b. Target costing leads to a market driven approach to accounting.

c. A target cost is the maximum manufactured cost for a product.

d. A target cost is arrived at by subtracting its expected market price from the required margin on sales.

e. Target costing is a cost management tool which reduces a product's costs over its entire life cycle.

520. Which of the following is **true** regarding target costing?

a. Target costing reduces the development cycle of a product.

b. Target costing can be used with complex products that require many subassemblies.

c. Target costing can be used to forecast future costs.

d. Both (a) and (c) above.

e. All of (a), (b) and (c) above.

521. In which of the following industries project life cycle costing is useful?

a. Projects in capital intensive industries.

b. Projects considering major expansion.

c. Projects sensitive to disruption due to down time.

d. Both (a) and (b) above.

e. All of (a), (b) and (c) above.

522. Which of the following is **not** a cause of relative cost advantage?

a. Product differentiation.

b. Efficient process technology.

c. Access to low cost distribution channels.

d. Superior management.

e. Economies of scale.

523. Which of the following costing concepts is designed for capturing a pre-determined market share?

a. Full costing.

b. Marginal costing.

c. Activity based costing.

d. Target costing.

e. Value based costing.

524. The system of costing which monitors and accumulates the costs incurred by the firm in maintaining or improving product quality is called

a. Activity based costing

b. Target costing

c. Quality costing

d. Life cycle costing

e. None of the above.

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Inflation Accounting

525. Which of the following can be termed as the objectives of inflation accounting?

a. Improving quality of financial information for decision making.

b. Providing a better basis for inter period comparison of financial statements.

c. To give effect to the changes in purchasing power of money while measuring the income and expenses during an accounting period.

d. Both (a) and (b) above.

e. All of (a), (b) and (c) above.

526. Which of the following statements is/are **incorrect**?

a. When prices are rising, holding higher levels of monetary assets would entail gains to the business.

b. When prices are rising, monetary liabilities decrease the gains accruing to the business.

c. When prices are rising, monetary liabilities increase the gains accruing to the business.

d. Both (a) and (b) above.

e. All of (a), (b) and (c) above.

527. As per the CPP method, the formula used for converting opening stock value to current purchasing power is

a. Opening stock value x Index at the end of the accounting period/Index in the period of purchase.

b. Opening stock value x Index in the period of purchase/Index at the end of the accounting period.

c. Opening stock value x Index at the end of the accounting period/Average index during the accounting period.

d. Opening stock value x Average index during the accounting period/Index at the end of the accounting period.

e. Opening stock value x Index at the end of the accounting period/Index in the beginning of the accounting period.

528. Which of the following is a shortcoming of the CPP method?

a. Distorted figures due to adoption of general price index.

b. Difference between the converted figures in the financial statements and the current replacement value of such items.

c. Recognition of gain on long-term liabilities as they would be paid back in money of low purchasing power.

d. Both (a) and (b) above.

e. All of (a), (b) and (c) above.

529. The value obtained on disposal of an asset is called

a. Realizable value

b. Replacement value

c. Economic value

d. Historical value

e. Residual value.

530. Which of the following **does not** influence the cost of capital?

a. Market value of equity

b. Market value of the firm

c. Cost of preference capital

d. Marginal tax rate

e. Rate of inflation.

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531. Which of the following statements is/are **true** regarding the current purchasing power method of inflation accounting?

i. The unit of measurement is generally the general purchasing power of the rupee as on the balance sheet date.

ii. All items are classified into monetary and non-monetary assets and liabilities.

iii. All items are classified into current and non-current assets and liabilities.

a. Only (i) above

b. Only (ii) above

c. Only (iii) above

d. Both (i) and (ii) above

e. Both (i) and (iii) above.

Corporate Risk Management

532. Which of the following statements is **true**?

a. Both systematic as well as unsystematic risk has bearing on the required rate of return.

b. Only unsystematic risk has bearing on required rate of return.

c. Only systematic risk is priced and has an influence on required rate of return.

d. Although unsystematic risk may have no bearing on the required rate of return in the financial market, unmanaged unsystematic risk can and often does hurt shareholders.

e. Both (c) and (d) above.

533. Which of the following statements defines risk?

a. Possibility of actual outcome being different from the expected outcome.

b. There are a number of specific, probable outcomes, but it is not certain as to which one of them will actually happen.

c. There are a number of probable outcomes, the outcomes being unknown and it is not certain as to which one of them will actually happen.

d. Only (a) above

e. Both (a) and (b) above.

534. Which of the following statements is/are **false**?

a. Risk is generally measured using the concept of standard deviation.

b. The degree of risk present in a particular situation is an absolute, independent amount.

c. Degree of risk is dependent on the level of information available with the entity facing the risk.

d. As the market value of a firm's shares is closely related to the profit earned by it, corporate risk can also be termed as the possibility of a company's actual profits after tax (PAT) being different from the expected PAT.

e. Both (c) and (d) above.

535. Which of the following statements is **true**?

a. A firm that has borrowed money on a floating rate basis faces the risk of lower profits in an increasing interest rate scenario.

b. In an increasing interest rate scenario, a firm having fixed rate assets will encounter a higher value for its investments.

c. A firm that has fixed rate borrowings and floating rate investments has a higher exposure than a firm having fixed rate borrowings and fixed rate investments for the same term.

d. Both (a) and (c) above.

e. All of (a), (b) and (c) above.

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536. Which of the following statements is **false**?

a. A profitable firm will have little or no liquidity risk.

b. Liquidity risk may also refer to the possibility of a firm having excess funds, and no profitable avenues for deployment.

c. Liquidity risk and wrong capital structure are the prime reasons for financial risk.

d. Market risk is also known as price risk.

e. Interest rate risk and exchange risk contribute most to the presence of market risk.

537. Risk of the assets of a firm **not** being readily marketable is called

a. Market risk

b. Marketable risk

c. Business risk

d. Financial risk

e. Exchange risk.

538. Which of the following is an external business risk?

a. Labor strike

b. Machinery breakdown

c. Changes in customer preferences

d. Government policy

e. Both (c) and (d) above.

539. Which of the following is **false** regarding 'Options'?

a. The value of an option does not depend on price of the underlying asset.

b. Options give you the right, but not the obligation, to buy or sell an asset.

c. Options cannot be used to hedge commodities.

d. Both (a) and (c) above.

e. All of (a), (b) and (c) above.

540. Which of the following statements are **false**?

a. Hedging transactions are zero-NPV transactions when trading is costless and markets are completely efficient.

b. When you buy or sell a futures contract the price is fixed today but payment is made at a later stage.

c. A holder of a financial futures contract is eligible for dividends and interest payments made on the underlying security.

d. A holder of a futures contract forgoes the convenience yield on the underlying commodity.

e. Purchasing a commodity in the futures market enables the holder to save on storage, insurance and wastage costs.

541. A currency swap involves

a. An exchange of principal amounts today

b. An exchange of interest payments during the currency of the loans

c. A re-exchange of principal amounts at the time of maturity

d. An exchange of principal and interest in one currency with principal and interest in another currency

e. All of the above.

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542. Which of the following statements is/are **false**?

a. A firm having fixed rate assets faces the risk of lower value of investments in decreasing interest rate scenario.

b. A firm having fixed rate assets faces the risk of lower value of investments in an increasing interest rate scenario.

c. Interest rate risk becomes prominent when the assets and liabilities of a firm do not match in their exposure to interest rate movements.

d. Exchange risk occurs due to interlinkages between the various markets.

e. Liquidity risk also refers to the possibility of having excess funds and no profitable avenues for deployment.

543. The concept of Value at Risk (VAR) is closely linked to which of the following concepts?

a. Mean

b. Standard deviation

c. Normal distribution

d. Both (a) and (c) above

e. All of (a), (b) and (c) above.

544. Which of the following statements is/are **true** regarding Value at Risk (VAR)?

a. VAR is a statistical measure calculated over a specific investment horizon.

b. VAR measures the expected loss arising due to normal market movements in the variables responsible for the portfolio's risk.

c. VAR does not make a distinction between the downside movements and upside movements of risk.

d. Both (a) and (b) above

e. All of (a), (b) and (c) above.

545. Value At Risk (VAR)

a. Cannot be used to quantify the risk arising out of individual assets/liabilities

b. Can be used to lay down the policy for the level of overall risk that is acceptable to the management.

c. Does not measure 'event' risk

d. Both (b) and (c) above

e. Both (a) and (c) above.

546. Creation of exposures in the normal course of business which offset the existing exposures is called

a. Exposure netting

b. Leading

c. Lagging

d. Hedging

e. None of the above.

547. Asset-liability management can be used to manage

a. Exchange risk

b. Interest rate risk

c. Default risk

d. Liquidity risk

e. Both (a) and (b) above.

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548. Which of the following statements is/are **false**?

a. Price of systematic risk is identical for all the participants in the financial market.

b. In terms of the discounted cash flow model of firm valuation, unsystematic risk may lower the expected cash flows, even though it has no influence over the discount rate.

c. In an interest rate swap there is no exchange of principal repayment obligations.

d. Both (a) and (b) above

e. None of the above.

549. Which of the following statements is **false**?

a. An option holder is the seller of the option.

b. Options represent a special kind of financial contract under which the option holder enjoys the right, but has no obligation to do something.

c. An European option can be exercised only on the expiration date.

d. An American option can be exercised on or before the expiration date.

e. Both (c) and (d) above.

550. Which of the following is **not** a feature of a warrant?

a. Warrants cannot be issued independently.

b. Warrants are typically exercisable for cash.

c. Warrants give the holder a call option on the equity stock of the company.

d. Both (a) and (b) above.

e. None of the above.

551. FCD's will require a compulsory credit rating if the conversion period

a. Is less than 12 months

b. Exceeds 12 months

c. Is between 12 and 24 months

d. Exceeds 24 months

e. Exceeds 36 months.

552. The distance between the actual price of the warrant and its lower limit is a function of which of the following factors?

a. Variance of the stock returns

b. Time to expiration

c. Risk-free interest rate

d. Both (a) and (b) above

e. All of (a), (b) and (c) above.

553. Which of the following statements is **correct**?

a. The interest rate on convertible debentures or debentures with warrants is typically lower than that on straight debentures.

b. A call option cannot have a negative value.

c. Convertible debentures and debentures with warrants make sense when it is costly or difficult to assess the risk characteristics of the issuing firm.

d. Both (a) and (b) above.

e. All of (a), (b) and (c) above.

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554. Financial swaps may be induced by which of the following factors?

a. Spread compression.

b. Market segmentation.

c. Market saturation.

d. Both (a) and (b) above.

e. All of (a), (b) and (c) above.

555. If the value of call option is given as 19.8, present value of exercise price is 108.7 and the stock price is Rs.120, then the value of put option is

a. Rs. 8.50

b. Rs. 31.10

c. Rs. 208.90

d. Rs. 248.50

e. Rs. 278.50.

556. Which of the following statements pertain to a forward contract?

a. These are standardized contracts.

b. These are traded in secondary markets.

c. Traders in these contracts have to meet margin requirements with the exchange.

d. These contracts usually end with deliveries.

e. These are traded in separate exchanges.

557. Which of the following is a key difference between forwards and futures?

a. There is no secondary market for futures whereas forwards are traded in organized exchange.

b. Forward contracts usually do not end with deliveries whereas futures are.

c. There is no margin requirements in case of futures.

d. Forwards are marked to the market on a daily basis.

e. A future is a standardized contract whereas a forward is a tailor made one.

558. Which of the following statements is **true**?

a. Managing risk is more important than minimizing borrowing costs.

b. Firms often reduce some exposures, leaving others unhedged.

c. The principal emphasis of a firm in risk management is hedging translation exposure.

d. The most widely used instrument in hedging foreign exchange risk is futures contract.

e. Most of the large Indian companies have formally stated risk management policy.

559. An importer in the United States is due to take delivery of silk sarees from India in 6 months. The price is fixed in Rupees. Which of the following transactions would eliminate the importer's exchange risk?

a. Sell 6-month call option on rupee.

b. Buy rupee forward.

c. Sell rupee forward.

d. Sell rupee in the currency futures market.

e. Buy 6-month put option on rupee.

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560. A comparison of the forward and futures markets reveals that

a. While the size of the contract is tailored to individual needs in a futures contract, it is standardized in a forward contract

b. While a margin money is required for a futures contract, no such thing is required for a forward contract

c. While futures contracts are normally settled by actual delivery, forward contracts are mostly cash settled

d. While futures contracts are finalized over the telephone, forward contracts are finalized on proper exchange floors

e. Both (c) and (d) above.

561. The term "option premium" refers to

a. The exercise price of an option

b. The premium over the exercise price that has to be paid by the buyer of the contract

c. The price of an option

d. The loss borne by an option writer

e. The profit made by the purchaser of the option when it becomes "in the money" for him.

562. The future price of a commodity will be higher if

a. Risk-free interest rate is higher

b. Storage costs are lower

c. Convenience yield is higher

d. Spot price is lower

e. Both (a) and (d) above.

563. The exercise price of a call option on a stock is Rs.100. Then which of the following statements is/are **true**?

a. The option is said to be 'in-the-money' if the stock price is more than Rs.100.

b. The option is said to be 'in-the-money' if the stock price is less than Rs.100.

c. The option is said to be 'at-the-money' if the stock price is less than Rs.100.

d. The option is said to be 'out-of-the- money' if the stock price is less than Rs.100.

e. Both (a) and (d) above.

564. Which of the following statements is/are **true**?

i. The pay-off from buying a put option is the same as writing a call option.

ii. A warrant is a call option on the equity of the company.

iii. European options can be exercised at any time up to maturity.

a. Only (i) above

b. Only (ii) above

c. Only (iii) above

d. Both (i) and (ii) above.

e. Both (ii) and (iii) above.

565. Insurance is a form of risk management by

a. Risk avoidance

b. Risk separation

c. Risk transfer

d. Risk retention

e. Loss Control.

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566. Which of the following theories assumes that the risk premium must necessary rise with maturity?

a. Preferred Habitat Theory

b. Market Segmentation Theory

c. Liquidity Preference Theory

d. Expectation Theory

e. None of the above.

Risk Management and Corporate Strategy

567. Three major reasons to study international finance include:

a. To understand a global economy

b. To understand the impact of global finance on businesses

c. To understand the imperatives of on the Global Economy European Union

d. To make intelligent personal decisions

e. (a), (b), and (d).

568. Which of the following is the primary objective of a firm?

a. Employees benefits.

b. Satisfaction of customers.

c. Satisfaction of suppliers.

d. Prompt payment to creditors.

e. Maximize stockholder wealth.

569. Financial risk involves

a. Fluctuation in exchange rates

b. Different interest and inflation rates

c. Balance of payments position

d. (a) and (b)

e. (a), (b) and (c)

570. Managers are generally defined as

a. Stockholders

b. Agents

c. Creditors

d. Suppliers

e. Customers

571. Incentives for multinational company managers do **not** include the following

a. Stock options

b. Bonuses

c. Perquisites

d. Salary increases

e. Vacation

572. Given below an Environmental factors affecting international operations **except**

a. International distances

b. Foreign economic factors

c. Foreign political situations

d. Foreign legal aspect

e. Foreign customs.

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573. Three major risks in international business are

a. Political, financial and weather
b. Economic, political and people
c. Political, financial and regulatory
d. Accounting, management and information
e. Marketing, ethics and political.

574. Conflicts of interest for multinational corporations do **not** include which of the following statements?

a. The interests of sovereign governments may be different.
b. The goals of multinationals are divergent from host countries.
c. Some conflicts may exist within multinational subsidiaries.
d. Multinational companies may conflict with local laws.
e. Multinational managers live in different time zones.

575. To maximize shareholder value, US companies have increased

a. Profit margin on sales and asset turnover
b. Asset dispositions
c. Dividends and share purchases
d. The utilization rate of assets
e. Mergers and acquisitions.

576. The conflict between owners, employees, suppliers, and customers of a company is known as

a. Regulatory risk
b. Problem of agency
c. Conflict of multiple environments
d. Conflict of interests
e. None of the above.

577. The main differences between domestic and international companies from a financial manager's point of view are largely due to differences in

a. Risks
b. National laws
c. Economic factors
d. Political factors
e. All f the above.

578. A global company is an organization that attempts to

a. Have a worldwide presence in its market
b. Integrate its operations worldwide
c. Standardize operations in one or more of the company's functional areas.
d. Both (a) and (b) above
e. All of (a), (b) and (c) above.

579. Corporate governance is often narrowly defined as the prudent exercise of ownership rights toward the goal of increased:

a. Shareholder value
b. profit
c. profit margin on sales
d. asset turnover
e. sales volume.

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580. The OECD Principles of Corporate Governance covers:

a. The rights of shareholders

b. The equitable treatment of shareholders

c. The responsibilities of the board

d. Disclosure and transparency

e. The rights of suppliers.

581. The price of a futures contract is higher than the price of an otherwise identical forward contract when

a. Price changes of the underlying asset are positively correlated with changes in the interest rates

b. Price changes of the underlying asset are negatively correlated with changes in the interest rates

c. Price changes of the underlying asset are unrelated with changes in the interest rates

d. Both (a) and (b)

e. Both (a) and (c)

582. Which of the following situations contains a riskless arbitrage opportunity?

a. F = $ 104.65, d = 1.10, r = 1.15, S = $ 100.00, t = 1.

b. F = $ 56.77, d = 1.00, r = 1.05, S = $ 55.00, t = 0.75.

c. F = $ 65.00, d = 1.00, r = 1.00, S = $ 60.00 , t = 30.

d. (b) and (c) only.

e. All of (a), (b) and (c) above.

583. Which of the following quantities does the price of a European call **not** have to be greater than or equal to in the absence of riskless arbitrage?

a. 0

b. S – K

c. S x d-t – K x r-t

d. All of the above.

e. None of the above.

584. On June 26 an American company learns that it will have to pay 200,000 German Marks to buy some raw materials from a German company on August 15. It enters into the appropriate futures agreement on June 26. In general, what does entering into the futures agreement do to the cost of the raw materials as measured in U.S. dollars?

a. Increases the dollar cost.

b. Decreases the dollar cost.

c. Neither increases nor decreases the dollar cost.

d. Might or might not affect the dollar cost.

e. Either (c) or (d).

585. In the hedging example given in the previous question, what does entering into the futures agreement do to the variability of the cost of the raw materials as measured in U.S. dollars?

a. Increases the variability of the cost as measured in dollars.

b. Decreases the variability of the cost as measured in dollars.

c. Does not change the variability of the cost as measured in dollars.

d. Cannot be assessed.

e. Either (c) or (d).

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586. Suppose Dell stock is trading for Rs.120/share, today and Dell stock pays no dividends, and the risk-free rate for one-half year period is 7% (on an annualized basis). Also suppose that a Dell call with strike price 150 that expires in one-half of a year has a price of Rs.45. To the nearest penny, what does the price of a Dell put with strike price 150 that expires in one-half of a year have to be, to rule out the existence of a risk less arbitrage opportunity?

a. Rs.65.01

b. Rs.70.01

c. Rs.75.01

d. Rs.80.01

e. None of the above.

Practice of Hedging

587. Which one of the following statements regarding hedging is **true**?

a. Hedging is adding securities to an existing portfolio to increase the overall return.

b. Hedging is a strategy used by investors to reduce the risk of a portfolio.

c. Hedging is a strategy used by investors to increase both the risk and return of a portfolio

d. Hedging is a strategy used to increase portfolio volatility.

e. None of the above.

588. The presence of risk means that

a. More than one outcome is possible

b. Investors will lose money

c. The standard deviation of the payoff is larger than its expected value

d. Final wealth will be greater than initial wealth

e. Terminal wealth will be less than initial wealth.

589. Adding a home insurance policy to your portfolio of assets is an example of

a. Speculating

b. Asset dominance

c. Risk neutrality

d. Aversion to risk

e. Hedging

590. If a T-bill pays 5 percent, which of the following investments would not be chosen by a risk-averse investor?

a. An asset that pays 10 percent with a probability of 0.60 or 2 percent with a probability of 0.40.

b. An asset that pays 10 percent with a probability of 0.40 or 2 percent with a probability of 0.60.

c. An asset that pays 10 percent with a probability of 0.30 or 3.75 percent with a probability of 0.70.

d. An asset that pays 10 percent with a probability of 0.20 or 3.75 percent with a probability of 0.80

e. Neither a nor b would be chosen.

591. One reason swaps are desirable is that

a. They are free of credit risk

b. They have no transactions costs

c. They offer participants easy ways to restructure their balance sheets

d. They increase interest rate risk

e. They increase interest rate volatility.

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592. In the equation Profits = a + b($/£ exchange rate), b is a measure of

a. The firm's beta when measured in terms of the foreign currency

b. The ratio of the firm's beta in terms of dollars to the firm's beta in terms of pounds

c. The sensitivity of the exchange rate to profits

d. The sensitivity of profits to the exchange rate

e. The frequency with which the exchange rate changes.

593. Arbitrage proofs in futures market pricing relationships

a. Rely on the CAPM

b. Incorporate transactions costs

c. Demonstrate how investors can exploit misalignments.

d. Both (a) and (c)

e. Both (b) and (c).

594. The terms of futures contracts such as the quality and quantity of the commodity and the delivery date are

a. Specified by the buyers and sellers

b. Specified by the futures exchanges

c. Specified only by the buyers

d. Specified by brokers and dealers

e. Both (b) and (c)

595. The open interest on silver futures at a particular time is the

a. Number of all silver futures outstanding contracts

b. Number of all silver futures outstanding contracts

c. Number of silver futures contracts traded the previous day

d. Number of silver futures contracts traded during the day

e. Both (b) and (c).

596. Financial futures contracts are actively traded on the following indices except

a. The Dow Jones Industrial Index

b. The New York Stock Exchange Index

c. The Nikkei Index

d. The S&P 500 Index

e. All of the above indices have actively traded futures contracts.

597. The expectations hypothesis of futures pricing

a. Is not a zero sum game

b. States that the futures price equals the expected value of the future spot price of the asset.

c. Is the simplest theory of futures pricing

d. (a) and (b)

e. (b) and (c).

598. Which of the following items is specified in a futures contract?

i. The maximum acceptable price range during the life of the contract.

ii. The contract size.

iii. The market price at expiration.

iv. The acceptable grade of the commodity on which the contract is held.

v. The settlement price.

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a. (i) and (v)

b. (i), (ii), and (iv)

c. (i), (iii), and (v)

d. (ii), (iv), and (v)

e. All of the above.

599. Hedging may reduce agency costs because:

a. Some of the uncertainty about a manager's lifetime income has been diversified away

b. The shareholders will always prefer volatile projects while the debtholders will prefer non-volatile ones

c. Risk-averse employees will demand a risk premium from a firm that is more likely to be in financial distress

d. Customers will think twice about purchasing goods from a company that may not be able to offer long-term customer service

e. A reduction in the variability of the firm's cash flows may reduce the likelihood for conflicts between the debt holders and the shareholders.

600. Which of the following statements represent capital market imperfections?

i. Agency costs.

ii. The difference between half of the bid-ask spread between the spot and forward Markets.

iii. The potential costs from renegotiating a loan that has gone into default.

iv. The lost time value from having to carry forward losses into a successive tax year.

v. Fees for liquidators, lawyers, and courts in the case of bankruptcy.

a. (ii) only

b. (v) only

c. (i) and (v) only

d. (ii) and (iii) only

e. (ii), (iii) and (v) only

601. Interest-rate parity refers to the concept that, where market imperfections are few because

a. The same goods must sell for the same price across countries

b. Interest rates across countries will eventually be the same

c. There is an offsetting relationship between interest rate differentials and differentials in the forward spot exchange market

d. There is an offsetting relationship provided by costs and revenues in similar market environments

e. Both (b) and (c).

602. The forward market is especially well-suited to offer hedging protection against

a. Translation risk exposure

b. Transactions risk exposure

c. Political risk exposure

d. Taxation

e. Economic exposure.

603. Suppose that the Japanese Yen is selling at a forward discount in the forward-exchange market. This implies that most likely

a. This currency has low exchange-rate risk

b. This currency has high exchange-rate risk

c. This currency is gaining strength in relation to the dollar

d. Interest rates are higher in Japan than in the United States

e. Interest rates are declining in Japan.

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604. All of the following are hedges against exchange-rate risk **except**

a. Balancing monetary assets and liabilities

b. Use of spot market

c. Foreign-currency swaps

d. Adjustment of funds commitments between countries

e. Use of forward contracts.

605. A multinational can centralize cash management and attempt to reduce exchange rate risk exposure through the use of

a. a reinvoicing center

b. a bill of lading

c. a time draft

d. countertrade

e. Both (a) and (c).

606. Forfaiting most closely resembles

a. export factoring

b. Countertrade

c. Netting

d. Reinvoicing

e. Either (a) or (b).

607. Which of the following is/are **false**?

i. In perfect markets, a manager's decision to hedge a firm's cash flows is irrelevant because there is no exchange rate risk

ii. In perfect markets, a manager's decision to hedge a firm's cash flows is irrelevant because the shareholders can hedge exchange risk themselves

iii. If a large firm keeps track of the exposure of each of its divisions, the firm has better information about each division, and is therefore better able to make decisions

iv. If a firm does not have a hedging policy, the managers may insist on higher wages to compensate them for the risk they bear because part of their lifetime future wealth is exposed to exchange rate risk

a. (i) only

b. (i) and (ii) only

c. (ii) and (iii) only

d. (ii) and (iv) only

e. (i), (ii) and (iv) only

608. Which of the following is \are **true**?

a. The risk-adjusted expected tax savings from borrowing in your local currency always equals the present value of the expected tax savings from borrowing in a foreign currency.

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609. Determine which statements below is/are valid reasons for the manager of a firm to hedge exchange rate risk and which are not

i. The manager should use hedging in order to minimize the volatility of the cash flows and therefore the probability of bankruptcy even though the expected return on the firm's stock will also be minimized.

ii. Firms may benefit from economies of scale when hedging in forward or money markets, while individual shareholders may not.

iii. When a firm's cash flows are highly variable, the chance of financial distress is greater, and financial distress is costly in imperfect markets.

iv. Shareholders do not have sufficient information about a firm's exposure.

v. Risk averse employees demand a risk premium when the volatility of a firm's cash flows exceeds the level of the firm's debt.

a. (i) only

b. (i) and (v) only

c. (ii) and (iv) only

d. (ii) and (v) only

e. (ii), (iii) and (iv) only

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Part I: Answers with Explanatory Notes

Introduction to Strategic Management

1. ***(c)*** The term business level refers to that organization level at which the responsibility for the formulation of a multifunctional strategy is determined. In a multi industrial company, the business level normally corresponds to the divisional level and in a single product line firm, the business and corporate levels result in the same level.

2. ***(a)*** Strategic management is defined as the set of decisions and actions that result in the formulation and implementation of plans designed to achieve a company's objectives. It comprises nine critical tasks.

3. ***(d)*** For a multi-business firm, the business level would normally correspond to the divisional level.

4. ***(a)*** The managers at business level must translate the corporate strategy into concrete objectives for their individual businesses or divisions such that these business level strategic decisions determine the firm's competitive stance in the selected product-market arena.

5. ***(c)*** Functional level managers comprising the product, geographic and functional managers develop short range objectives and strategies and have the primary responsibility of implementing and executing the firm's strategic plans.

6. ***(d)*** Corporate and business level managers focus their attention on 'doing the right things' whereas managers at the functional level focus their attention on 'doing things right'.

7. ***(c)*** Strategy includes the determination and evaluation of alternative options to achieve an organization's objectives and mission. Thus it includes a choice of the alternative option that is to be adopted.

8. ***(b)*** Technological developments are a part of remote external environment.

9. ***(a)*** Strategic planning concentrates on self-development of organization and the individual for obtaining better results.

10. ***(a)*** Leverage ratios indicate a firm's financial risk. Liquidity ratio measures a firm's capacity to meet its short-term financial obligations. Activity ratios reflect the firm's efficiency in resources utilization. Profitability ratios provide a firm's over all economic performance.

11. ***(a)*** The smaller firms follow an entrepreneurial mode of formality, i.e. they are under the control of a single individual and they produce a limited number of products.

12. ***(e)*** The remote external environment comprises economic and social conditions, political priorities and technological developments. Government agencies and their regulations are a part of the immediate external environment.

13. ***(a)*** The concept of strategic management includes various activities, including the determination, formulation, implementation and evaluation of strategy.

14. ***(c)*** The process of strategy implementation calls for changes in the overall culture, organizational structure, and/or management system.

Strategic Management Process

15. ***(c)*** Strategic analysis enables a firm to identify a range of possible attractive opportunities that reflect possible avenues for investment.

16. ***(a)*** Long-term objective refers to those results that an organization seeks to achieve over a number of years. They involve areas like profitability, employee relations, technological development, productivity, etc.

17. ***(d)*** Grand strategy is a unique package of long-term strategies. It is a statement that indicates the means for achieving the objectives.

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18. *(c)* Operating strategies provide the means for achieving annual objectives. The company budget is coordinated with the needs of operating strategies to ensure specificity, practicality and accountability in the plans.

19. *(c)* Henry Mintzberg has classified strategic decision-making into three different modes: entrepreneurial, adaptive and planning.

20. *(a)* Standard operating procedures give directions to managers and their subordinates to guide their thoughts, decisions, and actions while implementing the organizations strategy.

21. *(d)* The four basic elements in the strategic management process are environmental scanning, strategy formulation, strategy implementation and evaluation and control.

22. *(b)* Environmental scanning refers to the monitoring, evaluating and dissemination of information from the internal and external environment to the decision makers within the firm. It identifies the strategic factors that may determine the future of the firm.

23. *(b)* Policies are directives given to managers and their subordinates to guide their thoughts, decisions, and actions while implementing the organization's strategy.

24. *(a)* Procedures or the standard operating procedures describe in detail the sequential steps or techniques for carrying out jobs. It describes the various activities that must be carried out to complete the corporation's program.

25. *(b)* The line managers also are heavily involved in strategy formulation and implementation, apart from top level management. They have to develop corporate strategies for their own units within the overall guidelines of the corporate strategy.

26. *(b)* As resources are limited and strategic decisions are closely related to resources, a centralized corporate portfolio approach to strategy is useful in diversified organizations.

27. *(a)* The strategies which are formulated produce excellent results only if they are well implemented. The strategic planning process acts as a bridge between strategy formulation and strategy implementation.

28. *(a)* Rational or formal planning is the process of logically approaching the task of identifying the ends an organization pursues, and the means by which those ends are achieved. It requires cooperation between managers working at the corporate, business and operational levels.

Company Mission

29. *(b)* Market, product and principal technology are considered as the three indispensable components of a mission statement.

30. *(d)* The mission statement is an enduring statement of instruction of an organization and it refers to the philosophy of business in order to build the image of the company by activities currently pursued by the organization and its future status.

31. *(d)* Apart form options (a), (b) and (c), another requirement of a bumper-sticker strategy is that the business must be organized distinctively, to make it peculiarly able to deliver the strategy. Also, the business must be absolutely committed to doing so.

32. *(b)* Market, product and principal technology are considered as the three indispensable components of a mission statement. To describe the business activity of a company, a combination of these three components of mission statements is necessary.

33. *(c)* The purpose of a company's goal is to specify with precision what must be done if the company is to attain its mission.

34. *(a)* Profitability is the primary goal of a business organization. If measured on a long run basis, profit is accepted as the clearest indication of a firm's ability to satisfy the principal claims of employees and stock holders.

35. *(b)* Decisions based on short-term concern for profitability would lead to strategic myopia.

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36. ***(a)*** A company's philosophy reflects the basic beliefs, values, aspirations, guiding principles and philosophical priorities that the strategic decision –makers are committed to emphasize in their management of the firm.

37. ***(a)*** The mission statement of any company reflects the survival, growth and profitability.

Analyzing the External Environment

38. ***(a)*** Analysis of economic factors is necessary as every market is unique and consumption patterns change along with the wealth of the consumers in various market segments.

39. ***(b)*** The operating environment which includes factors in the immediate competitive situation regarding procurement of resources, profitability for the company from their products and services etc, is also known as task or competitive environment.

40. ***(d)*** If the existing firms are experiencing economies of scale then it acts as a barrier to entry for the new entrants.

41. ***(c)*** The purchasing power of the customers can be better determined by their personality and life styles than demographic and geographic variables. A psychographic study is considered to be an important component of the total profile.

42. ***(a)*** The bargaining power of suppliers will increase if the product sold by the suppliers has less substitutes.

43. ***(a)*** In order to identify the opportunities and threats, it is the duty of the managers to analyze the competitive forces in the industry's environment. The managers can use the five forces model to analyze this.

44. ***(d)*** Brand name does not have any salvage value and thus the investment made has to be foregone forever.

45. ***(c)*** The customers are buyers who ultimately buy and consume the products. They can develop a competitive threat by demanding lower prices and better service.

46. ***(c)*** When the suppliers are weak, the company can take advantage of lowering the prices of the inputs with improved quality. If the suppliers are strong, the company must pay more for its inputs or have to satisfy with low quality materials.

47. ***(b)*** Growing demand from either new customers or additional purchases by existing customers tends to reduce rivalry among the companies because increased requirement for the products creates opportunities for companies to expand.

Evaluating the Multinational Environment

48. ***(b)*** These multi national companies face difficulties because of the different competitive arenas. Thus, an awareness of opportunities and threats in the domestic industry is necessary for the success for any multi national corporation.

49. ***(e)*** Self-explanatory.

50. ***(a)*** Political status refers to the political environment prevailing in the host country and is based on the host nation's power and leaves an impact on international affairs.

51. ***(c)*** The internal strengths are particularly considered to be important in the international operations because the bargaining leverage of the company depends upon these elements valued most by the host nation.

52. ***(a)*** Even though the multi national corporations are involved in the multi-domestic industry, competition that occurs internally in a country is independent of the competition in other countries.

53. ***(d)*** The public image is often shaped from a marketing view point.

54. ***(b)*** The selection of pure global strategy depends upon a high co-ordination and geographical concentration of the multi national's activities.

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Internal Analysis of the Company

55. *(b)* Internal analysis provides the means of identifying the strengths to build on and the weakness to overcome during strategy formulation.

56. *(c)* When the finished goods are ready, the manufacturing operations end there. Thus the warehousing of finished goods is not included in manufacturing operations.

57. *(b)* General administration comes under the support activities. The other primary activities are inbound logistics, outbound logistics and service.

58. *(d)* Capital-labor substitution refers to substituting capital for labor and vice versa. Economies of scale refer to the reductions in cost per unit of output as volume of output increases. Learning refers to understanding the role of specialization and its advantages.

59. *(d)* The research and development function either supplements a product-oriented effort or improves the production processes. R&D is accomplished at great expense, but is a vital necessity if the firm is to prosper or even survive.

60. *(b)* Financial statement analysis can be made to draw future trends but is based on the basic assumption that conditions will remain similar enough to extrapolate data.

61. *(a)* Fixed charge coverage ratio = (EBIT + interest expense + lease obligations)/(interest expense + lease obligations). This ratio comes under leverage ratios.

62. *(c)* Research and development function is considered as a vital necessity if the firm is to prosper or even survive.

63. *(d)* In marketing function, information is brought to the organization and forwarded to its customers. Thus, marketing is a vital communication link between the organization and the outside world.

64. *(a)* Sales forecast forms a basis for budget and financial planning and market research forms a basis for product development.

65. *(c)* Product research and development process is concerned with the innovations of a firm's products, process research and development attempts to reduce the costs of operations and seeks constant improvement in quality through more efficient process.

66. *(a)* Product research and development process is concerned with the innovation/implementations of a firm's products.

Company Culture and Values

67. *(d)* The shared internalized beliefs and values shape the content and account for major strength of an organization's culture.

68. *(c)* Companies with strong cultures are enthusiastic collectors and tellers of stories, anecdotes and legends in support of basic beliefs.

69. *(b)* A firm requiring only a few organizational changes to implement the new strategy given that these changes are potentially compatible with the current culture, can follow two broad themes:

i. Reinforce and maintain the current culture.

ii. Remove various existing organizational road blocks to bring in the desired culture.

70. *(b)* The key components of a firm (structure, staff, systems, style and people) influence the formation of critical management relationships. Strategy depends on these relationships between a firm's culture and the critical factors that form an organization.

71. *(d)* Firms which need many changes in key organizational factors with these changes having high potential compatibility with the current culture, usually perform effectively. They either seek to take advantage of a major opportunity or attempt to redirect major product-market operations consistent with proven core capabilities. Also, these firms which have linkage to mission are usually in a very promising position. They can pursue a strategy that requires major changes but still benefit from the power of cultural reinforcement.

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72. *(c)* A simple structure prevails in a simple organization. Apart from maximizing the CEO's control, the simple structure allows rapid response to product or market shifts and has the ability to accommodate unique customer demands without any co-ordination difficulties.

73. *(c)* Functional structure also allows the firms to seek and foster distinct competencies in one or more functional areas leading to the firm's overall strength and core competency.

74. *(b)* A matrix organizational form is one that provides and controls skills and resources where and when they are required most.

75. *(b)* While the content of a culture determines the direction of influence of culture on the organizational behavior, the intensity of a culture affects the behavior depends on a culture's strength.

76. *(b)* Managers in organizations with adaptive cultures are able to introduce changes in the way the organization operates, including changes in its strategy and structure that allow the organization to adapt to changes occurring in the external environment.

77. *(b)* The clan control mechanism relies on shared values and beliefs. It derives itself from cultural settings. A strong culture facilitates the control process by enhancing the clan control. It is highly effective in selective environments.

78. *(b)* As per the definition given by Koontz O Donnel "An objective is a term commonly used to indicate the end point of a management program."

Formulating Long-term Objectives and Strategy

79. *(d)* All these forces influence the selection of basic objectives. Also, these factors must be analyzed as part of the strategic planning process.

80. *(c)* Objectives improve the effectiveness of an organization by producing three major benefits: providing direction, serving as standards for evaluating performance, and motivating members of an organization.

81. *(a)* At the peak point of the hierarchy are the socio-economic objectives, such as requiring the organization to contribute to the welfare of the people by providing goods and services at reasonable cost.

82. *(c)* A divestiture strategy involves the sale of a firm or a major component of a firm. It is a retrenchment strategy.

83. *(a)* A grand strategy can be defined as a comprehensive general approach that guides a firm's major actions. They provide basic direction for strategic actions.

84. *(a)* The main rational for concentration approach is that the firm thoroughly develops and exploits its expertise in a delimited competitive arena.

85. *(a)* When a firm's long-term strategy is based on growth through acquisition of one or more similar firms operating at the same stage of the production-marketing chain, its grand strategy is referred to as horizontal strategy.

86. *(a)* The purpose of joint venture is to combine the resources and expertise to develop new products or technologies. It also enables a firm to enter a country that restricts foreign ownership.

87. *(b)* Conglomerate or unrelated diversification is a diversification into a new business area that has no connection with any of the company's existing areas. The reasons for conglomerate diversification are reduction of risks, economies of large scale operation, financial stability and increased profits.

88. *(e)* In addition to the situations given in the options, retrenchment strategies are also considered if there is a poor economic condition, operating and product inefficiency, etc.

89. *(d)* The divestiture strategy is adopted when the firm wants to increase the efficiency of a strategic business unit or major operating division or product line that has failed to achieve the desired results.

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Strategic Analysis and Choice

90. *(e)* Both the options mentioned are the purposes of strategic analysis.

91. *(c)* The criteria of suitability measures the extent to which the proposed strategies fit the situation identified in the strategic analysis. It also indicates the opportunities and threats a firm faces.

92. *(a)* Criteria of feasibility analyzes whether the company has the financial resources for the implementation of strategy, capability of company at the required level etc.

93. *(b)* Under business portfolio approach, the company decides how the portfolio of business should be managed to achieve corporate objectives.

94. *(a)* Corporate portfolio analysis strategy has to be adaptable to multi product market/firms in which each product/market is managed as a separate business or profit center because the firm is not dominated by one product/market.

95. *(a)* Self-explanatory.

96. *(c)* Market growth rate represents the percentage growth in sales. It is measured as the percentage increase in a market's sales or unit volume over the two most recent years and it indicates the attractiveness of the markets served by each of the businesses in a company's portfolio.

97. *(a)* BCG matrix, developed by the Boston Consulting Group, facilitates corporate strategic analysis of likely generators and optimum users of corporate resources.

98. *(b)* Stars represent the best long run opportunities in the farm's portfolio. They generate their own large internal cash flows due to large-scale economies and cumulative production experience.

99. *(b)* Businesses with low growth rates but high market share are termed as cash cows. They are yesterday's stars and remain the current foundation of their corporate portfolios.

100. *(b)* Strategy formulation is referred to as long range planning and is concerned with developing a company's mission, objectives and strategies. It begins with the finding of a strategic fit between external opportunities and internal weaknesses.

101. *(a)* The strategies identified by SWOT analysis should improve an organization's business strength and opportunities and at the same time reduces its weakness and threats.

102. *(b)* Turnaround strategy is implemented in an organization if the weaknesses are evolved from its inefficiencies.

103. *(d)* Divestiture is included in Quadrant II of the strategy selection matrix. Firms in this quadrant choose to redirect resources from one business activity to another within the company.

104. *(e)* The strategies mentioned are present in Quadrant III of the strategy selection matrix.

105. *(b)* Innovation is chosen as a strategy when the business's strengths are in creative product design or unique production technologies.

106. *(a)* Risk oriented managers adapt high-risk strategies.

107. *(c)* Self-explanatory.

108. *(d)* A specific basis for monitoring and controlling organizational performance is provided by a comprehensive set of annual objectives. Such objectives can aid in the development of "trigger points" that alert top management to variations in key performance areas that might have serious ramifications for the ultimate success of the strategy.

109. *(d)* The guidance in assessing the ultimate effectiveness of a chosen strategy is provided through market share, return on investment, return on equity, stock price and new market penetration.

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110. *(c)* Identification and communication of annual objectives that relate logically to the strategy's long-term objectives is a critical step in the successful implementation of a strategy. The successful execution of the business's overall long-term plan is due to the accomplishment of these annual objectives.

Operationalizing the Strategy

111. *(a)* As the operating and personnel managers identify their role, the annual objectives can act as a major force in effectively mobilizing the "people asset" of a business.

112. *(c)* A functional strategy is the strategy which is usually a short-term game plan for a key functional area within a company.

113. *(b)* The short-term time horizon also allows functional managers to recognize current conditions and adjust to changing conditions in developing functional strategies.

114. *(c)* Specificity adds substance, completeness and meaning to what a specific sub unit of the business must do. Specificity gives clarity to top management regarding how functional managers intend to complete the grand strategy successfully. Also, specificity brings co-ordination between operating units within the company by clarifying areas of interdependence and potential conflict.

115. *(a)* A functional strategy for product component of the marketing function should take care of the customer needs by identifying and leading to customer satisfaction by providing them with quality product and service.

116. *(c)* Market-oriented approach gives the trend of the consumer demand and thus uses it for pricing the product or service.

117. *(b)* Retrenchment often requires a financial strategy that focuses on the reallocation of existing capital resources. It necessitates the pruning of product lines, production facilities or personnel to be reallocated elsewhere in the firm.

118. *(e)* For a functional strategy the time horizon is comparatively short. A functional strategy is more specific than a grand strategy as they are restricted to a company's subunits in carrying out certain functional activities in key areas.

119. *(a)* Human Resources management aids in completing the grand strategy successfully by ensuring the development of managerial talent, the presence of systems to manage compensation and regulatory concerns, the competitive development and well-motivated employees.

120. *(c)* The policies provide appropriate guidelines for the establishment and control of ongoing operations in a manner consistent with the firm's strategic objectives.

Strategy and Structure

121. *(e)*All the organizational elements mentioned provides fundamental means for institutionalizing the firm's strategy.

122. *(d)* Functional structure generally exists in the firms which concentrate on one or few related products/markets. The grouping of similar tasks and activities viz. production, marketing, accounting, research and development, as separate functional units with the organization is done by functional structures.

123. *(b)* Functional structures lead to greater efficiency and refinement of particular expertise and also allow the firm to promote distinct competencies among the functional areas.

Resource Management and Control

124. *(b)* In a decentralized approach, priorities would be decided centrally but after allowing all divisions and business units to formulate their own preferred strategies. The decisions taken under a decentralized approach should balance the potential financial gains with the strategic logic implied.

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125. ***(a)*** Mandatory policies tend to stop the efficient and effective thinking of managers and employees. They are unlikely to motivate managers.

126. ***(b)*** Explicit policies cover the major functional areas of business and provide a clear framework in which decisions can be made.

127. ***(d)*** Cash flow budget comes under the category of finance budgets. It serves as a vital tool for controlling cash and meeting current obligations. It also helps in forecasting cash receipts and outlays to indicate the total amount of funds required and the time at which they are required. Budgeted income statement and balance sheet budget are the other types of budgets under the finance category.

128. ***(c)*** Executive staff budget is a general management budget that indicates special expense accounts, compensation, and human resource requirements for higher levels of the organization. Research and development budget and branch and regional budget are the other types of budgets which come under the research and general management category.

129. ***(b)*** A procedure is a prescribed series of related steps to be taken under certain recurring circumstances.

130. ***(b)*** A budgeting process begins with the development of detailed economic, revenue and profit forecast. These forecasts are designed to meet organization goals and produce guidelines that can be used in budget preparation.

131. ***(d)*** Strategic control provides feedback about the various steps of strategic management. It enables the management to find out whether the strategic management processes are appropriate, compatible and functioning in the desired direction.

132. ***(c)*** The basic idea of strategic surveillance is that some form of general monitoring of multiple information sources should be encouraged.

133. ***(a)*** This is the basic purpose of strategic surveillance.

134. ***(d)*** A special alert control should trigger an immediate and intense reassessment of the company's strategy and its current strategic situation.

135. ***(b)*** Capital budgets outline specific expenditure for plants, equipment, machinery, inventories and other capital items needed during the budget period. They require care as they give definite form to plans for spending the funds of an enterprise.

136. ***(a)*** An expenditure budget is a statement that presents the financial plan for each department during the budget period. The expenditure budget for each functional unit and for sub functional activities can guide and control the individual execution of strategy.

137. ***(d)*** Operational controls are concerned with providing action controls. Operational control systems exist because operating managers need control methods appropriate to their level of strategy implementation. Budgets, schedules and key success factors are the three types of operational control systems.

The Value Chain and Competitive Scope

138. ***(b)*** The value chain analysis focuses on examining the organization in the context of the overall chain of these activities.

139. ***(c)*** Primary activities include design, creation and delivery of the product as well as its marketing and its support and after sales service. These activities are categorized into four functions viz. research and development, production, marketing and sales and service.

140. ***(c)*** The supportive activities mentioned provide inputs which allow the primary activities to take place.

141. ***(c)*** A company's infrastructure is considered to be very important because it has to do with the company wide context within which all the other value creation activities take place.

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142. *(d)* Coalitions are ways of broadening scope without broadening the firm, by contracting with an independent firm to perform value activities or teaming up with an independent firm to share activities.

143. *(c)* Coalitions are long-term agreements among firms that go beyond normal market transactions but full short of outright mergers. They can be either vertical or horizontal. This is an example of horizontal coalition.

144. *(d)* Organizational structure helps in grouping certain activities together under organizational units or departments and at the same time these departments are separated from other group of activities because of their differences. Organizational theorists call this separation of like activities as differentiation.

145. *(c)* The value-chain analysis focuses on examining the corporation in the context of the over all chain of value-creating activities, of which the firm may only be a small part.

146. *(d)* The basis for defining relevant business unit boundaries is provided by the relationship between competitive scope and the value chain.

147. *(c)* The configuration and economics of the value chain are shaped by competitive scope and it can have a powerful effect on the competitive advantage.

148. *(c)* Segment scope is one in which the buyers are served by a variety of products.

149. *(d)* Vertical scope defines the division of activities between a firm and its suppliers, channels and buyers.

The Value Chain and Generic Strategies

150. *(a)* Cost advantage is the outcome of the firm achieving a lower cumulative cost of performing value activities than its competitors. Any firm which is able to minimize its cost compared to its competitors will stand high in the industry.

151. *(c)* Cost drivers are considered to be the structural causes of the cost of an activity and can be more or less under a firm's control.

152. *(c)* Linkages provide a potentially powerful source of cost advantage because they are delicate and require joint optimization or co-ordination of activities across organizational lines.

153. *(a)* Vertical linkages reflect the interdependencies between a firm's activities and the value chains of suppliers and channels.

154. *(d)* Self-explanatory.

155. *(c)* Cost reduction may or may not erode a firm's differentiation and cost reduction in activities that do not affect the firm's differentiation should be aggressively pursued by it.

156. *(d)* All the statements mentioned are correct.

157. *(d)* Self-explanatory.

158. *(b)* An industry that is just beginning to develop is referred to as an embryonic industry. The growth at the embryonic stage is slow due to factors such as buyer's unfamiliarity with the industry's product, inability of companies to reap any significant economies of scale resulting in high prices, and poorly developed distribution channels.

159. *(a)* At the embryonic stage in an industry evolution, barriers to entry tend to be based on access to key technological know-how rather than cost economies or brand loyalty. A company's innovative efforts may also result in an embryonic industry.

160. *(d)* The shake out stage is one in which the demand approaches the saturation level. In a shake out industry environment, the excessive productive capacity of companies not accompanied with a growth in demand, results in price cuts. This leads to a price war and rivalry between the companies intensifies.

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161. *(a)* In a shake out industry environment, the excessive productive capacity of companies not accompanied with a growth in demand, results in price cuts. This leads to a price war and rivalry between the companies intensifies.

162. *(c)* In the maturity stage, the market is completely saturated and demand is limited to replacement demand.

163. *(c)* Both brand loyalty and low-cost operations being significant entry barriers, the threat of entry of potential competitors is greatly reduced.

Strategic Financial Management: An Overview

164. *(d)* The non-financial objectives of companies include not only employee welfare but also management welfare, societal welfare, environment protection and fulfillment of responsibilities towards the suppliers and customers.

165. *(d)* Agency costs can considerably be reduced by aligning the interests of the shareholders with that of the management. With all of these initiatives the objectives of the various entities of the business (shareholders, bondholders, employees, management) can be aligned with that of the organizational objectives and goal congruence can be achieved. The threat of hostile takeovers cause the managers to undertake efforts to maximize share prices.

166. *(e)* With the fall in the interest rates, the shares become a more profitable avenue for parking funds for the investors. Hence, as the demand for the shares rise, their prices also rise, leading to a fall in the dividend return in percentage terms.

167. *(e)* When interest rates are low companies borrow funds for longer time frames at fixed interest rates and substitute debt finance for equity finance.

168. *(b)* Non-growth strategy simply refers to consolidation of company's activities, withdrawal from less profitable ventures and seeking an optimal organizational structure to achieve efficiency. It would still continue to look for profitable ventures and realign its product market position.

169. *(a)* With the rise in the interest rates, the value of the gilt falls. The investor will make capital loss plus selling costs in case he decides to offload the gilts in the market.

170. *(e)* The financial planning involves decisions and plans not only at the strategic (long-term) level but also at the tactical (middle and lower) levels of the organization.

171. *(d)* The idea is that the higher debt ratio increases the bankruptcy costs, which the managers are keen to avoid. Hence, a high level of leverage sharpens managerial focus. The fear of losing one's job is a good motivator. This is one reason why shareholders also prefer higher debt-equity ratios.

172. *(b)* The three stages of strategic management are strategy formulation, strategy implementation, and strategy evaluation.

173. *(e)* Strategic management activities are an ongoing process and are done on everyday basis.

174. *(b)* The strategic decisions are taken and enforced by the top level management.

175. *(d)* In large organizations, the strategic activities are undertaken at all the levels-i.e. corporate, divisional, and functional levels.

176. *(a)* The long-term objectives of a firm are achieved through strategies.

177. *(e)* Perhaps the most important benefit of strategic management is that it promotes better understanding among various stakeholders in the organization.

178. *(b)* It is perhaps because of self-interest on the part of the management that they do not plan and take strategic decisions.

179. *(d)* Some might argue that planning is about negotiation and bargaining but, in a strict sense, planning is a top-down, imposed strategy form. The production of a plan reflects the intentions of a top management team. It does not allow for learning or creativity, that is, emergent strategies are not encompassed.

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180. ***(c)*** All the answers are consistent with shareholder wealth maximization (either in the short run or as a subordinate long run goal) with the exclusion of satisfying. At no time is company management just doing enough to satisfy its shareholders consistent with the maximization of their wealth.

181. ***(e)*** Diversification at corporate level to reduce unsystematic risk will not increase the wealth of shareholders if they already hold diversified portfolios of shares.

182. ***(d)*** Maximization of annual profits does not maximize shareholder wealth as profit may not be the real cash profit and maximization of profits can be in the short-term.

183. ***(a)*** All of the above except (a) indicate managers making decisions that increases their own wealth in preference to that of shareholders. In terms of financing decisions managers will favor the use of lower levels of debt to reduce the risk of the company and hence the risk to their continued employment in the organization.

184. ***(e)*** The costs of obtaining a listing on the stock exchange is unrelated to the agency problem.

185. ***(b)*** Currently institutional investors account for just under two thirds of all UK equities and in theory, the agency problem should have decreased. On the contrary, institutional investors have become pre-occupied with putting pressure on companies to maintain their dividend policy.

186. ***(c)*** The Cadbury Committee did not specify that companies should phase out share options; the later Greenbury Report recommended this.

187. ***(e)*** Firms, finance investment with their own internal funds perceive the interest rate as an opportunity cost of investment.

Firm's Environment, Governance and Strategy

188. ***(d)*** The ownership structure is a part of the operational environment of the firm.

189. ***(e)***

ROA = EBIT/ TA

= 12/100

= 12%

ROE = equity earnings/equity share capital

= (12 – 3)/70

= 12.85%

190. ***(e)*** Due to the operation of limited liability concept, the shareholders' liability is restricted to the extent of the face value of the shares held by them. They are as such to pay nothing.

191. ***(b)*** The profitability index is the ratio of net cash inflows from the project to the cash outflows. Hence, any value greater than zero, indicates positive NPV.

192. ***(c)*** The profitability index is the ratio of net cash inflows from the project to the cash outflows.

193. ***(d)*** Fisher's rate of intersection is the point at which the NPV from two projects are the same.

194. ***(c)*** Various project appraisal criterion may or may not give the same result.

195. ***(b)*** NPV model does not take capital rationing into account. Hence, at times, adjusted NPV is used to take into account the financing aspect of investment decisions.

196. ***(d)*** Porter's five forces model does not take into account the bargaining power of labor unions.

197. ***(c)*** The correct answer is NAFTA.

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198. *(b)* High ownership concentration is associated with low levels of diversification.

199. *(c)* Nominating committees are formed from which board members are appointed.

200. *(a)* Higher level of diversification generally improves the growth prospects of the firm, leading to lower level of employment risk.

201. *(b)* This is one of the innovative concepts whereby incentives are given for efforts aimed towards reducing agency costs.

202. *(d)* These are specifically managers' defenses against hostile takeovers.

203. **(d)** The Japanese system of corporate control is marked by inactive shareholders.

204. *(c)* This would give unrestricted power in the hands of the CEO, hence not recommended.

205. *(c)* The creditors of the company impose various monitoring controls on the functioning of the company. They being external to the company form the external governance mechanism.

206. Answer does not reflect the alternatives.

207. *(b)* The value chain analysis helps in effecting the business level strategy.

208. *(c)* When resources are combined uniquely it becomes a competitive advantage for the company.

209. *(b)* Due to forces in the external environment, core competencies at times reduce the competitive edge of the firm.

210. *(a)* Complexity and uncertainties in operations coupled with conflicts within the company makes managerial decision making all the more difficult.

211. *(a)* Abundance of firm resources is not generally the internal incentive to diversify.

212. *(c)* Cross linkages among the various lines of the business, can fail the diversification effort of the company.

Valuing Real Assets in the Presence of Risk

213. *(b)* PV = 12\[1+0.1+1.5(0.15-0.10)]

= 10.21 million.

214. *(c)* k_e = [(1 – t)(pv of future pre-tax cash flows-r x B)]\E_L

= [(1 – 45)(14.5 – (0.09 x 10)]\25

= 29.92%

215. *(d)* The cost of debt = (1 – 0.35)*5%

= 3.25%

Cost of equity = (1 – 0.35%)(15 – 0.05 x 60)]\40

=19.5%

216. *(a)* Determination of the current value requires us to know the value of the future cash flows and the appropriate discount rate to be applied to these future cash flows.

217. *(c)* The market-determined required rate of return is also called the discount rate. It depends upon the risk associated with the particular security.

218. *(d)* Risk aversion will play a role in determination of the required rate of return if the investment is too risky compared to the return, but it is already taken into consideration in the risk premium.

219. *(a)* The difficulty in the capital budgeting process is not in finding viable investment alternatives but in determining the appropriate position on the risk-return scale.

220. *(e)* S.D. is also used for comparing the variability of the returns of the two projects.

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221. ***(b)*** The measure of volatility of returns relative to the market is beta.

222. ***(c)*** Beta measures the volatility of returns of an individual stock relative to that of the market index of returns.

223. ***(b)*** A risk-adjusted discount rate determined in a qualitative or quantitative manner is used to evaluate projects with different risk.

224. ***(d)*** Computers have made it possible to simulate various economic and financial outcomes using a large number of variables.

225. ***(d)*** One major benefit of simulation is its ability to test various possible combinations of events. It is increasingly being used for capital budgeting analysis.

226. ***(d)*** Decision trees can quickly become quite complicated.

227. ***(c)*** The portfolio effect analyzes the benefits of diversification in reducing the risk for the portfolio of investments.

228. ***(b)*** The efficient frontier gives the best tradeoff between risk and return.

229. ***(b)*** CAPM is based on R_f, β and R_m

230. ***(a)*** Although 40-70% debt is the norm for most firms, generally growth firms in stable industries can afford to absorb higher amount of debt.

231. ***(a)*** Investor expectations are based on market values, so the cost of capital should be calculated on this basis.

232. ***(c)*** The WACC is the required rate of return, or discount rate that is appropriate to use regardless of the source of funds.

233. ***(b)*** The marginal cost of capital refers to the cost of the next rupee raised to fund capital projects.

234. ***(c)*** A well-diversified portfolio is primarily affected by the market risk.

235. ***(b)*** Under the assumptions of the CAPM model the market portfolio is the tangency portfolio that lies on the capital market line, emerging from the risk free asset.

236. ***(d)*** For fairly priced securities, the alpha is zero.

237. ***(a)*** As per the CAPM model, for a zero beta security, the expected return is equal to the risk free rate of return.

238. ***(c)*** In the state of equilibrium, the marginal price risk for a risky security stands equal to the market portfolio.

239. ***(a)*** Total capital of the company = M.V. of debt + M.V. value of equity

= 5+15=20 lakhs

$\therefore K_c = [(15\backslash 20) \times 20] + [(5\backslash 20) \times 8]$

= 17%

240. ***(d)*** $\beta_A = \beta_E \backslash [1+D\backslash E]$ [Assuming no taxes]

$= 1.2\backslash[1+0.8] = 0.67$

241. ***(a)*** Certainty equivalent

Cash flow $\frac{300}{1.10^3} = 225.35$

242. ***(b)*** The discount rate for appraising a particular project has to be adjusted and cost of capital should not be used without exceptions, for all the projects.

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Real Options

243. *(a)* The annual cost of the project = 1\n where n is the life of the project

=1\12

=8.33%

244. *(e)* Call value = 350 exp$^{\{(-0.05)(20)\}}$ x 0.7065-500 exp) $^{\{(-0.07)(20\}}$ x (0.3240)

= 51.02 million

It has been calculated with the help of Blach Schlie's formula.

245. *(e)* Equity is valued as a call option, wherein exercising of the option requires the firm to be liquidated and the face value of the debt (corresponds to exercise price) paid off. Other things remaining same the value of the equity increases with increase in the variance. It is therefore conceivable that the equity shareholders may take in projects with negative NPV's, which while making them better off can devalue the firm.

246. *(b)* The value of the callable bond increases with fall and as the volatility of interest rates increase. Adding a call option to the bond generally makes it less attractive to the buyers, as it reduces the upside potential of the bond. As interest rates decline, the bond prices increase, the bonds are more likely to be called back.

247. *(a)* While the project to augment the existing product portfolio is assessed under the growth option model, the time of implementation is important here, the project should be valued under the investment-timing model.

248. *(c)* This method is similar to the certainty –equivalent method where the risky variable is replaced with one that can be discounted at riskless rate of return.

249. *(b)* A rainbow option is one which is driven by multiple sources of uncertainty. It is not an example of real option.

250. *(d)* Unlike the financial option, the owners of the financial option can affect the value of the underlying asset. The value of the option increases with increase in the time to expiration.

251. *(e)* Self explanatory.

252. *(c)*An amount with future payoffs that is dependant on the result of an uncertain development in called a contingent claim.

253. *(d)* An European type embedded option.

254. *(d)* The underlying stock price is greater than the present value of option exercise price discounted at the risk-free rate.

255. *(e)* The difference between the market value of the option and its intrinsic value gives out of the money value.

256. *(d)* The value of the investment is not only in terms of its NPV today, but also the option to invest later when its appeal might improve.

257. *(d)* Time value represents the potential for a further increase in the option's intrinsic value before it matures.

258. *(e)* Options (a), (b), (c).

259. *(a)* Increase in initial investment may drastically change the viability of the project.

260. *(b)* The cash flows with respect to stocks refer to the dividends, which is identical to the project cash flows and thus plays similar votes.

261. *(a)* A rational manager may even reject a project with a positive NPV when the value of the option to wait is high.

262. *(c)* A financial option provides the right but not the obligation to buy or sell an asset under specified terms. When considering options on real assets it is natural to generalize this notion somewhat. For example, a company can have the option to modernize its production facilities to become more productive, in effect exchanging the cash flow stream that the current facility would generate to the cash flow stream that the new facility would generate. A financial option also satisfies the option on real assets definition.

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263. *(c)* Much of the theory and techniques used to value financial options have been applied and extended to real options with the result that real option values are consistent with the financial market. For example, if a real option can be perfectly replicated by trading in financial assets then the value of the real option is equal to the value of the trading strategy.

264. *(a)* The field of investment under uncertainty came to life because of the growing need and desire to understand how uncertainty impacts business conditions and to enable management to consistently make good decisions in an ever changing business environment. Thus, a realization emerged that it would be necessary to develop business policies that identify the best response to every change in the business environment. Perhaps the most important output of a real option analysis is a policy map which describes under what conditions an option should be exercised.

265. *(c)* Development projects typically consist of one or more initial stages where the product is finalized, a production facility construction stage, and a production stage. Usually the cost of the initial stage is relatively small compared to the costs of the other stages and the estimated value of a successful product launch. Furthermore, the initial stages provide new and better information about the likelihood of a successful product launch. In the event that the news gathered from the initial stage is bad abandoning the project becomes very valuable because it facilitates the company to not incur likely sizable future losses.

266. *(e)* The impact of the project management's decision on the project's value can't be definitely explained with options given.

267. In general, the more decisions that can impact a project cash flow stream the better. It is not so different from maneuvering a vehicle, the more ways you can maneuver it the better you are able to steer it. The decisions in a project act as levers we can use to adjust the cash flow. Of course, levers are only useful if you know how to use them.

268. *(c)*

I. True: Option Pricing Theory has many uses and is versatile; helping evaluate the risk of decisions involving options. Some examples in manufacturing and servicing include options on raw materials, the option to abandon a project, and the option to vary the product mix as demand changes.

II. False: The stock of a company is in effect a call option on the assets of the firm.

III. True: P = C – S + PV(x) . As S rises, P falls.

Capital Structure

269. **(*d*)** Fixed charges coverage ratio $= \dfrac{\text{EBIT}}{\text{I} + \dfrac{\text{PP}}{(1-\text{t})}} = \dfrac{1,20,000}{1,20,000 + \dfrac{2,00,000}{(1-0.4)}} = 2.64$

270. *(e)* Specific risk is that risk which is specific to the company or industry and hence can be eliminated by diversification. Market risk cannot be avoided through diversification because it includes a wide range of external factors. Business risk includes the risk of doing business in a particular industry or environment and thus will affect the EBIT.

271. *(e)* Business risk includes the risk of doing business in a particular industry or environment and thus has an effect on demand, volatility in prices of firm's product and variability in prices of firm's product also.

272. *(a)* Retaining the management control is one of the advantages of debt financing. Debt finance increases the financial risk and usually costs less than the equity.

273. *(d)* The shortfall in value arising from economic inefficiency can be a cause for bankruptcy and is not a direct cost of bankruptcy. On the other hand, out of pocket expenses and fees and other compensation are direct fallout of the bankruptcy.

274. *(b)* MM approach assumes that all investors have homogenous expectations about the future earnings of all the firms in the market.

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275. ***(c)*** Cost of personal leverage is higher compared to corporate leverage because the creditors find it risky to lend to individuals with high leverage.

276. ***(d)*** The presence of personal taxes reduces the value of the tax shield because capital gains are generally taxed at a lower rate than regular income.

277. ***(e)*** If the ROI is more than the cost of debt, ROE of levered firm is higher and if the ROI is les than cost of debt, ROE of unlevered firm is more.

278. ***(c)*** Forecasting is difficult in a non-seasonal and non-cyclical business and thus long-term finance is preferable.

279. ***(d)*** MM approach assumes that capital structure does not have impact on a firm's value. The investors of the levered firm will find it profitable to sell their shareholding and acquire shares of the unlevered firm using personal leverage. Thus the premium enjoyed by the levered firm gets nullified.

280. ***(e)*** Business risk includes the uncertainty or variability of the firms EBIT and thus is not referred to the variability in the market value of a firm.

281. ***(d)*** Operating leverage examines the effect of the change in the quantity produced on the EBIT of the company.

282. ***(e)*** DOL is negative below the break even point because the total contribution is not able to cover the fixed expenses.

283. ***(c)*** Total leverage refers to the effect on EPS due to a change in the output of the firm.

284. ***(d)*** DOL = $\text{DOL} = \frac{Q(S - V)}{Q(S - V) - F}$

$= \frac{7{,}000\,(150 - 85)}{7{,}000\,(150 - 85) - 2{,}50{,}000}$

= 2.22

285. ***(c)*** Market value of debt = Rs.130 lakh.

Market value of equity = $\frac{\text{PAT}}{\text{Capitalization rate}}$

EBIT = 75

(Less) I = 18.2

PAT 56.8

$= \frac{56.8}{0.165}$ = Rs.344.24 lakh

Market value of the firm

= Market value of debt + Market value of equity

= 130 + 344.24 = Rs.474.24 lakh.

286. ***(c)*** Average cost of capital = $= K_d \times \frac{D}{D - E} + K_e \times \frac{E}{D + E}$

= 0.13x(115.38/380.09) + 0.17 x (264.71/380.09)

= 15.78%.

D = 15/0.13 = 115.38

E = (60 – 15)/0.17 = 264.7

D + E = 380.09

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287. *(c)* Tax advantage of debt capital

$$= \frac{[1-(1-t_c)(1-t_{ps})]}{(1-t_{pd})} \times B$$

$$= \frac{[1-(1-0.35)(1-0.12)]}{(1-0.35)} \times 1 = 0.12 \text{ rupee.} = 0.12 \text{ rupee.}$$

288. *(c)* Cash flow coverage ratio = $\dfrac{\text{EBIT + DEP + Other non-cash charges}}{\text{Interest on debt} + \dfrac{\text{Loan repayment installment}}{(1-t)}}$

$$= \frac{150+20}{15+\dfrac{20}{(0.65)}} = 3.71$$

289. *(c)* ROE = [ROI + ROI – r D/E] (1 – t)

= [0.14 + (0.14 – 0.08) 0.5] (1 – 0.4) = 10.2%

290. *(d)* ROE = [ROI + ROI – r D/E] (1 – t)

0.17 = [ROI + (ROI – 0.085) 0.6] (1 – 0.35)

ROI = 19.53%

291. *(e)* A firm with a lesser cost of capital carries higher market value.

Preference shareholders have preference over equity shareholders to the post-tax earnings in the form of dividends and assets in the event of liquidation.

292. *(a)* Equity shareholders are the owners of a firm and thus are faced with both financial and business risk.

293. *(d)* MM approach assumes that the rate at which an individual borrow would be the same at which the corporate borrows.

MM approach cited the arbitrage process to explain their position regarding the value of a levered firm and an unlevered firm.

294. *(c)* When EBIT falls by 33.33%, it just meet the debt expenses.

295. *(b)* Maximization of shareholders wealth is the main objective of any firm.

296. *(c)* Since the interest on term loan is a tax-deductible expense, the net cost will be

0.18(1 – 0.35) = 11.7%.

297. *(c)* Since there are no taxes,

NOI = 120 x 0.17 + 80 x 0.15

= Rs.32.4 lakh.

298. *(e)* The expectations of equity holders are in the form of dividends and lenders in the form of interest.

299. *(b)* Agency costs refer to the divergence between managers and shareholders and between debt and equity holders, which brings inefficiency. Hierarchical monitoring structure is an effective tool for reducing agency costs at each level.

300. *(a)* Retained earnings are the cheapest funding source as per Pecking Order theory of finance. Thus it is easy to invest in the business again.

301. *(e)* Term loan is granted by FIs and they put different conditions to avoid default risk. These conditions are stricter when loan amount constitutes a large portion of capital structure.

302. *(b)* The relation captures the sensitivity of the EPS to any changes in the EBIT.

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303. ***(a)*** Gross cash flow = 56 x (1 – 0.3) + 9.7 = Rs.48.9

NOPLAT = Rs.56 x (1 – 0.3) = Rs.39.2

304. ***(b)*** New investment = 90.5 – 78.6/18% = Rs.66.11 cr.

305. ***(c)*** As per traditional leverage theory, up to a certain amount of leverage the cost of debt will decrease but thereafter as the default risk increases, cost of debt also increases.

306. ***(c)*** Whenever ROI > cost of debt, the firm will earn more for its equity shareholders.

307. ***(d)*** The capital structure decision depends on the debt repayment capacity of the firm. A firm can borrow until its IRR is higher than cost of debt and capital.

308. ***(c)*** Shareholders and managers objectives are different. Agency costs arises on that issue.

309. **(c)** Agency costs arises from the divergence between the goal of shareholder and managers and between debt and equity holders. A market for corporate control cannot resolve the problem.

310. ***(d)*** The overall capitalization rate decreases as the leverage increases keeping the cost of debt and equity constant. The cost of the equity is higher than the cost of debt.

311. ***(b)*** K = 12% + (12 – 10)% x .5 = 13%

312. ***(a)*** Merton Miller argues that the investors who are tax exempt would prefer to invest in debt, while investors in higher tax brackets prefer equity investments.

313. ***(c)*** Rs. (10 – 5)/2 = Rs.2.5 lakh.

314. ***(e)*** As per ROE and ROI analysis ROE will increase with leverage.

As the leverage increases, the firm will get more tax shield and at the same time increase in the ROI has direct relationship with ROE.

315. ***(c)*** ROE = {ROI + (ROI – r)D/E} (1 – t)

Where,

ROE = return on equity

ROI = return on investment

r = cost of debt

D = debt component in the total capital

E = equity component in the total capital

T = tax rate.

316. ***(e)*** As the leverage increases the cost of equity also increases because shareholders demands more premium for taking bankruptcy risk.

317. ***(d)*** Net Profit Margin = 18/(2 x 2) = 4.5%

318. ***(d)*** after tax interest rate = 5.5\2

= 2.75 %

319. ***(a)*** Generally when the growth prospects are poor, companies have low chances of being takenover.

320. ***(e)*** When ROI = k_d ROE will remain the same irrespective of the level of leverage employed.

321. ***(d)*** Strategic planning is done with a broad organizational objective in mind. It is a top down approach.

322. ***(c)*** Capital budgeting is generally done for fixed asset investment.

323. ***(c)*** Return on investment = 120\1000=12%

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324. *(a)* Stern-Stewart was the first to popularize the concept of EVA .

325. *(e)* Statements (a) (b) and (c) are true. The annual budget records not only the new projects that the company is planning to undertake, but also projects that are yet to be completed.

326. *(d)* One of the major advantages of economic value added (EVA) is that the monitoring costs are reduced drastically .

327. *(c)* The IRR of project A (16%)<RADR (18%). Hence the project should be rejected.

The IRR of project B (12%) > RADR (10%). Hence the project should be accepted.

328. *(b)* (1 – 0.34) = Rs.10.56 Lakh is the required cash flow.

329. *(a)* Profitable and growing companies tend to go in for higher level of debt ot exploit the benefits of leverage.

330. *(c)* A company with bankruptcy risk has several real costs associated with it. The firm's value erodes due to costs relating to legal expenses and more importantly due to possible distress selling. The loss of tax shield is but a part of the real costs of bankruptcy.

331. *(c)* Traditionally, the equity shareholders are more risk aggressive than the debt holders. Since, the liability of the former is limited, they would want the company to go in for riskier projects when in financial distress.

332. *(b)* Trade off theory propounds that the fast growth and stsrt up companies are exposed to higher chances of financial distress, due to erratic cash flows. Hence they should borrow less due to higher bankruptcy risk.

333. *(a)* The pecking order theory says that more profitable firms should go in for higher levels of debt.

334. *(e)* Self explanatory.

335. *(e)* Due to tax incentives associated with debt, growth companies tend to go in for debt.

336. *(c)* Net income approach propounds that with increasing levels of leverage, the more expensive source of finance, equity, with a lower weight age gets cancelled out with the cheaper source of finance, debt, with a higher weight age, thereby k_o remains unchanged.

337. *(b)* According to the traditional theory, an optimal capital structure of the firm exists where the cost of capital is the minimum, at a specific level of leverage, employed by the firm.

338. *(d)* The MM hypothesis says that firms in a similar risk class will command similar market values, other things remaining the same. In case of any deviation, arbitrage mechanism shall ensure that their values become equal eventually.

339. *(d)* 5 – 4.78+0.36 =0.58 million

340. *(a)* Issue of debt generally signals that the firm is prospering and has excess of cash profits to meet the additional interest obligation. Hence investors take it as good news.

341. *(b)* With increasing level of financial leverage, the bankruptcy and agency costs are minimal. However beyond a certain level, these costs shoot up increasing the cost of capital.

342. *(d)* DOL measures the sensitivity of EBIT to change in sales. This is how it is interpreted.

343. *(c)* Relative financial risk is the difference between the coefficient of variation of earnings per share and coefficient of variation of operating income.

344. *(c)* The correct answer is one. Operating BEP is at that level where EBIT = 6

345. *(d)* This signifies the risk of bankruptcy and this situation is referred to as financial distress.

346. *(e)* The market value of the equity of the firm when stands at zero, the firm is said to be economically bankrupt.

347. *(c)* New WACC = $\frac{4}{5}\times 16+\frac{1}{5}\times 22$ =17.2 %

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Industry Analysis, Financial Policies and Strategies

348. *(b)* The threat of takeovers and increased monitoring by the stakeholders on the management of the firm reduces the conflict of interest of the two parties to a great extent.

349. *(d)* A manager receiving lower salary but additional shares of the company's stock, and the board of directors becoming more vigilant in the oversight of the company's management, is likely to reduce the agency problem between stock holders and managers.

350. *(e)* The threat of take over and pressure from the board of directors helps in motivating managers to act in the interest of share holders.

351. *(e)* Executive compensation and institutional investors such as mutual funds and pension funds holding large amount of firms stock is likely to encourage a firms manager in making decisions that are in the best interest of shareholders.

352. *(c)* This separation essentially leads to the conflict of interest of the management and the shareholders.

353. *(b)* Government debt is less risky than the subordinated or secured debt. Equity of course is the riskiest of all of them.

354. *(d)* Equity being the riskiest, promises the highest returns. Then comes the debt and finally the treasury bills which are the lowest of the risk front, and, so returns are also the lowest.

355. *(d)* A vertical merger involves merger between firms that are in different stages of production or value chain.

356. *(e)* Partnerships are established on the concept of unlimited liability.

357. *(d)* These are the short-term strategies meant to execute the broader long term corporate objectives.

358. *(e)* Expected long run profits of the firm affects firm value. A loss in the current quarter that leads to profits later may be an appropriate strategy. Timing affects the present value of the firm. Monies received sooner are more valuable than the same amount received later. Economic Environment Factors and Conditions in Financial Markets are outside the control of managers, and do affect profitability

359. *(c)* The central planning association in this case monitors the future earning potential, which might vary from time to time. (c) is the appropriate answer.

360. *(e)* Firm managers sometime want to relax on the job. Employees sometime take items from the store in which they work.

361. *(c)* Those managers who either hold shares in their firm or have stock options on the equity of the firm, will be then indulging in risk reducing activities because their compensation contract better aligns their interest with that of the firm's shareholders thus it can be said, that managers who hold the share or stock options will be more willing to take actions that increases the risk.

362. *(a)* The agency relationship arising from the separation of ownership from management is characterized as agency problem.

363. *(b)* Payment of payroll taxes is not a mechanism of reducing the agency costs.

364. *(a)* It is the cash flows that are considered for arriving at the firms' value.

365. *(e)* Agency problems between managers and shareholders can be reduced by (a), (b), (c).

366. *(c)* Golden parachute is a mechanism to ensure that the management is not left in a lurch as the takeover takes place.

367. *(b)* Without a contract correlated with effort, the manager has no incentive to work hard, since managers are assumed to be effort-averse. Option a) relates to adverse selection, not moral hazard. Option c) is incorrect because performance measures such as net income or share price *encourage* managers to cover up the effects of shirking by means of earnings management. Option d) is incorrect because it is the basing of compensation on net income or share price that imposes risk on the manager, since random state realizations mean that the manager cannot completely control them.

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368. *(b)* The SWOT analysis is an important tool in the industry analysis.

369. *(a)* This all about the analysis of the industry and market dynamics.

370. *(e)* Learning curve and the economies of scale cannot be correlated with the level of rivalry among the competing firms.

371. *(c)* Copy the statement.

372. *(d)* High capital intensity coupled with the patents and proprietary technology act as high entry barriers to the industry.

373. *(c)* Fluctuations in the stock markets and interest rates do not directly affect the industry profile and competition.

374. *(b)* Strategy formulation vis-à-vis that of the competitors, and predicting the next competitive move determines the success and failure of the firms.

375. *(d)* This is an obvious phenomenon in the highly competitive industry where strategies and counter strategies are initiated by the firms, to survive in the market.

376. *(d)* Environmental scanning relates to analysis of the industry in the present context.

Dividend Policy

377. *(b)* D_t = cr x EPS_t +(1 – c) Dt – 1

= 0.4 x 0.5 x 3.5 + (1 – 0.4) x 1.5 = 1.6

378. *(b)* When dividend exceeds 10% but less than 12.5%, 2.5% of current profits should be transferred to reserves.

379. *(b)* Dividends cannot be declared for a financial year in which the financial statements are already prepared.

380. *(b)* Companies Act lays down that any dividend declared must be paid within 42 days from the date of declaration. The declared dividend must be classified as a current liability in the balance sheet of the company.

381. *(c)* The bonus issue will increase the number of shares without any consideration and thus it leads to a decrease in book value per share.

382. *(a)* Stock split is done to bring down the par value of the shares and thus to bring the shares within a more popular trading range.

383. *(e)* Share repurchase reduces the amount of floating stock available for a raider and the management is able to increase its stake in the company without investing additional funds.

384. *(e)* Pay out ratio refers to the percentage of EPS, which is distributed to equity holders as dividend.

385. *(c)* The model suggests that if IRR is greater than the cost of capital, the firm should retain its entire earnings and no dividends should be declared.

386. *(c)* Bonus shares can be issued only out of free reserves built out of the genuine profits or share premium collected in cash.

387. *(e)* Both stock split and share repurchase can have an impact on the liquidity of a firms outstanding shares.

388. *(c)* The Companies Act lays down that dividends can be paid out of profits only and prohibits the payment of any dividend out of capital.

389. *(c)* A bonus issue shall not be made within 12 months of any public or rights issue.

390. *(c)* Gordon model implies that when the cost of equity is less than the return on investment, the pay out should be reduced to increase the market price.

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391. *(d)* Bonus issue shall be made out of reserves built out of genuine profits or share premium collected in cash.

392. *(b)* The shareholders can renounce their rights in favor of any other person at market-determined rate.

393. *(d)* As the rights issues are offered to existing shareholders, the marketing costs and other relevant public issue expenses ate eliminated.

394. *(d)* Price per share = $\frac{D + (E - D) \text{ x } r/k}{K}$

$$= \frac{0.875 + (3.5 - 0.875) \text{ x } 0.17/0.14}{0.14} = \text{Rs.}29.01$$

395. *(c)* $P_0 = \frac{Y_0(1-b)}{k - br}$

$$60 = \frac{4(1-0.55)}{0.15 - 0.55 \text{ x } r}$$

$r = 21.8\%$

396. *(e)* A company may pay dividend from profits of the current year after providing depreciation, undistributed profits of previous years or money provided by the central government.

397. *(c)* Companies Act lays down that if a company fails to transfer the unclaimed dividend to the unpaid dividend account, 12% interest have to be paid from the date of default.

398. *(d)* The dividend declared must be paid within 42 days from the date of declaration and thus is classified as a current liability in the balance sheet of the company.

399. *(c)* Rs.1.50 is added to retained earnings and thus the book value will increase by the same amount.

400. *(d)* $\frac{P = M(4D + R)}{3}$ The weight age for dividend is given assuming that the market is overwhelmingly in favor of liberal dividend pay out.

401. *(c)* The model assumes that retained earnings are the only source of finance available and ROI is constant throughout the life of the firm.

402. *(a)* Investors are rational and they discount any information.

403. *(e)* The new amendment to Companies Act adding facility to companies to buy-back their shares to increase its capital base and to avoid takeovers.

404. *(d)* The proportion of stake holding remains same when a shareholder uses his right option at the time of rights issue.

405. *(c)* As per Walter model managers are paying no dividend when IRR > cost of fund.

406. *(c)* In Walter model, retained earning is the only source of financing. The model assumes that the value of a firm depends only on the present value of the future stream of the dividends and the present value of the future stream of returns from the returned earnings only.

407. *(d)* If a company is insolvent then it is not in a position to pay even its obligations, which has priority over dividend.

408. *(b)* Stock splits has information content about the firm valuation or future earnings and the market reacts to the same by revising the valuation.

409. *(e)* Previous years dividends cannot be revised after account closure as per Companies Act, 1956. Issue of bonus shares will increase the number of outstanding shares. Bonus issue is one of the forms of capitalization of unused profit.

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410. *(a)* Bonus issue increases the capital base, which reduces the intrinsic value. As bonus shares are issued to the existing shareholders, this will increase the number of outstanding shares, and thus the book value per share will decrease.

411. *(a)* Rs.(10 – 50 x 0.10) lakh = Rs.5 lakh.

412. *(d)* Bonus issue cannot change the face value of share as it is issued from free reserves. It only increases the capital base of the company.

Asymmetric Information

413. *(a)* The borrowers such as the management of a firm has better information regarding the firm's value than its creditors and shareholders.

414. *(c)* These intermediaries help to integrate markets and diversify the risk, thereby reducing their risk exposure.

415. *(d)* The very concept of asymmetric information deals with the fact that the instance managers of the company have access to more information about the value of the company than outsiders.

416. *(c)* The chance that a contract will change the risk-taking behavior of one or both of the involved parties is known as moral hazard.

417. *(d)* Adverse selections, phenomenon.

418. *(c)* Inadequate bank supervision and non-compliance with the statutory norms by them were the major causes of the financial crises in these economies.

419. *(d)* The collapse of these companies show how hand full of companies can ruin the investor morale and create market uncertainty.

420. *(b)* The market is said to be efficient in the strong form when the security prices reflect the latest relevant information. In other words all the investors possess similar knowledge about the security.

421. *(b)* The risk-adjusted returns on small firms' equities is definitely correlated with market capitalization.

422. *(c)* Studies on the effect of earnings announcements a stocks and future prices demonstrate that opportunities for profitable trading are eliminated within half an hour.

423. *(c)* Technical analysis.

424. *(b)* Information asymmetry.

425. *(a)* Event studies are conducted to test the semi strong efficient hypothesis.

426. *(d)* The primary reason that can be attributed for this is that, the management of the firms must keep itself away from percolating any information about its strategic plans to either of its shareholders or creditors. This is so because any information so leaked may be taken up by its competitors who in turn might use them for competing & both against its rivals.

427. *(a)* It is because the management has access to information of strategic importance that investors do not, that leads to the problem of information asymmetry.

428. *(c)* When investors do not have information regarding the true status of the organization, the firm tends to be undervalued overvalued. Hence the firm's stock prices might not reflect its actual value.

429. *(d)* Information asymmetry refers to the fact that the management of a firm has better information regarding the firm's value than its creditors and shareholders.

430. *(a)* A company which has easy access to internal sources of finance can afford to be more liberal in its dividend pay-out.

431. *(e)* Due to synergies expected from the strategic merger, the acquiring firms shareholders gain significantly compared to the acquired firm. The method of payment by the former affects the long-term viability of the merger.

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432. ***(e)*** Self explanatory.

433. ***(d)*** Payment of dividends generally signals 'good news' for the investors.

434. ***(d)*** This instance highlights the fact how the companies use financing decisions to signal valid information about themselves.

435. ***(b)*** Moral hazard exists when, after entering into a contract, one party acts to gain more benefits and thereby lessen the benefits to the other party.

Decision Support Models

436. ***(e)*** Marakon model states that a firm's value is measured by the ratio of its market value to book value.

437. ***(c)***

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453. *(e)* Marakon approach values a firm based on the ratio of its market value to book value.

454. *(c)* As per Mckinsey approach, operating leverage is identified as value driver in business unit level.

455. *(a)* Total sales are mix of cash and credit sales but the theory assumes cash sales only.

Financial Statement Analysis

456. *(e)* Loans and advances under schedule 10 should be analyzed to find whether it is long-term or short-term.

457. *(c)* The liquidity of inventories is dependent on the demand for the product and thus is less liquid.

458. *(c)* The ratio gives the number of days for which cash expenses can be met by liquidating quick assets and not current assets.

459. *(e)* High inventory turnover may be due to low inventory or low turnover may be due to excess inventory.

460. *(d)* Average collection period explains the number of days it takes to collect the accounts receivable.

461. *(c)* High fixed assets turnover ratio can be as a result of higher sales of the firm.

462. *(c)* Current ratio implies a firms ability to meet its current liabilities out of its current assets.

463. *(e)* Current liabilities include loans and advances taken, trade creditors, accrued expenses and provisions.

464. *(d)* Cost of goods sold includes only direct expenses.

465. *(e)* Gross profit margin ratio represents firm's profitability after meeting its direct expenses.

466. *(e)* The fact that it is the only measure to convey a detailed outlook of the financial aspects of a firm nullifies the limitation of financial statement analysis.

467. *(c)* $\frac{2,500 + X}{1,800 + X} = 1.1$

X = Rs.5,200.

468. *(d)* $\frac{CA}{CL} = 1.5$ CA = 3,600

$\frac{CA - I}{CL} = 1.25$ I = 600

$\frac{S}{I} = 7$ S = 4,200

469. *(b)* Working capital gap shows the extent of current liabilities, which are financed by short-term bank borrowings.

470. *(c)* Debt/Assets ratio gives the proposition of total assets financed by external financing.

471. *(b)* The greater the interest coverage ratio, the higher the ability of the firm to pay its interest expense.

472. *(e)* EBIT when the output is 4,500 = Rs. 1,20,000

Increased output = 4,950.

New EBIT = Rs. 1,47,000.

Percentage change = 22.5

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473. ***(c)*** DFL $= \dfrac{\text{EBIT}}{\text{EBIT} - \text{I} - \dfrac{D_p}{(1-t)}}$

$$= \frac{5,50,000}{5,50,000 - 1,25,000 - \dfrac{75,000}{(0.65)}} = 1.77$$

474. ***(b)*** Capital structure ratio includes debt-equity ratio and debt-assets ratio. Thus it measures the financial risk of firm.

475. ***(b)*** Dividend pay out ratio = $\dfrac{\text{DPS}}{\text{EPS}}$ = 0.5 DPS = 2

EPS $\dfrac{\text{DPS}}{0.5}$ = Rs.4.

476. ***(e)*** EBDIT is considered because interest expense varies with the capital structure policies and depreciation rate is different for different type of assets. Other income is deducted because of getting only the income from operation.

477. ***(a)*** Debt asset ratio refers to the portion of assets financed by debt capital.

478. ***(a)*** Creditors want to know whether the company can repay its debt or not. Quick ratio reveals the cash position of the company.

479. ***(c)*** The activity ratios are the main indicator measuring level of usage of assets. Activity ratios are measured return or turnover against the assets used.

480. ***(c)*** (250 + 150)/600 = 0.583

481. ***(b)*** Leverage of the firm increases financial risk as it is exposed to committed expenses. This again measures the variability in EPS for change in capital structure.

482. ***(c)*** Quick ratio measures the amount of easy cash the company can get. A lower quick ratio conveys that the firm is suffering from lack of liquidity.

483. ***(a)*** Let X be the portion of equity

0.18X + (1 – X) x 0.12 = 0.15

or X = 0.5

Therefore, D/E = 1:1

Financial Distress and Restructuring

484. ***(c)*** SICA implies that the accumulated losses should not equal or exceed firm's net worth.

485. ***(d)*** The borrowal account becomes a doubtful advance when the principal or interest in respect of any of its borrowal accounts has remained overdue for periods exceeding 2.5 years.

486. ***(b)*** External factors are not under control of a firm and thus are very difficult to diversify the loss faced out of it.

487. ***(b)*** Beaver model defines the inability of a firm to pay its financial obligation as they mature.

488. ***(e)*** If Z score is les than 1.81, the firm is likely to go bankrupt and if in the range of 1.81 and 2.99, it is treated as an area of ignorance.

489. ***(a)*** The decision is based on a thorough techno-economic viability study of the firm in co-ordination with the management of the firm, financial institutions, etc.

490. ***(d)*** Voluntary winding up takes place when a firm realizes that there is no hope of turnaround but is in a comfortable position to pay-off its debt obligations.

491. ***(a)*** Suspension of one of the business may not impact much on a firm's performance.

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492. ***(e)*** Creditors voluntary winding up does not assume that the company is insolvent but realizes that there is no hope of turnaround.

493. ***(c)*** The net liquidation value can be obtained by the difference in liquidation value of firm's assets and the liquidation value of firm's liabilities.

494. ***(d)*** Working capital/Total assets ratio is a balance sheet ratio. In L.C.Gupta model balance sheet ratios are (Net Worth/Total Debt) and (All outside liabilities/Tangible assets) only.

495. ***(b)*** As per Altman's Z score model the weightage given to market value of equity/book value of debt is 0.6. Other factors have weightage over 1.

Working Capital Management

496. ***(b)*** Working capital leverage $= \frac{\text{Current Assets}}{\text{Total assets + Change in current assets}}$

$$= \frac{100}{100 + (-15)} = 0.69$$

497. ***(b)*** Working capital requirement = (Amount of sales per day x Weighted operating cycle) + Required cash balance.

= (2.75 x 55) + 10

= Rs.161.25 mn.

498. ***(e)*** Simulation is identified as an efficient working capital management tool to arrive at better estimates.

499. ***(b)*** Optimal conversion size = $\frac{2bt}{I}$

$$= \frac{2 \text{ x } 1.000 \text{ x } 3\text{mn}}{0.12}$$

= Rs. 3,16,228.

500. ***(e)*** Both the cash management models ensure that the firm has adequate cash at all times.

501. ***(a)*** UCL = 3RP – 2LL

$$\text{RP} = \sqrt[3]{\frac{3b\sigma^2}{14}} + \text{LL}$$

$$= \sqrt[3]{\frac{3 \text{ x } 175 \text{ x } (6.000)^2}{4 \text{ x } .0003055}} + 55,000$$

= 79,913.45

UL = 3 x 79,913.45 – 2 x 55,000

= Rs.1,29,740

502. ***(a)*** Working capital leverage considers the total current assets and not net current assets.

503. ***(e)*** Cash budgets are used to estimate the future cash requirements.

504. ***(c)*** Discriminate analysis can also be done using more than two independent variables but the process may be complex.

505. ***(a)*** Baumol model assumes that cash expenses are incurred evenly over the planning period.

506. ***(b)*** JIT system ensures that the inventory level is optimum in a firm.

507. ***(c)*** The investment in current assets can be reduced to earn the same return with lower investment.

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508. *(a)* Since the inventory is the least liquid among the current assets, the lock-up period is more.

509. *(a)* Simulation model does not maximize objective functions.

510. *(e)* Effective control of receivables is necessary for the smooth functioning of a firm.

511. *(a)* In JIT all goods are received just when it is required. Inventory means accumulation of cost in that system.

512. *(d)* Weightage on debtors = selling price per unit/selling price per unit = 1.00

513. *(c)* Holding costs are generally fixed in nature. Holding cost represents the opportunity forgone to invest the cash into the securities and earn interest on that.

514. *(a)* (50 – 30)/2 = 10 days

515. *(d)* Rs.(3.5 x 50 + 0.5)lakh = Rs.175.5 lakh

Strategic Cost Management

516. *(d)* Effective product differentiation results in the creation of a firm's value.

517. *(c)* Value chin analysis requires an external focus as the chain extends from basic raw material supplier to the end user.

518. *(d)* ABC does not partition variable and fixed costs. This is considered as a shortcoming as many short run decisions need to identify variable costs.

519. *(a)* Target costs are not predetermined costs but are based on external analysis of markets and competitors.

520. *(d)* Target costing is difficult to use with complex products as tracking costs becomes too complicated and tedious and cost analysis must be performed at so many levels.

521. *(e)* Project life cycle costing involves accounting for all costs over the life of the decision, which is influenced directly by the decision.

522. *(a)* Product differentiation gives competitive advantage to a firm,. It cannot help firm to reduce its cost.

523. *(d)* In case of target costing, for capturing the market a customer driven price is fixed.

524. *(c)* In quality costing, benefits from increased product quality come from lower costs for reworking discovered defective units and from more satisfied customers who find fewer defective units.

Inflation Accounting

525. *(e)* Inflation accounting gives a better picture for both internal and external users who need to make decisions.

526. *(d)* When prices are rising, monetary assets decrease the gains and monetary liabilities increase the gains accruing to the business.

527. *(a)* The period during which the various items of stock were purchased should be identified and then a price index, which represents the general price level during that period, should also be ascertained.

528. *(e)* The CPP method tries to convert the values of all items into the purchasing power of rupee as on the balance sheet date by using as general price index as on such date.

529. *(a)* The value realized from the sale of an asset is referred to as realizable value.

530. *(e)* Rate of inflation directly affects purchasing power of money.

531. *(d)* The CPP method tries to measure all items in the financial statements in a unit of measurement that represents the same amount of purchasng power.

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Corporate Risk Management

532. *(e)* Systematic risk is related to the general economy, as a whole where as unsystematic risk is specific to the company or industry as a whole.

533. *(e)* Risk is a function of not only the probability of an outcome being different from that expected, but also its potential intensity, if it occurs.

534. *(b)* The degree of risk attached to an event is generally linked to the likelihood of the occurrence of that event.

535. *(d)* As the interest rate is fixed, the gains that could have earned due to rise in rate is eliminated.

536. *(a)* A profitable firm may have a severe liquidity crunch because it has blocked its money in illiquid assets.

537. *(b)* When assets, which are not readily marketable, is required to be sold for need of funds, the non-marketability may lead to liquidity risk.

538. *(e)* Business risk refers to the risk of doing business in a particular industry or environment and it gets transferred to the investors who invest in the business or company.

539. *(d)* Options can be used for hedging commodities and the value depends on the price of the underlying commodity.

540. *(c)* The holder of a financial futures contract uses it for hedging purpose only and is not eligible for dividends and interest payments.

541. *(e)* In currency swap, one party agrees to make periodic payments based on either fixed or floating interest rates to a counter party who is in turn makes periodic payments to the other in a different currency.

542. *(a)* Interest rate risk becomes prominent when the assets and liabilities of a firm don't match in their exposure to interest rate movements.

543. *(e)* VAR measures the expected loss arising due to normal market movements in the variables responsible for the portfolios risk.

544. *(d)* VAR measures the distinction between the downside movements and the upside movements.

545. *(d)* VAR is used to quantify the risk arising out of individual assets/liabilities and these are summed up to arrive at the VAR for the organization as a whole.

546. *(a)* Exposure netting is an internal hedging technique, which is available for managing currency risk.

547. *(e)* Asset-Liability management is used to minimize exposure to price risk by holding the appropriate combination of assets and liabilities so as to meet the firms objectives and simultaneously minimizing the firms risk.

548. *(e)* Systematic risk refers to the non-diversifiable risk whereas unsystematic risk refers to the diversifiable risk.

549. *(a)* The buyer of the option is the holder and has the right to exercise the option.

550. *(a)* Warrants is a potentially profitable but very speculative medium for the investor seeking long-term capital gains.

551. *(e)* SEBI guideline implies that FCDs should carry a compulsory credit rating if the conversion period exceeds 36 months.

552. *(e)* The market price of the warrant fluctuates between the minimum and the maximum limit. When the current price is equal to or lower than the exercise price the minimum warrant value is zero. Generally the actual value will be greater than the minimum value.

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553. *(e)* Convertible bonds usually provide lower interest yield than straight bonds do because at some future time, if converted into shares, the bond might provide more current income or and/or there may be a handsome capital gains as the bond price moves up with the value of the underlying shares.

554. *(e)* When there is a variation in the spreads of interest rates applicable to two parties in efferent markets, there is an opportunity for a mutually advantageous financial swap. Due to regulations capital markets may be segmented and thus arises an opportunity for swapping. An issue may find that a particular capital market saturated with its debt is unwilling to absorb any more and as a result opportunity for swapping arises.

555. *(a)* 120 + P – 108.7 = 19.8

or P = Rs.8.5

556. *(d)* Forward contracts are not standardized contracts and it generally ends with delivery.

557. *(e)* Future contracts owe their origin to forward contracts but it is more refined than forward contract. Future contracts are standardized in terms of quantity, quality, terms of delivery, etc.

558. *(b)* Hedging must be considered with the corresponding hedging cost.

559. *(b)* Forward contract will give him an opportunity to buy the rupee at a predetermined price. Thus in case of falling exchange rate also he can buy it at the fixed price.

560. *(b)* Future contract demands for margin money.

561. *(c)* Option premium is the amount, which the option buyer has to pay to the option writer to induce him to accept the risk associated with the contract.

562. *(a)* Risk-free interest rate acts as benchmark.

563. *(e)* When the stock price is more than exercise price, it will be called in the money and when it is less than the exercise price it will be known as out of money. In case of out of the money the buyer will face loss if he exercises the option and reverse for in the money option.

564. *(b)* A warrant gives the right to convert it into fixed number of shares at a fixed exercise price. The holder of warrant can convert it into the equity share at the end of or within a time period.

565. *(c)* Risk is transferred when the firm originally exposed to a risk, transfers it to a third party, which is willing to bear the risk. In that way insurance companies bears the risk of others.

566. *(c)* Liquidity preference theory contends that every person want to hold assets in liquid form. Some incentive in the form of premium must be given to them to induce for investment.

Risk Management And Corporate Strategy

567. *(e)* The study of corporate finance facilitates the understanding of the impact of global finance on business.

568. *(e)* Maximization of shareholders' wealth is the primary goal of the firm.

569. *(e)* Financial risk incorporates all of these. Changes in the BoP impacts the strengths of the home currency, hence is a part of the financial risk.

570. *(b)* Managers are the agents of the shareholders of the firm.

571. *(e)* Vacation is not an incentive that is are given to the managers of the firm for improving their performance. Incentives are generally in the form of perquisites and pay hikes and ESOPs.

572. *(a)* In the integrated markets of today, distances are not seen as a major issue affecting the firms operations.

573. *(c)* The presence of these risks makes the global financial markets highly volatile and uncertain.

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574. *(e)* With the advent of high end technology solutions, coordination among the managers, spread across the globe is easily feasible.

575. *(a)* As a result of increase in profit, the EPS of the company. will automatically increase, thereby increasing the dividend.

576. *(d)* The conflict between owners, employees, suppliers and customers of a company is known as and conflicts of interest.

577. *(e)* These factors affect the coordination between the domestic and international companies significantly.

578. *(e)* This gives the comprehensive definition of a global organization.

579. *(a)* Corporate governance gives the relationship between all the stakeholders in a company. This includes the shareholders, directors, and management of a company, as defined by the corporate charter, bylaws, formal policy, and rule of law. Ethical companies are said to have excellent corporate governance

580. *(e)* The OECD is a group of 30 member countries who discuss and develop economic and social policy. The OECD has been called a monitoring agency. The OECD has a lot of power, as the member nations account for two thirds of the worlds goods and services.

581. *(a)* When the price changes of the underlying asset are positively correlated with changes in interest rates, the net effect of marking-to-the-market is to give the futures buyer extra money.

582. *(e)* Use spot-futures parity.

A. S(r/d)^t = 104.55.

B. S(r/d)^t = 57.05.

C. S(r/d)^t = 60.

583. *(b)* Since the European call cannot be exercised early, there is no reason that its price has to be greater than or equal to S – K. Hence this answer b.

584. *(c)* Hedging does not tend to increase or decrease the dollar cost.

585. *(b)* Hedging reduces the variability of the costs.

586. *(b)* Use put-call parity with C = \$45, S = \$120, d = 1.00, t = 0.5, r = 1.07, and K = 150:

$C = P + Sd^{-t} - Kr^{-t}$

$P = C - Sd^{-t} + Kr^{-t}$

$P = 45 - 120 + 150(1.07)^{-0.5}$

$P = 70.01$

Practice of Hedging

587. **(b)** Hedging is a mechanism of risk minimization.

588. **(a)** The presence of risk leads to the probability of occurrence of multiple outcomes.

589. **(e)** Insurance is a risk hedging mechanism.

590. **(d)** The higher the probability of occurrence of the outcome, the lower is the risk involved.

591. **(c)** Traditionally, the exchange of one security for another to change the maturity (bonds), quality of issues (stocks or bonds), or because investment objectives have changed. Recently, swaps have grown to include currency swaps and interest rates swaps.

592. **(d)** In the given regression equation the slope refers to the sensitivity of profits to the exchange rate.

593. *(c)* Misalignments in the prices leads to the possibility of arbitrage. This is what the investors exploit to make risk free profits.

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594. ***(b)*** No resemblance to the alternatives

595. ***(a)*** The total number of options or futures contracts that are not closed or delivered on a particular day is called open interest. A common misconception is that open interest is the volume of options and futures trades. This is not correct.

596. ***(e)*** All of these exchanges trade actively in futures contracts.

597. ***(e)*** This theory proposes that long-term interest rates can act as a predictor of future short-term interest rates. Empirical evidence suggests that this hypothesis often overstates the future short-term interest rate. This over-estimation may be due to the higher risk premium associated with holding a long-term debt security whos*e* yield is more uncertain due to potential changes in interest rates.

598. ***(d)*** All of these variables are pre-specified by the contracts. All the above terms and conditions of the futures contract are pre-specified by the exchange.

All the above terms and conditions of the futures continued are pre-specified by the exchange.

599. ***(b)*** The shareholders will always prefer volatile projects while the debt holders will prefer non-volatile ones

600. ***(c)*** Agency costs and fees for liquidators, lawyers and courts in this case of bankruptcy represent capital market imperfections

601. ***(b)*** Interest rates across countries will eventually be the same

602. ***(b)*** Forward markets help in effectively hedging the transaction exposure due to variability of the exchange rates.

603. ***(c)*** It implies that the forward rate of you is quoting below the current spot rate. Hence the yen is expected to appreciate against $.

604. ***(b)*** An open (unhedged) position is dealt with in the spot market.

605. ***(a)*** A reinvoicing center assumes the exchange rate risk of the various subsidiaries of a multinational corporation if it allows each subsidiary to purchase or sell in its “home” currency.

606. ***(a)*** Forfaiting refers to the act of purchasing an exporter’s receivables (the amount the importer owes the exporter) at a discount by paying cash. The “forfaiter,” the purchaser of the receivables, becomes the entity to whom the importer is obliged to pay its debt.

607. ***(c)*** In perfect markets, a manager's decision to hedge a firm's cash flows is irrelevant because the shareholders can hedge exchange risk themselves. If a large firm keeps track of the exposure of each of its divisions, the firm has better information about each division, and is therefore better able to make decisions

608. ***(e)*** Firms use hedging as a strategy when they are unsure of what the market will do. It is important for companies to have proper hedging policy in place.

609. ***(b)*** In a volatile market the cost of financial distress could be high. Hence, hedging should be used to protect against unfavorable market movements.

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Frequently Used Formulae

Capital Structure

1. The overall capitalization rate of the firm

$$k_o = k_d \frac{B}{B+S} + k_e \frac{S}{B+S}$$

where,

k_d is the cost of debt;

B is the market value of the outstanding debt.

S is the market value of equity

K_e is the cost of equity;

K_o is the weighted average cost of capital.

2. Present value of a tax shield = $\frac{t_c \text{ x r x B}}{r} = t_c B$

where,

t_c is the tax rate on corporate income;

r is the rate of interest payable on debt;

B is the market value of the debt.

or

$$= 1 - \frac{(1-t_c)(1-t_{ps})}{(1-t_{pd})} \text{ x B}$$

where,

t_{ps} is the personal tax rate on income from shares.

t_{pd} is the personal tax rate on income from debt.

3. The relation between EBIT and EPS is as follows:

$$EPS = \frac{(EBIT-1)(1-t)}{n}$$

where,

I is the annual interest payment

t is the tax rate of the firm

n is the number of shares

EBIT – EPS indifference point:

$$\frac{(EBIT-I_1)(1-t)}{n_1} = \frac{(EBIT-I_2)(1-t)}{n_2}$$

4. The relation between ROI and ROE is as follows:

ROE = {ROI + (ROI – k_d) D/E} (I – t).

where,

ROE is the Return on Equity

ROI is the Return on Investment

k_d is the cost of debt (pre-tax)

D is the debt component in the total capital

E is the equity component in the total capital

t is the tax rate

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Dividend Policy

1. Graham-Dodd Model

$P = m (D + E/3)$

where,

P	is the market price per share
m	is the multiplier
D	is the dividend per share
E	is the earnings per share

2. Walter Model

$$P = \frac{D + (E - D) r / k}{k}$$

where,

P	is the market price per share
D	is the dividend per share
E	is the earnings per share
r	is the return on investments
k	is the cost of capital

3. Gordon Model

The model is expressed as:

$$P_0 = \frac{Y_0 (1 - b)}{k - br}$$

where,

P_0	is the market price per share at the beginning of Year 0
Y_0	is the expected earnings per share for Year 0
b	is the retention ratio (retained earnings/total earnings)
r	is the return on investments
k	is the cost of equity

4. MM Approach

$$P_0 = \frac{D_1 + P_1}{1 + p}$$

where,

P_0	is the market price per share at the beginning of Year 0
D_1	is the expected dividend per share for Year 1
P_1	is the market price per share at the end of Year 1
p	is the capitalization rate for the firms in that risk class

5. Corporate Dividend Behavior (Lintner Model)

$Dt = cr\ EPSt + (1 - c)\ Dt\text{-}1$

where,

Dt	is the dividend per share for the time period t;
c	is the weightage given to current earnings by the firm;
r	is the target pay-out rate;
EPSt	is the earnings per share for the time period t;
Dt–1	is the dividend per share for the time period t – 1;

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Financial Analysis

1. Liquidity Ratios

Current Ratio = Current Assets/Current Liabilities

$$\text{Quick Ratio} = \frac{\text{Current Assets} - \text{Inventories}}{\text{Current Liabilities}}$$

$$\text{Short-term Finance to Net Current Assets Ratio} = \frac{\text{Short-term bank borrowings}}{\text{Current Assets} - \text{Current Liabilities}}$$

$$\text{Interval Measure} = \frac{\text{Quick assets}}{\text{Average daily expenses on operations}}$$

2. Leverage Ratios

$$\text{Debt-Equity Ratio} = \frac{\text{Long-term debt}}{\text{Equity}}$$

$$\text{Total Debt-Equity Ratio} = \frac{\text{External Financing}}{\text{Net Worth}}$$

$$\text{Debt Ratio} = \frac{\text{External Financing}}{\text{Total Assets}}$$

$$\text{Interest coverage ratio} = \frac{\begin{array}{c}\text{Earnings before depreciation, interest, tax,}\\ \text{extraordinary items and other non-cash charges}\end{array}}{\text{Interest}}$$

3. Turnover Ratios

$$\text{Inventory turnover} = \frac{\text{Cost of goods sold}}{\text{Average inventory}}$$

$$\text{Accounts receivables turnover ratio} = \frac{\text{Net Sales}}{\text{Average accounts received}}$$

$$\text{Fixed assets turnover ratio} = \frac{\text{Net Sales}}{\text{Average Net Fixed Assets}}$$

$$\text{Total assets turnover ratio} = \frac{\text{Net Sales}}{\text{Average Total Assets}}$$

4. Profitability Ratios

$$\text{Gross profit margin ratio} = \frac{\text{Gross Profit}}{\text{Net Sales}}$$

$$\text{Net profit margin ratio} = \frac{\text{Profit after tax and before extraordinary items}}{\text{Net Sales}}$$

$$\text{Return on capital employed} = \frac{\text{Profit before interest taxes and extraordinary items}}{\text{Average total capital employed}}$$

$$\text{Return on Net Worth} = \frac{\text{Profit after tax but before extraordinary items}}{\text{Average net worth}}$$

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Decision Support Models

1. Extended Probabilistic Analysis

$$C_1 = C_0 + \tilde{n}\tilde{s} - v\tilde{n}\tilde{s} - \tilde{n}f - \tilde{n}i - T(\tilde{n}\tilde{s} - v\tilde{n}\tilde{s} - \tilde{n}f - \tilde{n}i - \tilde{n}f')$$

Where,

C_1	=	ending cash balance
C_0	=	beginning cash balance
$\tilde{n}$	=	duration of the recession in months
$\tilde{s}$	=	monthly sales during the recession
$\tilde{n}\tilde{s}$	=	total sales during the recession
v	=	proportion of variable cash expenses to sales
$v\tilde{n}\tilde{s}$	=	total variable cash expenses during the recession
f	=	monthly fixed cash expenses, other than debt servicing burden, during the recession
$\tilde{n}f$	=	total fixed cash expenses, other than debt servicing burden during the recession
i	=	monthly interest payment associated with the contemplated level of debt during the recession
$\tilde{n}i$	=	total interest payment associated with the contemplated level of debt during the recession
f'	=	monthly non-cash fixed expenses
nf'	=	total non-cash fixed expenses during the recession
T	=	corporate income tax rate.

Working Capital Management

$$\text{Working capital leverage} = \frac{\text{Percentage change in ROI}}{\text{Percentage change in c}}$$

$$\text{Percentage change in ROI} = \frac{\frac{I}{t} - \frac{I}{t+\Delta c}}{\frac{I}{t}} = 1 - \frac{t}{t+\Delta c} = \frac{\Delta c}{t+\Delta c}$$

$$\text{Percentage change in } c = \frac{\Delta c}{c}$$

Hence,

$$\text{Working Capital Leverage} = \frac{\Delta c}{t+\Delta c} \times \frac{c}{\Delta c} = \frac{c}{t+\Delta c}$$

Where,

c	is the existing level of current assets
t	is the existing level of total assets
I	is the existing level of EBIT
Δc	is the change in the level of current assets in absolute terms.

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1. Weighted Operating Cycle

Raw Material Stage

$$W_r = \frac{\text{Raw material cost per unit}}{\text{Selling price per unit}}$$

Work-in-process Stage

$$W_w = \frac{\text{Raw material cost per unit} + (0.5 \times \text{Processing cost per unit}}{\text{Selling price per unit}}$$

Finished Goods Stage

$$W_f = \frac{\text{Cost of goods sold per unit}}{\text{Selling price per unit}}$$

Debtors Stage

$$W_d = \frac{\text{Selling price per unit}}{\text{Selling price per unit}} = 1$$

Creditors Stage

$$W_c = \frac{\text{Raw material cost per unit}}{\text{Selling price per unit}}$$

Duration of raw materials stage = D_r

Duration of work-in-process stage = D_w

Duration of finished goods stage = D_f

Duration of debtors stage = D_d

Duration of creditors stage = D_c,

Weighted operating cycle = $(D_r \text{ x } W_r) + (D_w \text{ x } W_w) + (D_f \text{ x } W_f) + (D_d \text{ x } W_d) - (D_c \text{ x } W_c)$

Working capital requirement

= (Amount of sales per day x Weighted operating cycle) + Required cash balance.

2. Discriminant Analysis

$Z_i = aX_i + bY_i$

where,

Z_i is the Z-score for the ith account

X_i is the value of the first independent variable for the ith account (current ratio in this case)

Y_i is the value of the second independent variable for the ith account (net profit margin in this case)

a and b are the parameter values that make the mean Z-score for group 1 significantly different from the mean Z-score for group 2.

3. Baumol Model

TC = I (C/2) + b (T/C)

where,

TC	=	Total costs (total conversion costs + total holding costs)
I	=	Interest rate on marketable securities per planning period
C	=	Amount of securities liquidated per batch
T	=	Estimated cash requirement over the planning period.

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The point where the total costs are minimum can be arrived at by minimizing the above equation. Minimization give us the following relationship.

$$C = \sqrt{\frac{2bT}{I}}$$

4. Miller and Orr Model

$$RP = \sqrt{\frac{3b\sigma^2}{41}} + LL \text{ and,}$$

$$UL = 3\,RP - 2\,LL$$

where,

LL = Lower control limit

RP = Return point

UL = Upper control limit

b = Fixed conversion cost

I = Interest rate per day on marketable securities

σ^2 = Variance of daily changes in the expected cash balance.

Strategic Cost Management

Target Cost = Sales Price (for the target market share – desired profit)

Firms in Financial Distress

Altman's Z Score Model

$$Z = 1.2X_1 + 1.4X_2 + 3.3X_3 + 0.6X_4 + 1.0X_5$$

where,

Z = Discriminant score

X_1 = Working capital/Total assets

X_2 = Retained earnings/Total assets

X_3 = EBIT/Total assets

X_4 = Market value of equity/Book value of debt

X_5 = Sales/Total assets.

Valuation of Firms

1. Discounted cash flow approach

Gross Cash Flow of the Firm =

Earnings Before Interest and Taxes (EBIT)

Less: Taxes on EBIT

= Net Operating Profit Less Adjusted Taxes (NOPLAT**)

Add: Depreciation

Add: Non-Cash Charges

= Gross Cash Flow

** NOPLAT can also be computed as EBIT (1 – t) where t is the tax rate of the firm.

The Gross Investment can be computed as follows:

Increase in Net Working Capital

Add: Capital Expenditure incurred

Add: Increase in Other Assets

= Gross Investments

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2. Cost of Capital

$$k_o = k_e \frac{S}{V} + k_p \frac{P}{V} + k_d (1 - t) \frac{B}{V}$$

where,

k_o	is the weightage average cost of capital
k_e	is the cost of equity capital
k_p	is the cost of preference capital
k_d	is the cost of debt
S	is the market value of equity capital
P	is the market value of preference capital
B	is the market value of debt
V	is the sum of the market values of the equity capital, preference capital and the debt i.e.S + P + B
t	is the tax rate applicable to the firm.

3. The continuing value of the firm may be computed as follows:

$$CV_n = \frac{FCF_{n+1}}{k - g}$$

where,

CV_n	is the continuing value of the firm at the end of the year n
FCF_{n+1}	is the expected free cash flow for the year n + 1
k	is the weighted average cost of capital of the firm
g	is the expected perpetual growth rate of the free cash flow.

Mergers and Acquisitions

1. Net Acquisition Value

$$NAV = PV_{ab} - (PV_a + PV_b) - P - E$$

where,

NAV	is the Net Acquisition Value
Pv_{ab}	is the present value of the merged entity
Pv_a	is the present value of firm A
PV_b	is the present value of firm B
P	is the premium paid by Firm A to acquire Firm B. It can be computed as the difference of Purchase Consideration – PV_b is the Present Value of B.
E	is the expenses involved in the merger

2. Conn & Nielson Model

$$\text{Exchange Ratio} = \frac{-S_1}{S_2} + \frac{(E_1 + E_2) PE_{12}}{P_1 S_2}$$

where,

ER	=	Exchange Ratio
P	=	Price per Share
EPS	=	Earnings per Share
PE	=	Price to Earnings Multiple
S	=	Number of Issued Shares

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3. Purchase Consideration

Assets taken over at agreed price	**
Less: liabilities taken over at agreed price	**
Purchase consideration	**
or	
Share issued	*
Share premium	*
Debenture issued	*
Other assets issued	*
Purchase consideration	**

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Part II: Problems

Introduction to Strategic Management

1. The decision of HP and Compaq to merge caught attention in all the circles. The response was a mix of favorable and criticizing statements. There is ample justification from the part of those who visualized the idea of this mega merger. The executives of both the firms say that the future lies in integrated solutions and not just stand-alone products. The future lies in globally supporting and managing information technology infrastructure, not just building it. They claim that together they can lead the changes transforming the industry and produce even greater value for the company's customers and shareholders. The opposing party claims that the result will not be as fruitful as the executives perceive. This group mainly includes the founding family members of the company.

Analyze any three strategic issues to be addressed before the proposed merger is effected.

Strategic Management Process

2. The baron of the consumer electronics market in the country, Kabir Mulchandani, has been successful in his strategies to attract the Indian customers. The promotional offers formulated by him for CTVs have kept customers interested and competitors scared. He came up with innovative schemes like exchange offers and bundling two products for the price of one. An efficient marketing and distribution network backed Mulchandani's acumen in the price game. The business headed by him, Baron International, started with effective promotion and sales strategies for the AKAI brand of color televisions. Later on, the tie-up was snapped and a new alliance was formed with AIWA, a subsidiary of Sony Corporation. Thus the company now sells the 'AIWA' brand in the country. It has now claimed a significant market share in the hi-fi systems and CTV segment. The CEO of the company indebted this success to the strategic strength maintained at the organization. How can the company review the benefits of implementing the process of strategic management? Discuss.

Company Mission

3. Infosys Technologies Ltd., has emerged as the world leader in consulting and information technology services. It allied with the Global 2000 companies to provide business consulting, systems integration, application development and product engineering services. Through these services, Infosys helps its clients to fully exploit technology for business transformation. The clients leverage on its global delivery model to achieve higher quality, rapid time-to-market and cost-effective solutions. The company employs approximately 10,000 employees in over 30 offices worldwide. It ensures that its clients benefit from seamless coordination across strategy, implementation, and management of their technology programs, expertise in focused industries, strong quality orientation, cross-technology expertise, and distributed project management capabilities. The company carries a high reputation for its approach towards creating wealth for its stakeholders by ensuring profitable operations through legal and technical means. Its mission statement also conveys the same message. The company was started with a dream to create and share wealth through an ethically run, world-class corporation. Comment on the responsibilities of a company like Infosys towards the society.

4. ITC is a market leader of cigarettes and tobacco, hotels, packaging, specialty papers and paperboards in India. The corporate strategies of the company are aimed at matching its core capabilities with market opportunities to produce superior shareholder value. One of the key corporate strategies is to continue its focus on the core business of cigarettes and tobacco. The increased focus on this segment is in the wake of competition posed by manufacturers like Godfrey Philips, who are planning to launch new brands in the premium segment. The competitors are also extending full pace to attract a reasonable share from the ITC. All the companies engaged in this business face stiff opposition from social activists and certain sections of the society. These sections are striving hard to create awareness of the ill effects of smoking among the people. ITC often sponsors sports events and contributes to activities related to environmental protection, education etc. Do you think that ITC is following the guidelines of a socially responsible firm?

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5. Reliance Financial Services (RFS) was established as a subsidiary of Rurban Financial Corporation based in the United States. The company has been providing trust and financial services to clients since 1956. Chartered in 1997 as a national chartered bank, Reliance offers a wide array of trust and financial services to clients nationwide and around the globe. The company's mission statement explains the rationale for its existence. This includes providing high quality and integrated financial services and products to the client it serves. RFS believes that its success is dependent on the relentless effort to build friends, provide consistent first-class client experiences, partnerships to maintain an environment nurture to attract and retain quality people, build value to enhance shareholder value. The mission statement projects all these factors and the business runs in line with the mission statement. Analyze the various components of a corporate mission statement and relate them with the mission statement of RFS.

6. Pfizer Inc. is a research based pharmaceutical company with global operations. It discovers, develops, manufactures, and markets leading prescription medicines. It has three business segments namely, health care, animal health and consumer health care. Pfizer has marked its presence in more than 150 countries. The company possesses many of the world's best-known medicine brands. The mission statement of the company quotes that it will become the world's most valued company to patients, customers, colleagues, investors, business partners, and the communities where they work and live. The purpose of the company is to dedicate itself to humanity's quest for longer, healthier, happier lives through innovation in pharmaceutical, consumer, and animal health products. Pfizer has recently launched a campaign to enroll low-income seniors in health benefit programs with a $15 flat fee for its prescriptions in Texas. How does the activity support the mission and purpose developed by the firm?

Analyzing the External Environment

7. Hero Honda, the country leader in the two-wheeler industry was started as a Joint Venture between Hero Group, the world's largest bicycle manufacturer and the Honda Motor Company of Japan. The company is today the leading manufacturer of motorcycles in the country. Hero Honda Motors Ltd., has succeeded in bringing out a revolution in the two wheeler-motor bike segment. The customer base has exceeded 30 lakh and the market share is at 47%, making it a veritable giant in the industry. Apart from these positive figures, Hero Honda faces two major issues. The competitors have been successful in developing strategies to capture the market share of the company. This increased level of competition in the industry has forced them to come up with new and costly promotion techniques. The other issue being internal concerns with its partner Honda Motor Corporation. Assume yourself as a management consultant hired by Hero Honda Motors and discuss the strategic decisions you might make to help the company solve the issues in both the internal and external environment.

8. ALSTOM, the French power giant is active in power generation, transmission, distribution, conversion and transport through its rail and marine activities, ALSTOM offers its customers a complete range of innovative components, systems and services covering design and manufacture. It is also involved in commissioning and long-term maintenance and has unique expertise in systems integration, management of turnkey projects, and application of advanced technologies. The company started operations in China some time back and has already invested 120 million US dollars and has begun seven joint ventures. ALSTOM conducted research studies and the results thus generated have made the company to invest in China. What were the factors to be analyzed while conducting the study for the external environment?

9. ABN AMRO reached an agreement to sell its consumer banking businesses in Chile and Venezuela to Bank Boston and Banco del Caribe respectively. Earlier the company disposed its retail activities in Argentina to Banco Galicia. The company claims that the activities are in line with the bank's strategy to focus on its core client segments around the world and direct capital and resources towards businesses earning higher returns. ABN AMRO is also planning to close its loss-making US equities and corporate finance business after its failure to compete with larger Wall Street rivals. Do these decisions require analysis of external environment? If yes, which environment analysis warrants top priority considering that the company is operating in the financial services business?

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10. The success or failure of an organization largely depends on its operating environment. A suitable analysis of the operating environment is essential for any firm operating in an external environment. The analysis includes an insight study of participants like competitors, customers, suppliers etc. The behavior and movement of each of these participants needs to be followed to meet the challenges faced in an industry. Equal importance should be given to all those participants as the competitor can take advantage in the instance of an unsatisfied customer or a supplier. In this context, what are the factors that need to be considered while analyzing the operating environment of the actions of these participants?

11. The Boeing Company is the world's leading aerospace company, with its heritage mirroring the history of flight. It is the largest manufacturer of satellites, commercial jetliners, and military aircraft. The company is also a global market leader in missile defense, human space flight, and launch services. Boeing continues to expand its product line and develop new technologies to meet customer needs. The main commercial products consist of the 717, 737, 747, 757, 767, and 777 families of jetliners. The company was in the development stage of 747X super jumbo but recently decided to put this program on hold and instead pursue a new midsize jet capable of flying very long routes at near the speed of sound. This crucial decision was taken after consultation with its customers and other beneficiaries. The decision to move forward from the production plan may dearly cost the company, as the investment requirements are very high. Are there any environmental issues to be considered for taking this major decision?

12. BPL, the leader in the CTV segment in the country, has witnessed its market share erode from a level of 21 percent to 19 percent. To counter this decline, it has put in place a strategy of segmentation of the product range by creating specific sub-brands. The company has decided to approach the market aggressively. To resist the sliding share due to the advent of multinational players, the company is planning to focus on the popular segment in the line of 'home entertainment' and premium segment in the line of 'exclusive entertainment'. To meet the future challenges, it set up a customer satisfaction cell to strengthen pre and after sales. The segmentation of the market into high-end, tech-savvy, value maximizer, risk averse, etc., had become necessary for BPL to consolidate its position. BPL had to take a conscious decision to ensure that its other product range moved as expected when there was 'pressure' on the middle-end and high-end color television range. The company is determined to pass the fall in the prices of components to the customers, which will result in a reduced price for its products. In a price sensitive market like the CTV, which type of environment analysis is suitable before BPL can strategize its operations?

Evaluating the Multi-national Environment

13. Companies prefer to operate in various markets, as trade barriers are unveiling day-by-day. The decision to participate in markets worldwide has also attracted more strategic issues. As the markets become more competitive, it gets difficult for the companies to sustain and maintain their market share. Thus it becomes imperative for companies to formulate an effective strategy and modify it whenever necessary. Most of the multi-national companies while globalizing their operations, try to give a considerable attention to the local tastes. This factor needs significant attention, as the customers of that particular market are the real deciders for the firm's product or service. The multinational companies also have to face stiff opposition from the domestic players, as they are wary of losing their share. How the process of strategic planning does helps a company in gaining its share in different markets? Illustrate with examples.

14. SAN MARZANO, a brand of the UK based Pizza Express chain of restaurants, has planned a major expansion in the country. The brand has 400 outlets globally, of which around 250 are in the United Kingdom. Business in the Indian market has already started with four outlets, two in New Delhi, one each in Mumbai and Pune. The company plans to open more outlets in the country by 2005. SAN MARZANO considers the Indian market as an appropriate target for its business. The company wanted to expand and consolidate its position in Mumbai and Delhi as it has the infrastructure laid out in these cities. Compared to its presence in the Indian market, the company has only one restaurant each in other Asian markets such as Hong Kong, Japan, and Pakistan. SAN MARZANO claims that its menu in India will remain unchanged for the time being. How should the analysis of multinational environment be conducted before preparing for the Indian market?

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Internal Analysis of the Company

15. ABB's vision and mission is to create value for its customers and stakeholders and the communities and societies in which it operates. To achieve this vision and mission, the company has drawn up a charter of values and a set of guidelines to follow at all times. Integral to the mission and values are its sustainability and business ethics programs. These programs enable it to expand a high level of environmental awareness and to balance social and economic performance throughout the group. They also ensure that the company maintains high ethical standards by fulfilling its commitments and acting with integrity in accordance with sound business principles. How far are these efforts significant to ABB, which deals with heavy engineering equipments?

Formulating Long-term Objectives and Strategy

16. BMW the premium segment automaker has stated that by 2004, it plans to add a new BMW model that will be smaller and less expensive than the 3 series, the current entry-level BMW. The company's strategy now is to stay focused on using these brands to build a full range of premium products. Despite the consolidation of the world auto industry into a few giant players, BMW executives are adamant that the company can remain independent and still thrive. How the decision taken by BMW to cater the middle class segment helps them in achieving its long-term objectives?

17. Rolls-Royce Plc. a global company which provides power on land, sea and air has established itself as a leader in civil aerospace, defense, marine and energy markets. The company is the world's leading supplier of marine propulsion equipment and offers integrated ship solutions for both commercial and naval markets. Rolls-Royce has the capability to provide total power generation, compression and pumping solutions to the world energy market through a competitive range of packaged generation and compression sets driven by gas turbines and reciprocating engines. A comprehensive and global support network is in place to satisfy the aftermarket needs of customers using Rolls-Royce products and services. The company adopted relationship marketing as a major technique to focus on its growth. How does a customer relationship approach help a company like Rolls-Royce Plc. in achieving its long-term objectives?

Strategy Analysis and Choice

18. Asea Brown Boveri is a global leader in power and automation technologies that enable utility and industry customers to improve performance while lowering environmental impact. During the late '90s, ABB adopted a strategy for its local business to transform into a company delivering more knowledge and service based solutions with fewer heavy assets to earn higher operating margins and a better return on investments. The strategy was a shift from its core business functions, which need huge investments in heavy assets. How far is ABB's shift in strategy justified?

19. Wipro technologies, a leading provider of IT services in the country has drawn up its strategy to become a world leader in the field. The company has stated in its last annual report that the markets addressed by it are undergoing rapid change due to the pace of technological development and change in business models. The company is planning to achieve this by identifying and developing service offerings in emerging growth areas as separate business opportunities, such as infrastructure support services, business intelligence services and telecommunication, internet and application service providers. It believes that these trends provide significant growth opportunities. Do you agree with the company's management decision to explore the emerging growth areas?

20. India's largest private refinery, Reliance Petroleum Ltd., is putting together a multi-pronged strategy to market its products as the sector is let open for private firms beginning April 2002. In the run up to deregulation, the firm, which operates a 27 million tonne refinery, will form joint ventures, acquire marketing assets as well as develop its own infrastructure. Backed by the formidable Reliance group, the country's largest business group by sales, RPL's entry into marketing is expected to shake up a sector dominated by state-run firms. The firm had already signed a memorandum of understanding with the state-run refinery,

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Indian Oil Corporation, the country's largest firm by sales, for a marketing joint venture. RPL also announced plans to increase its production capacity by getting rid of bottlenecks in its operations. RPL developed its marketing strategy keeping in mind the proposed investment in pipelines. This will allow distribution across India in a seamless and efficient manner. Above all, RPL recently announced its amalgamation with Reliance Industries Ltd. to attain strength and competitiveness in facing the situation after the dismantling of prices. How is a strategic analysis conducted to face this situation both at the corporate and business unit level?

21. Television channel wars are gaining intensity day-by-day. Discovery channel, the leading channel, which telecasts science and other inquisitive programs, is developing a programming strategy. This includes 118 hours of new programming every week. The channel is also trying to recognize the individual needs and viewing habits of the viewers. It will introduce programming blocks during the day to appeal various target groups at their time of preference. The introduction of blocks for each target group is based on extensive studies to gauge audience-viewing patterns across demographics, identifying the most popular day parts for each demographic. The blocks that are being introduced are Sunrise, Discovery Kids, Action Zone, Prime Time, Friday Showcase and Super Sundays, each catering to different groups. The necessity to introduce a new programming strategy came from the audience survey, which revealed a common refrain, 'I love to watch it but I don't know what to watch when.' Therefore the channel made its strategy 'Relevant Content for the Target Audience at the Right Time'. The channel executives agree that although it has great programming, it has not been promoted much. Discuss some of the behavioral considerations that can affect the strategic choice of the channel.

22. BNP Paribas is one of France's foremost companies and one of the leading banks in Europe. The group is a leader in specialized financial services and its unique business model has demonstrated its effectiveness over the past ten years. In all its core businesses, BNP Paribas is determined to be a benchmark-banking group, which considers the customer as its key preoccupation and actively pursues the improvement of its earning capacity. This three-way objective has led it to define the values, which must guide the attitude of each employee and inspire the management principles implemented at every level of the group, both within and outside France. The company forayed into the Indian market a few years ago and was doing business in all the major segments to mark a significant presence in the country. But recently the bank announced its decision to terminate its retail operations in the country. A better evaluation of the strategic alternatives at the initial stage could have avoided this situation. What criteria should the bank have analyzed before entering into retail operations in India?

23. Birla Home Finance Limited (BHFL) is a joint venture of the Birla Group and BHW Holdings and AG of Germany. BHW is one of the largest housing finance companies in Europe. With this joint venture, Birla Home Finance Ltd has access to the most modern and innovative home finance products to be introduced in India from time to time. Birla Home Finance Ltd is the group's foray into financial services to fulfill the social objective of providing a home to a wide stratum of society. It is a National Housing Bank Registered Company. The company has developed a set of strategies to run the business. These include keeping the company retail, offering the best service and maintaining a competitive price. The market estimates indicate a industry outflow worth approx Rs.40,000 crore per annum, of which the formal sector finance accounts only for about 30%. The balance is a mixture of own savings, contribution from friends and relatives, employer's loans and other sources. Do you think the strategy followed is appropriate? If not, give your suggestions.

Operationalizing the Strategy

24. Community investment is a core business imperative at Cadbury Schweppes. The company was well known for its pioneering work in the 1800s, providing housing, education, welfare, and recreation facilities to the local community. Today that sense of community responsibility has developed as a part of its business strategy and continues through cash donations, time and skills and the gifts-in-kind. The company has achieved the reputation of a good corporate citizen, which is fundamental to its aim of achieving growth in shareowner value. The UK division of Cadbury Schweppes has recognized that a global HR strategy is necessary in today's market to cater to a more mobile workforce. It has also elected to dispense with localized systems and processes in favor of a more standardized approach. How do you think will this strategy help the company to attain its objectives?

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25. Industrial Development Bank of India (IDBI), the country's largest financial institution has appointed four high-power committees (strategy and policy, risk management, product innovation and human resource development) to implement strategies, to reposition itself in the domestic financial sector. IDBI's strategic objective is to position itself as India's premier wholesale bank through a full range of products. Discuss how IDBI can effectively implement its strategies to attain growth in the domestic financial sector.

Strategy and Structure

26. Maria Jones is the owner of the US based Jones group, which is in the business of restaurant and catering services. The group has 400 strong full-time employees. Ms. Jones has retained complete control over the operations and personally reviews all the new business proposals and requests for tenders and decides which jobs are to be accepted. What type of leadership style does Ms. Jones follow? Do you justify this style of leadership?

Resource Management and Control

27. GE opened a state-of-the-art R&D laboratory in Bangalore after identifying the enormous potential in the biotechnology sector. The company viewed this as an essential requisite to innovate and introduce new products in this segment. Explain the importance of resource management and control in developing an efficient Research and Development center.

The Value Chain and Competitive Scope

28. The European Union (EU) plans to build a single energy market by the year 2005 to provide the 15-member bloc with the most effective, secure and competitive energy market. To achieve this goal, the EU should set a time schedule, establish fair competition, and a genuine single market. These new proposals constitute a decisive step towards providing the people of Europe with an integrated electricity and gas system, offering security in terms of competition and price. The idea of the single market is not to create 15 open national markets, but one internal market. How far will the idea of a single market be successful here?

The Value Chain and Generic Strategies

29. The potential of the Indian non-life insurance market is astounding and has encouraged players like TATA AIG to foray into the sector. The company is able to peg its management expenses at 9 percent of the total cost whereas other players incur almost 23 percent. The backbone of Tata AIG's game plan is a technological framework over which, the company has spent about Rs.15 crore. To improve the service provided to its customers, the company hired a mix of insurance as well as non-insurance people committed to provide a level of service that is focused on the customer. Distribution network is one of the major problems faced by TATA AIG and other new private players whereas the state run competitors are strong on this point. A strong connection with the customer is what TATA AIG intends to establish in the days to come as it endeavors to scoop up a significant share from the potential goldmine. Considering the above factors, what should be an appropriate strategy for TATA AIG to widen its customer base and to improve the market share?

30. In today's highly competitive business environment, it is essential to nurture customer relationships to succeed. Customer relationships are a key business asset, and their cash flow represents a company's total market value. Organizations must integrate customers into their value chains to ensure competitive advantage and increase profits. Explain the significance of primary activities of value chain approach quoting the instances of players operating in the automobile industry.

Capital Structure

31. Ram Ltd. is having an expansion plan to cater to a growing market for its products. The company may finance the expansion either through an issue of 12% debentures or through an issue of shares at a price of Rs.10 per share. The total funds requirement is Rs.120 lakh. The company's profitability statement prior to expansion is summarized as follows:

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		Rs. in lakh
Sales		1,600
Less:	Costs excluding depreciation	1,100
	EBDIT	500
Less:	Depreciation	70
	EBIT	430
Less:	Interest	80
	PBT	350
Less:	Income tax at 40%	140
	PAT	210
Number of shares (lakh)		65
	EPS (Rs.)	3.23

The various possible values of EBIT after expansion and the probabilities associated with each of the values are as follows:

EBIT (Rs. lakh)	Probability
470	0.15
500	0.25
520	0.50
550	0.10

You are required to calculate

a. The company's expected EBIT, EPS and their standard deviation for each plan. What can you infer from the values?

b. Is there an EBIT indifference point between both plans? What does this imply?

32. Computech Ltd. makes a rights issue at Rs.6, a share of one new share for every 3 shares held. Before the issue there were 12 million shares and the share price was Rs.8. Based on the above information you are required to compute

a. The total amount of new money raised.

b. How many rights are required to buy one new share?

c. What is the value of one right?

d. What is the prospective ex-rights price?

e. How far could the total value of the company fall before shareholders would be unwilling to take up their rights?

f. Whether the company's shareholders are just as well off if rights shares are issued at Rs.5 rather than a rights issue at Rs.6?

33. Two companies April Ltd. and May Ltd. belong to the same risk class and are identical in every fashion except that April uses debt while May does not. The levered company has Rs.7,00,000 debentures carrying 12% rate of interest. Both the firms earn 18% before interest and taxes on their total assets of Rs.20 lakh. Assume perfect capital markets, rational investors and so on. Both companies pay tax at 40%. Capitalization rate for an all equity company is 16%.

You are required to

a. Compute the value of the two firms using the net income and Modigiliani and Miller approach.

b. Using the MM approach, compute the overall capitalization rate for both the companies.

c. Identify which of the two companies has an optimal capital structure according to the MM approach; give reasons for your answer.

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34. The following information is available regarding Mahavir Chemicals Ltd.

EBIT	Rs.75 lakh
Interest on debenture @ 8.5%	1.275
Interest on term loan @ 12%	1.92
Income tax @ 40%	28.7
Number of equity shares	15 lakh
Market price per share	Rs.20

The company has undistributed reserves and surplus of Rs.40 lakh. It is in need of Rs.50 lakh to pay off debentures and modernize plants. The company is considering the following two options.

a. Raising the entire amount as term loans @ 12.5%.

b. Issuing 1.5 lakh shares at Rs.15 per share and the rest of the amount in the form of term loans @ 12.5% p.a.

As a result of modernization the return on capital employed is likely to improve by 3%. In case the total amount is raised in the form of term loans the P/E ratio of the company is likely to decrease by 5% you are required to:

i. Advise the company on the financial plan to be selected.

ii. Find out the financial break even level of EBIT under both the alternatives.

iii. Find out the indifference level of EBIT.

35. There are two firms Alpha and Beta similar in all respects except in the degree of leverage employed by them. From the financial data given below, you are required to calculate the average cost of capital for both the firms as per the Net Income approach.

	Alpha	Beta
Net operating income	20,000	20,000
Interest on debt	0	4,500
Equity earnings	20,000	15,500
Cost of debt capital	7%	7%
Cost of equity capital	10%	10%
Market value of equity	2,00,000	1,55,000
Market value of debt	0	64,286
Total value of the firm	2,00,000	2,19,286

36. A company's expected annual net operating income (EBIT) is Rs.75,000. The company has 1,50,000, 10% debentures. The equity capitalization rate of the company is 12%. Assuming that there are no taxes you are required to calculate the value of the firm as well as the total cost of capital.

37. ABC Ltd. and XYZ Ltd. are in the same risk class and are similar in every respect except that ABC Ltd. is a levered firm, while XYZ Ltd. is unlevered, ABC Ltd. has Rs.12,00,000 debentures worth carrying 12% rate of interest. Both the firms earn 18% before interest and taxes on their total assets of Rs.22 lakh. Assuming a tax rate of 50% and a capitalization rate of 14% for the unlevered firm.

Calculate the value of both the firms using Net Income approach.

38. Phoenix Ltd. has a net operating income of Rs.40 million, Phoenix employs Rs.90 million debt capital carrying 8% percent interest charge. The equity capitalization rate applicable to Phoenix is 16%. What is the market value of Phoenix under the net income method? Assume that there is no tax.

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39. The following information is available for two firms Star Ltd. and Moon Ltd.

	Star Ltd.	Moon Ltd.
Net operating income	15,00,000	15,00,000
Interest on debt	Nil	6,00,000
Cost of equity	16%	16%
Cost of debt	12%	12%

a. Calculate the market value of equity, market value of debt and total value of both the firms.

b. What is the average cost of capital for each of the firms?

c. What happens to the average cost of capital of Star Ltd. if it employs Rs.20 million of debt to finance a project that yields an operating income of Rs.4 million?

d. What happens to average cost of capital of Moon Ltd. if it sells Rs.3 million of additional equity (at par) to retire Rs.3 million of outstanding debt? In answering the above questions assume that the Net Income approach applies and there are no taxes.

40. The management of Stellar Company, subscribing to the net operating income approach, believes that its cost of debt and overall cost of capital will remain at 10% and 14% respectively. If the equity shareholders demanded a return of 22%, what should be the proportion of debt and equity in the firms capital structure? Assume that there are no taxes.

41. Two firms Delta Ltd. and Sigma Ltd. are similar in all respects except the degree of leverage employed by them. From the data given below, calculate the equity capitalization rates for the firms.

	Delta Ltd.	Sigma Ltd.
Net operating income	15,000	15,000
Overall capitalization rate	0.14	0.14
Total market value	1,07,143	1,07,143
Interest on debt	2,500	5,000
Debt capitalization rate	0.11	0.11
Market value of debt	22,727	45,455
Market value of equity	84,416	61,688
Degree of leverage	0.269	0.736

42. The management of a firm believes that the cost of equity and debt for different proportions of equity and debt in the capital structure are as follows:

Proportion of equity	Proportion of debt	Cost of equity K_e%	Cost of debt Kd%
1.00	0.00	10	5
0.90	0.10	10	5.5
0.80	0.20	10.5	6
0.70	0.30	11	6.5
0.60	0.40	11.5	7
0.50	0.50	12	8
0.40	0.60	13	8.5
0.30	0.70	14	9
0.20	0.80	15	9.5
0.10	0.90	18	10

What is the optimal capital structure of the firm?

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43. A Ltd. and B Ltd. belong to the same risk class. They are identical in all respects except that A Ltd. has no debt in its capital structure where as B Ltd. is a levered firm. Relevant financial particulars of the companies are given below.

	A Ltd.	B Ltd.
Net operating income	2,00,000	2,00,000
Debt interest	–	40,000
Equity earnings	2,00,000	1,60,000
Equity capitalization rate	10%	12.5%
Market value of equity	20,00,000	12,80,000
Market value of debt	–	8,00,000
(Debt capitalization rate is 5%)		
	20,00,000	20,80,000
Average cost of capital	10%	9.615%

X owns 1% worth of equity in B Ltd. Show what arbitrage will he resort to?

44. The following information is available about Stallon Ltd.

Net operating income	Rs.15,00,000
Tax rate	40%
Debt capital	Rs.20,00,000
Interest rate on debt capital	8%

Capitalization rate applicable to debt free firm in the risk class to which Stallon Ltd. belongs to 12.5%.

What should be the value of the firm according to Modigliani and Miller model?

45. If the corporate tax rate t_c is 40 percent, the personal tax rate on equity income 7% and the personal tax rate on debt income 20%, what is the advantage per rupee of debt?

46. Multex Ltd. is trying to find an appropriate capital structure. The firm has made the following estimates of cost of debt and cost of equity at different leverage ratios:

Debt/Total assets	Interest on debt (%)	Cost of equity without bankruptcy and agency costs (%)	Cost of equity with bankruptcy and agency costs (%)
0	–	12.0	12.5
0.1	11.0	12.0	12.5
0.2	11.0	12.5	13.0
0.3	11.5	13.0	13.5
0.4	12.0	13.5	14.0
0.5	12.5	14.0	14.5
0.6	13.0	14.0	14.5
0.7	13.0	15.0	15.0
0.8	14.0	16.0	18.5
0.9	16.0	18.0	20.0

The tax rate for Multex Ltd. is 50%.

Required:

a. What is the average cost of capital of the company at various leverage ratios in the absence of bankruptcy and agency costs? What is the optimal capital structure?

b. What is the average cost of capital of the company at various leverage ratios with bankruptcy and agency costs? What is the optimal capital structure?

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47. A company's current operating income is Rs.6 lakh. The firm has Rs.8 lakh of 10% debt outstanding. Its cost of equity capital is estimated to be 16%.

i. Determine the current value of the firm using traditional approach.

ii. Calculate the firm's overall capitalization rate as well as both types of leverage ratios (a) B/S (b) B/V.

iii. The firm is considering increasing its leverage by raising an additional Rs.4,00,000 debt and using the proceeds to retire that amount of equity.

As a result of increased financial risk, k_d is likely to go up 12.5% and k_e to 18.5%. Is this move advisable?

48. The EBIT of Kalyani Chemicals Ltd., is Rs.60 lakh and its tax rate is 50%. The firm is able to borrow at an interest of 15%. But its required rate of return on equity is 20% in the absence of borrowing.

Required:

a. In the absence of personal taxes determine the value of the firm in an MM world with no leverage? With Rs.80 lakh debt; with Rs.120 lakh debt.

b. Calculate the value of the firm for all the 3 alternatives given in (i) A situation where both personal as well as corporate taxes exist. (ii) The marginal personal tax on stock income is 22%; and (iii) The marginal personal tax rate on debt income is 28%.

49. Sunshine Ltd. plans to employ debt in its capital structure in order to avail a net tax advantage (corporate and personal combined) which it estimates to be 18% of the amount of debt. Currently the company has no debt in its capital structure. The firm's market value is Rs.125 lakh. In case the company raises debt, it will increase bankruptcy costs and agency costs. The management is also concerned about the interest rate going up in case it borrows too much. The company believes that it can borrow up to Rs.45 lakh without incurring these costs. However, each Rs.45 lakh increment in borrowing is expected to result in the 3 costs cited being incurred. Further, this is expected to be at an increasing rate. Given the information below, you are expected to determine, if there is an optimal level of debt for the company.

(Rs. in lakh)

Debt	45	90	135	180	225	270
PV cost of bankruptcy agency and increased interest rate	0	5	10	18	30	45

50. Consider the following data for Reality Textiles Limited.

a. Existing capital : 1.5 million equity structure shares of Rs.10 each.

b. Tax rate : 40%

The company plans to raise additional capital of Rs.5 million for financing an expansion project. It is evaluating 2 alternatives. (i) issue of equity shares (0.5 million at Rs.10 per share); and (ii) issue of debentures carrying 14.5% interest. What will be the EPS under the two alternative financing plans for two levels of EBIT. Rs.2 million and Rs.3 million respectively. Also calculate the break even EBIT for the two alternatives.

51. A company's present capital structure contain 10,00,000 equity shares and 60,000 preference shares. The firm's current EBIT is Rs.6.4 million. Preference shares carry a dividend of Rs.8 per share. The tax rate of the company is 50%. The EPS is Rs.2.72. The firm is planning to raise Rs.10 million of external financing. Two financing alternatives are being considered.

i. Issuing 10,00,000 equity shares for Rs.10 each.

ii. Issuing debentures for Rs.10 million carrying 14% interest?

Required:

a. Compute the EPS-EBIT indifference point.

b. Which is the alternative that maximizes the EPS of the firm?

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52. A company's present capital structure consists of 8,00,000 shares of equity stock. It requires 5 million of external financing for which it is considering three alternatives. Alternative 1 calls for issuing 5,00,000 equity shares (Rs.10 par), alternative 2 calls for issuing 3,00,000 equity shares (Rs.10 par) and 2,00,000 preference shares (Rs.10 par) carrying 8% dividends per share. Alternative 3 calls for issuing 2,00,000 equity shares (Rs.10 par) and Rs.3 million of debentures carrying 15.5% interest. The company's EBIT is Rs.5.4 million and its tax rate is 40%. Calculate the indifference point for alternative 1&2, 2&3, and 1&3. Also determine the alternative which yields the maximum EPS.

53. From the data given below, analyze the impact on ROE, when ROI is 10%, 15% and 20%.

Particulars	Day Ltd. (Rs. in million)	Night Ltd. (Rs. in million)
Debt	0	100
Equity	200	100
Total investment	200	200
Tax rate	50%	50%
Cost of debt	–	15%

54. Infotech Ltd. has an average cost of debt of 10% and a tax rate of 40%. The ROI is 15%. What financial leverage ratio should the company adopt if its target ROE is 16.5%?

55. Multimedia Ltd. has an average cost of 8% for debt financing. The financial leverage ratio is 0.7 and the ROI is 11%. What is the ROE for the company, if its tax rate is 40%?

56. From the given information you are required to calculate the interest coverage ratio and the cash flow coverage ratio.

EBIT	Rs.125 lakh
Depreciation	Rs.20 lakh
Interest on debt	Rs.25 lakh
Tax rate	40%
Loan repayment installment	Rs.17.5 lakh

57. From the information given below, you are required to calculate the debt service coverage ratio?

(Rs. in lakh)

	Years				
	1	2	3	4	5
Profit after tax	25	40.0	75.00	100.000	115.000
Depreciation	18	16.2	14.58	13.122	11.809
Interest on term loan	40	40.2	38.60	36.400	34.600
Term loan repayment installment	–	–	45.00	45.000	45.000

58. Sriven Ltd. is embarking on an expansion plan requiring an outlay of Rs.200 million. The management is prepared to accept only a 5% chance of cash inadequacy. It is expected that during a recession the company would have an expected cash inflow of Rs.70 million with a standard deviation of Rs.40 million. The cash inflow would be normally distributed. The initial cash balance of the company is Rs.2.2 million.

The annual fixed charges associated with various levels of debt are as follows:

	Interest cost
First Rs.30 million	12%
Next Rs.30 million	12.5%
Next Rs.40 million	13%
Next Rs.50 million	13.5
Next Rs.50 million	14%

You are required to calculate the debt capacity of the firm.

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59. Aniket Ltd. presently has 2 million outstanding equity shares (Rs.10 par) selling at Rs.20 per share. It needs Rs.7.5 million of additional funds which can be raised in 2 ways.

a. Issue of 0.5 million shares @ Rs.15 each.

b. Issue of debt capital carrying 14% interest.

The expected EBIT after the new funds are raised will be Rs.10 million per year with a standard deviation of Rs.4 million. The company's tax rate is 40%. What is the probability that the debt alternative is better than the equity alternative with respect to earnings for share?

60. Remington Ltd. is embarking on an expansion plan requiring an outlay of Rs.50 crore. The management of the firm is convinced that it can raise the entire amount by debt (perpetual) at an interest cost of 14%. The company plans to raise debt as it is a cheaper source of finance. However, the ability of the firm to meet its interest obligations in a year of recession is likely to cause concern. During a recessionary year the net cash flows of the company without considering the interest burden on the new debt would have an expected value of Rs.14 crore with a standard deviation of Rs.4 crore.

You are required to determine the following.

a. What is the probability of cash inadequacy during a recessionary year, if the entire outlay of Rs.50 crore is raised as debt finance?

b. If the management is prepared to accept only a 5% chance of cash inadequacy, what proportion of Rs.50 crore requirement should be raised as debt finance?

61. Consider the following information relating to two companies, Alpha and Beta which are identical to each other excepting for their capital structure:

		(Rs. in lakh)
Particulars	Alpha	Beta
Operating Income	400	400
Interest Expense	0	100
Net Income	400	300
Overall Capitalization Rate (%)	10	8
Cost of Debt (%)	–	5

Ramesh holds 10% stake in the equity of Alpha as well as Beta. He cannot borrow at the rate of interest that is available to the companies and may have to pay a higher rate.

You are **required** to:

a. Explain how he can make arbitrage profits as propounded by Modigliani and Miller.

b. Calculate the maximum rate of interest he can pay if he has to borrow money to make arbitrage profits.

62. Innovative Enterprises Ltd. earned an EBIT of Rs.3 crore for the year just ended. The company has 10 lakh equity shares outstanding, with a face value of Rs.10 each and an outstanding debt of Rs.2 crore, which carries interest at 12%. The company also has free reserves to the extent of Rs.5 crore, which can be capitalized. The company is planning a bonus issue to utilize the entire free reserves and later a stock split to make the face value of the shares Rs.2.

After the bonus issue and stock split are complete, the company plans to raise funds to the extent of Rs.5 crore to finance additional investments. The required funds may be raised either as debt, at an interest of 14% or equity, which can be issued at the par value of Rs.2.

The company expects the standard deviation of total EBIT after the investments are made is Rs.1.8 crore. Assume the income tax rate of the company is 30%.

You are **required** to calculate the minimum level of EBIT at which the debt issue is better than the equity from the point of view of EPS by at least 95%.

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63. Consider the following information relating to two firms, X and Y, which are similar to each other in all aspects excepting leverage.

(Rs. lakh)

	X	Y
Equity capital	1,000	600
Debt	0	400
Net operating income	100	100
Interest on debt	0	20
Market value of equity	2,000	1,000

You are **required** to

a. Show how an investor holding a 10% stake in X can generate arbitrage profits by using personal leverage.

b. Show how an investor holding 10% stake in the equity of Y can generate arbitrage profits assuming that the market value of Y is Rs.2,000 lakh and that of X is Rs.1,000 lakh.

64. Vanguard Systems Ltd. has in its capital structure 10 lakh equity shares of face value Rs.10 each and debt of Rs.50 lakh. The equity shares of the company are now being traded at Rs.25 per share. The company now needs additional funds of Rs.100 lakh. It is in a dilemma on whether it should raise the funds through equity or debt. Equity shares can be issued at the current market price. Debt can be raised at 15%, which is higher than the interest on the currently outstanding debt by 1%. The additional income (EBIT) that is expected to be generated from the funds now sought to be raised is Rs.50 lakh, which is expected to have a standard deviation of Rs.10 lakh. The tax rate applicable to the company is 30%.

Estimate the probability that the equity alternative is better than debt with respect to earnings per share.

65. Imation Industries Ltd. (IIL) has in its capital structure 10,00,000 equity shares of face value Rs.10. The shares of the company are currently trading at Rs.20. To fund its expansion plans, the company is planning to raise Rs.1 crore. It is evaluating the following two alternatives:

a. **Issuing equity shares:** It is likely to be easy to raise the funds through this route due to the current buoyant state of the capital markets at a price of Rs.18 per share. Issue expenses are expected to be 5% of the issue amount.

b. **Issuing debentures:** The investors may expect a coupon of 13% if the issue is made at par. Issue expenses are expected to be 4% of the issue amount.

On deployment of the additional funds raised, the EBIT of the company is expected to increase to Rs.40 lakh with a standard deviation of Rs.4 lakh. The tax rate applicable to the company is 35%. The finance manager of the company wants to choose the alternative of issuing debentures only if it leads to a higher EPS than the alternative of issuing equity with a probability of more than 60%. Should he choose the debt alternative? Support your answers with relevant workings.

66. Two firms, Alpha and Beta, are identical except for their capital structure. Both will earn Rs.150 lakh in a boom and Rs.50 lakh in a slump excluding interest if any. There is a 50% chance of each event. Alpha is entirely equity financed and its market capitalization is Rs.500 lakh. Beta has issued Rs.400 lakh of debt at 10%. There are no taxes or market imperfections. Investors can borrow and lend at the risk-free rate of interest.

a. What is the value of Beta's shares? Justify your answer.

b. Suppose you invest Rs.20 lakh in Alpha's equity. Is there an alternative investment in Beta that would give you identical pay offs in a boom and a slump?

c. Now suppose you invest Rs.20 lakh in Beta's equity. Design an alternative strategy with identical pay offs in a boom and a slump.

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67. The following information is available regarding Zubex Textiles Ltd.

EBIT	Rs.54.00 lakh
Interest on debentures @ 9%	Rs.1.80 lakh
Interest on term loans @ 12%	Rs.2.4 lakh
Income tax	Rs.14.94 lakh
Number of Equity shares (FV Rs.10)	10 lakh
Market price per share	Rs.17.00

The company has undistributed reserves and surplus of Rs.35 lakh. It is in the need of Rs.65 lakh to pay off debentures and modernize plants. The company is considering the following two alternatives of financing for the purpose:

i. Raising the entire amount as term loans @13% p.a.

ii. Issuing 2 lakh shares at Rs.15 per share and the rest of the amount in the form of term loans @ 13% p.a.

As a result of modernization the return on capital employed is likely to improve by 2.5%. In case the total amount is raised in the form of term loans the P/E ratio of the company is likely to decline by 10%.

You are **required** to

a. Advise the company on the financial plan to be selected.

b. Find out the financial break even level of EBIT under both the alternatives.

c. Find out the indifference level of EBIT.

68. Aarti Manufacturers Ltd. is having an expansion plan to cater to a growing market for its products. The company may finance the expansion either through an issue of 15% debentures or through an issue of shares at a price of Rs.10 per share. The total funds requirement is Rs.100 lakh. The company's profitability statement prior to expansion is summarized as follows:

		Rs. in lakh
Sales		1,300
Less: Costs excluding depreciation		1,000
	EBDIT	300
Less: Depreciation		50
	EBIT	250
Less: Interest		50
	PBT	200
Less: Income tax at 35%		70
	PAT	130
Number of shares (lakh)		50
	EPS (Rs.)	2.60

The various possible values of EBIT after expansion and the probabilities associated with each of the values are as follows:

EBIT (Rs. lakh)	Probability
250	0.10
450	0.30
540	0.50
630	0.10

You are **required** to calculate

a. The company's expected EBIT, EPS and their standard deviations for each plan. What can you infer from the values?

b. Is there an EBIT indifference point between both plans? What does this imply?

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69. Two firms, Black Tiles Company and White Tiles Company are similar except that Black Tiles Company is unlevered while White Tiles Company has Rs.2 lakh of 5% debentures outstanding. Both companies have a net operating income of Rs.40,000. Their discount rate is 10% and both companies face a tax rate of 40%.

a. Calculate the value of both the firms if the Modigliani-Miller position on leverage holds good.

b. Assume that the current market value of the equity of White Tiles Company is Rs.1,60,000. According to Modigliani-Miller position, will this represent an equilibrium value for White Tiles Company? If no, then how will the equilibrium be restored? Clearly state the assumption(s) made.

70. Montego Ltd. has current earnings of Rs.5 per share with 50,00,000 issued equity shares. The company plans to issue 5,00,000 shares of 15% Rs.100 par value convertible preference share at par. The preference share is convertible into 4 equity shares for each preference share. The equity share has a current market of Rs.22 per share.

a. What is the preference share's conversion value?

b. What is the conversion premium?

c. Assuming that total earnings remain the same, what will be the effect of the issue on earnings per share before conversion and on a fully diluted basis?

d. If profit after taxes increases by Rs.1 crore, what will be the EPS before conversion and on a fully diluted basis?

e. It is said that issuing convertibles is better than issuing stock if the firm's shares are undervalued. Assume that this is the case with Montego, i.e., Montego's management perceives its shares are undervalued, and further issue of equity would harm existing shareholders. What would be the impact on existing shareholders of the convertible issue?

71. Two companies Delta and Gamma belong to same risk class and are identical in every fashion except that Delta uses debt while Gamma does not. The levered company has Rs.9,00,000 debentures carrying 10% rate of interest. Both the firms earn 20% before interest and taxes on their total assets of Rs.15 lakh. Assume perfect capital markets, rational investors and so on. Both companies pay tax at 50% and capitalization rate for an all-equity company is 15%.

You are **required** to:

a. Compute the value of the two firms using the Net Income and the Modigliani-Miller approach.

b. Using the MM approach, compute the over-all capitalization rate for both the companies.

c. Identify which of the two companies has an optimal capital structure according to the MM approach. Give reasons for your answer.

72. Benami Ltd. makes a rights issue at Rs.5 a share of one new share for every four shares held. Before the issue, there were 10 million shares outstanding and the share price was Rs.6. Based on the above information you are **required** to compute

a. The total amount of new money raised.

b. How many rights are required to buy one new share?

c. What is the value of one right?

d. What is the prospective ex-rights price?

e. How far could the total value of the company fall before shareholders would be unwilling to take up their rights.

f. Whether the company's shareholders are just as well off if rights shares are issued at Rs.4 rather than a rights issue at Rs.5.

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73. The following particulars are available about the steel giant TISCO Ltd., extracted from the annual reports of the company:

(in Rs. crore)

		1996	1997	1998
1.	Net Sales	6,256.18	6,409.43	6,516
2.	Current Assets	4,527.31	3,451.25	3,420.14
3.	Fixed Assets	5,393.56	5,526.40	6,300.04
4.	Total Debt	3,842.07	4,082.65	4,579.14
5.	Profit Before Tax	566.22	542.21	363.33
6.	Tax Rate	0.43	73.75	41.25
7.	Current Liabilities	1,625.31	1,665.72	1,715.87

You are **required** to:

a. Perform ROE analysis for the past 5 years and give your comments on the financial performance of the company.

b. Use the Higgins model to calculate the growth rate sustainable with internal equity assuming a constant pay out of 45%.

c. TISCO has been hit rather badly in 1998 with almost constant net sales and fall in profits. As a result the company is planning to hive off its cement division and focus on its core business of making steel. This may result in a reduction in current assets by around 25%. What is the impact this will have on the ROI of the company?

Dividend Policy

74. A company expects to generate the following net income and incur the following capital expenditure in the next five years as per the following details.

(Rs. in lakh)

Year	1	2	3	4	5
Net profit	75	60	45	40	25
Capital expenditure	40	45	55	47	50

The total number of outstanding shares are 18,00,000 and current dividend is Rs.6.5 per share; you are required to:

a. Determine the dividend per share, if the company follows a residual dividend policy.

b. Determine the amount of external financing if the current dividend is maintained.

c. Determine the amounts of external financing if the company maintains a 50% dividend pay out ratio.

d. Identify under which of the above 3 policies the aggregate dividends are maximized and under which policy the amount of external financing is minimized.

75. Lokesh Ltd. is a company that believes in shareholders wealth maximization, the company earned Rs.65 lakh as net income in the current year and has a target pay out ratio of 40%. There were Rs.13 lakh shares outstanding at a marketprice of Rs.25 per share. The company felt that it could either use the dividend amount to buy-back shares or pay it out as dividends.

You are required to determine:

a. At what price the shares should be bought back to equate the wealth of all shareholders under both the alternatives.

b. How many shares can be bought back?

c. Impact of buy-back on EPS and expected marketprice after repurchase.

You may assume that the P/E of the company is unaffected in both the alternatives.

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76. Rambo Ltd. has an all equity capital structure; it has 2,50,000 shares with a face value of Rs.10 trading at Rs.140 per share; when the company's, founder who was also its research director died unexpectedly, the firm was left with materially lower growth expectations and relatively few attractive new investment opportunities. Earlier the company found it necessary to plough back most of its earnings to finance growth which has been averaging 10% p.a. Future growth @4% is considered realistic at present, but that level may call for an increase in the dividend pay out. Further, it now appears that new investment projects could amount to only Rs.10,00,000 for 2000 in comparison to a projected Rs.25,00,000 of net income. The rate of return required by equity shareholders is 16%. If the existing 25% dividend pay out were continued, retained earnings would be Rs.18,75,000 in 2000. The one encouraging thing is that the high earning from existing assets are expected to continue and net income of Rs.25,00,000 is still possible for year 2000. Given the dramatically changed circumstances the company's management is reviewing its dividend policy.

a. Assuming that the acceptable 2000 investment projects would be financed entirely by retained earnings, calculate DPS for 2000, assuming the company uses the residual payment policy.

b. What pay out ratio does this imply for 2000?

c. If this pay out ratio is maintained for the foreseeable future, what should be the present market price of the common stock? How does this compare with the market price that prevailed prior to the death of the founder. Are these prices in consonance with the views of Graham and Dodd.

77. Skylark Ltd. is deciding whether to pay out Rs.4,00,000 in excess cash in the form of an extra dividend or go in for a share repurchase. Current earnings are Rs.2 per share and the stock sells for Rs.20. The market value balance sheet currently is as follows:

Balance Sheet

(Rs. in thousand)

Liabilities	Amount Rs.	Assets	Amount Rs.
Equity	1,700	Assets other than cash	1,900
Debt	600	Cash	400
	2,300		2,300

a. Evaluate the two alternatives in terms of the effect on the price per share of the stock, the EPS and the P/E ratio.

b. Which alternative is a better decision for the company? Why?

78. Solaris Ltd. has recorded an EPS of Rs.5.45 for the year 1999-2000. The company follows a fixed dividend pay out ratio of 60%. If the multiplier for the industry is 8, compute the expected market price for the share based on the Graham and Dodd model.

79. Cactus Ltd. paid a dividend of Rs.5 per share for 1999-2000. The company follows a fixed dividend pay out ratio of 60%. The company earns a return of 20% on its investments. The cost of capital to the company is 14%. Determine the expected market price of the share using the Walter Model.

80. Radium Ltd. follows a policy of fixed dividend pay out of 80%. The EPS for 1999-2000 is Rs.4.50 per share and the same is expected to grow by 20% during 2000-2001. The firm earns a return of 18% on its investment. The cost of equity of the company is 15%. Compute the value of the share as on 31.3.2000 using the Gordon model.

81. Gamma Ltd. expects with some degree of certainty to generate the following net income and to have the following capital expenditure during the next 5 years.

(Rs. in lakh)

Year	1	2	3	4	5
Net Income	40	35	55	47	36
Capital Expenditure	25	20	35	37	39

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The company currently has 30,00,000 equity shares of Rs.10 each and pays dividend of Re.1 per share.

a. You are required to determine dividends per share to external financing required in each year if dividend policy is treated as a residual decision.

b. Determine the amounts of external financing in each year that will be necessary if the present dividend per share is maintained.

c. Determine the dividend per share and the amounts of external financing that will be necessary if a dividend pay out ratio of 50% is maintained.

82. The following data is available for Rockwell Ltd.

Earnings per share	Rs.2
Internal rate of return	18%
Cost of capital	16%

If Walter's valuation formula holds, what will be the price per share when the dividend pay out ratio is 75%; 100%.

83. The following information is given about Rajiv Refractories Ltd.

EPS	Rs.4.00
Rate of return required by shareholders	15%

Assuming that Gorden valuation model holds, what rate of return should be earned on investments to ensure that the market price is Rs.40 when the dividend pay out ratio is 25%?

84. STC Ltd. belongs to a risk class for which the appropriate capitalization rate is 12%. It currently has 1,50,000 shares selling at Rs.125 each. The firm is contemplating the declaration of Rs.4 as dividend at the end of the current financial year which has just begun. What will be the price of the share at the end of the year, if a dividend is not declared? What will the price be, if dividend is declared? Answer these questions on the basis of Modigliani and Miller model and assume no taxes.

85. Treasure Ltd. belongs to a risk class for which the appropriate capitalization rate of 12.5%.

It currently has 1,00,000 shares selling at Rs.80 each. The firm is contemplating the declaration of Rs.4 dividend at the end of the current fiscal year which has just begun. Based on Modigliani and Miller model and assumptions of no taxes. You are **required** to

a. Calculate the share price at the end of the year if, dividend is not declared; declared.

b. Assuming that the firm pays dividends has net income of Rs.15,00,000 and makes new investments of Rs.21,00,000 during the period, how many new shares must be issued.

86. Deva Ltd. expects that its net income and capital expenditure over the next five years will be as follows.

Year	Net Income	Capital Expenditure
1	135	120
2	160	140
3	140	110
4	150	130
5	190	160

The firm plans to finance its capital expenditure with debt and equity in equal proportions. If the firm subscribes to the residual dividend policy what is the expected dividend stream under the following approaches?

a. Pure residual dividend policy.

b. Fixed dividend pay out ratio.

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87. Skyline Ltd. has an earnings per share of Rs.5 for the year 1998-99. Its dividend per share for the year 1997-98 was Rs.2.50. Assuming that the target pay out ratio and adjustment rate for the firm are 0.5 and 0.4 respectively. What is the dividend per share for Skyline Ltd. for the year 1998-99 if the Lintner model applies to it?

88. Ram Ltd. expects that its net income and capital expenditure over the next four years will be as follows:

Year	Net Income (Rs.)	Capital Expenditure (Rs.)
1	12,000	8,000
2	14,000	7,000
3	8,000	11,000
4	13,000	9,000

The company has 7,000 outstanding shares currently on which it pays a dividend of Re.1 per share.

Required:

a. What will be the dividend per share if the company follows a pure residual policy?

b. What external financing is required if the company plans to raise dividends by 10% every 2 years?

c. What will be the dividend per share and external financing requirement if the company follows a policy of a constant 50% pay out ratio?

89. Rajshree Ltd. has earnings per share of Rs.2 for the year t. Its dividend per share for year t-1 was 0.75. The target pay out ratio and the adjustment rate for this firm are 0.4 and 0.5 respectively. What would be the dividend per share for Rajshree Ltd. for year t if Lintner's model applies to it.

90. The Balance Sheet of Tushita Chemicals Ltd. as on 31st March, 2000 is as follows:

(Rs. in crore)

Liabilities	Amount	Assets	Amount
Share capital 10,00,000 shares of Rs.10 each fully paid-up	1.00	Plant & Machinery	14.25
Reserves & Surplus		Misc. fixed assets	2.0
Share premium	1.25	Inventory	4.5
General reserve	2.00	Debtors	2.00
Contingency reserve	0.75	Cash	0.5
13% FCD's	1.25		
Term loans	12.00		
Creditors	5.00		
	23.25		23.25

a. The Company on August 20, 1999 had issued 2,50,000, 13% FCDs of Rs.50 each. Each FCD will be converted in to two equity shares of Rs.10 each at a premium of Rs.15 per share, 12 months from the date of allotment.

b. The existing share capital includes 1,00,000 shares which were issued as purchase consideration to a machinery supplier. The cost of machinery was Rs.50 lakh and the entire purchase consideration was paid only in the form of shares.

Compute the maximum permissible bonus ratio as per SEBI guidelines.

91. Ganga Mineral Water Ltd. (GMWL) generally pays a dividend of 60% of its net earnings. The current EPS of the company is Rs.10 and it is expected to grow by 30% annually. The return the company earns on its investments is 25%. Its cost of equity is 20%.

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You are **required** to:

a. Calculate the market price of the share of GMWL from the above information using Gordon Model.

b. Explain whether the price will be different if calculated according to the standard dividend discount model.

92. A company expects to generate the following net income and incur the following capital expenditure in the next five years as per the following details:

(Rs. in lakh)

Year	1	2	3	4	5
Net Profit	50	40	25	20	15
Capital Expenditure	20	25	32	40	50

The total number of outstanding shares are 10,00,000 and the current dividend is Rs.5.00 per share. You are **required** to

a. Determine the dividend per share if the company follows a residual dividend policy.

b. Determine the amounts of external financing if the current dividend is maintained.

c. Determine the amounts of external financing if the company maintains a 50% dividend pay out ratio.

d. Identify under which of the above three policies the aggregate dividends are maximized and under which policy the amount of external financing is minimized?

93. BI Cycles Ltd.'s equity is structured as follows:

Paid-up share capital	Rs.150,00,000
(15 lakh shares of Rs.10 each)	
Retained earnings	Rs.155,00,000
Total	Rs.305,00,000

The company's net profit for the past 5 years were as follows:

(Rs. in lakh)

t – 4	t – 3	t – 2	t – 1	t
25.00	30.00	35.00	40.00	50.50

The company is in the 40% tax bracket. It is wondering whether to go in for a bonus issue of 1:5. Is 1:5 the maximum bonus ratio permissible for the company?

94. ADC Ltd. is a company that believes in shareholders' wealth maximization. The company earned Rs.44 lakh as net income in the current year and has a target pay out ratio of 50%. There were 11 lakh shares outstanding at a market price of Rs.20 per share. The company felt that with the Companies Act amendment round the corner, it could either use the dividend amount to buy-back its shares or to pay it out as dividends.

You are **required** to determine

a. At what price the shares should be bought back to equate the wealth of all shareholders under both the alternatives?

b. How many shares can be bought back?

c. Impact of buy-back on EPS and expected market price after repurchase.

You may assume that the P/E of the company is unaffected in both the alternatives.

95. Circuit Manufacturing Corporation (CMC) Ltd. has an all equity capital structure. It has 2,00,000 shares with a face value of Rs.10 trading at Rs.120 per share. When CMC's founder who was also its research director died unexpectedly in late 1997, CMC was left suddenly and permanently with materially lower growth expectations and relatively few attractive new investment opportunities. Unfortunately, there was no way to replace the

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founder's contributions to the firm. Earlier, CMC has found it necessary to plough back most of its earnings to finance growth which has been averaging 12% p.a. Future growth at 5% is considered realistic at present, but that level may call for an increase in the dividend pay out. Further, it now appears that new investment projects would amount to only Rs.8,00,000 for 1998 in comparison to a projected Rs.20,00,000 of net income. The rate of return required by equity shareholders is 14%.

If the existing 20% dividend pay out were continued, retained earnings would be Rs.16,00,000 in 1998. The one encouraging thing is that the high earning from existing assets are expected to continue and net income of Rs.20,00,000 is still possible for 1998. Given the dramatically changed circumstances, CMC's management is reviewing its dividend policy.

a. Assuming that the acceptable 1998 investment projects would be financed entirely by retained earnings, calculate DPS for 1998, assuming CMC uses the residual payment policy.

b. What pay out ratio does this imply for 1998.

c. If this pay out ratio is maintained for the foreseeable future, what should be the present market price of the common stock? How does this compare with the market price that prevailed prior to the death of the founder? Are these prices in consonance with the views of Graham and Dodd? Why or why not?

d. What are the implications of continuing the 20% pay out? Assume that if this pay out is maintained, the average rate of return on equity would be 7.5%. Will your conclusions on pay out and share value change now? Why or why not?

Information Asymmetry and the Markets for Corporate Securities

96. A firm has Rs. 100 million in cash on hand and a debt obligation of Rs. 100 million due in the next period. With this cash, it can take on one of two projects–A or B-which cost Rs. 100 million each. Assume that the firm cannot rise any additional outside funds. If the economy is favorable, project A will pay 120 million and project B will pay Rs.101 million. If the economy is unfavorable, project A will pay Rs.60 million and project B will pay Rs. 101 million. Assume that investors are risk neutral, there are no taxes or direct costs of bankruptcy, the riskless interest rate is zero, and the probability of each state is 5.

a. What is the NPV of each project?

b. Which project will equity holders want the managers to take why?

97. Nigel decides hr can make zippers at night for one period and will have cash flows next period of Rs. 210 if the economy is favorable, and Rs. 66 if the economy is unfavorable. One third of these proceeds must be paid out in taxes if the firm is all equity financed; however, because of the tax advantage of debt. Nigel saves Rs. 0.05 in taxes for every Rs.1.00 of debt financing that he uses. Assume investors are risk neutral, the riskless rate is 10 percent per period, and the probability of each state is 5. Also assume that if Nigel's firm goes bankrupt and debt holders take over, the legal fees and other bankruptcy costs total Rs. 20.

a. If Nigel organizes his firm as all equity, what it is worth?

b. Suppose Nigel's firm sold a zero- coupon bond worth Rs.44 at maturity next period.

How much the firm would receives for the debt?

c. With the debt level above, how much would the equity worth?

d. How much would the firm be worth?

e. Would the firm be worth more if it had a debt obligation of Rs. 70 next period?

98. A firm has a senior bond obligation of Rs.20 due this period and Rs.100 next period. It has also subordinate loan of Rs.40 owed to Jack and Jill and due next period. It has no projects to provide cash flows this period. Therefore, it the firm cannot get a loan of Rs. 20, it must liquidate. The firm has a current liquidation value of Rs.120. If the firm does not liquidate, it can take one of two projects with no additional investment, if it takes project A, it will receive cash flows of Rs.135 next period, for sure. If the firm takes project B, it will receive

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either cash flows of Rs.161or 69 with equal probability. Assume risk neutrality, a zero interest rate, no direct bankruptcy costs, and no taxes.

a. What has a higher PV: liquidating, project A, or project B?

b. Should Jack and Jill agree to loan the firm the Rs.20 it needs to stay operating if they receive a (subordinated) bond with a face value Rs.20.50?

c. If the firm does receive the loan from Jack and Jill, which project will the managers choose if they act in the interest of the equity holders?

99. Hiroko Fashion Corporation (HFC) can pursue either project Dress or project Cosmetic, with possible payoffs at year-end as fallows:

	Bad Economy (prob. = 30%)	Good Economy (prob. = 70%)
Project Dress	Rs.2	Rs.9
Project Cosmetic	7	6

Each project costs Rs.6 million at the beginning of the year. Assume there are no taxes, there are no direct bankruptcy costs, all investors are risk neutral, and the risk-free interest rate is zero.

a. Which project should HFC pursue if it is all equity financed? Why?

b. If HFC has a Rs.5 million bond obligation at the end, which project would its equity holders want to pursue? Why?

100. Sigma Design, a computer interface start up firm with no tangible assets, has invested Rs.50,000 in R&D. The success of the R&D effort as well as the state of the economy will be observed in one year. If the R&D is successful (prob = 90%) sigma requires a Rs.53,000 investment to start manufacturing. If the economy is favorable (prob = 90%) the project is worth Rs.1,53,000 and if it is unfavorable, the project will have a value of Rs.61,000. Demonstrate how the value of sigma is affected by whether or not it was originally financed with debt or equity. Assume no taxes, no direct bankruptcy costs, and all investors interest rate risk neutral, and the risk free interest rate is zero.

101. ABC Corp., which currently has no assets, is considering two projects that each cost Rs.100 Project A pays off Rs.120 next year in the good state of the economy and Rs.90 in the bad state of the economy. Project B pays off Rs.140 next year in the good state of the economy and Rs.60 in the bad state of the economy. If the two states are equally likely, there are no taxes or direct bankruptcy costs, the risk-free rate of interest is zero, and Equity holders prefer if the firm is 100% equity financed? Which project would equity?

Holders prefer if the firm has an Rs.85 bond obligations due next year?

102. Suppose you are hired as a consultant for Tail ways, Inc.' just after recapitalization that increased the firm's debt–to–assets ratio to 80%. The firm has the opportunity to take on a risk- free project yielding 10%, which you must analyze. You note that the risk-free rate is 8% and apply what you learned in chapter 11 about taking positive net present value projects; that is, accept those projects that generate expected returns that exceed the appropriate risk-adjusted discount rate of the project. You recommend that Tail Ways take the project.

Unfortunately, your client is not impressed with your recommendation, Because Tail ways ifs highly leveraged and is in risk of default, its borrowing rate is 4 % greater than the risk-free rate After reviewing your recommendation, the company CEO has asked you to explain how this "positive net present value project" can make him money when he is forced to borrow at 12 % to fund a project yielding 10%. You wonder how you bungled an assignment as simple as evaluating a risk-free project. What have you done wrong?

103. In the event of bankruptcy, the control of a firm passes from the equity holders to the debt holders, Describe differences in the preferences of the equity holders and debt holders and how decisions following bankruptcy proceedings are likely to change?

104. Why are debt holder equity holder incentive problem less severe for firms that barrow short-term rather than long-term?

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105. Consider the case of Ajax Manufacturing which just completed an R&D project on widgets that required a Rs.70 million bond obligation. The R&D effort resulted in an investment opportunity that will costs Rs.75 million and generate cash flow of % 85 million in the event of a recession (prob = 20%) and Rs.150 million if economic conditions are favorable (prob = 80%). What is the NPV of the project assuming no taxes, no direct bankruptcy cost, risk neutrality, and risk free interest rate is zero? Can the firm fund the project if the original debt is a senior obligation that doesn't allow the firm to issue additional debt?

106. Assume now that if Ajax Manufacturing uses a more capital-intensive manufacturing process, it can produce a greater number of widgets at a lower variable cost. Given the greater fixed costs, the cash flows are only 55 million in an unfavorable economy with the capital intensive process but are Rs.170 million in a favorable economy. Hence equity holders would receive Rs.100 million in the good state of the economy (Rs.170 million– Rs.70 million) and zero in a recession because Rs.5 million is less than Rs.70 million debt obligations. Can the firm issue equity fund project?

107. With debtor-in-possession (DIP) financing, bankrupt firms are able to obtain additional amount of debt that is senior top the firm' existing debt. Explain how the firm's existing debt holders can benefit from this

108. You have been hired as a bond analyst for bill sterns. A highly leveraged firm, Emax Industries, has switched to a more flexible management process that enables it top change it as investment strategy more quickly. How do you expect this change in the management process to effect bond value?

109. Atways Industries is involved in two similar mining projects. The Wyoming Project was financed through the firm's internal cash flows and appears as an asset on its balance sheet. The Montana project was set up as a wholly owned subsidiary of Atways. The subsidiary was financed 20 % with equity provided by Atways and 80 % with non-recourse debt

How do the different ways that these projects were financed and structured affect future investment and operating decisions?

Decision Support Models

110. The income statement for year 0 (the year which has just ended) and the balance sheet at the end year 0 for Anuja Limited are as follows:

Income Statement

	(Rs. lakh)
Sales	200
Gross margin (20%)	40
Selling and general (5%) administration	10
Profit before tax	30
Tax	12
Net profit	18

Balance Sheet

(Rs. in lakh)

Liabilities	Amount	Assets	Amount
Equity	100	Fixed assets	50
		Current assets	50
	100		100

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The company is debating whether it should maintain the status quo or adopt a new strategy. If it maintains the status quo.

The sales will remain constant at Rs.200 lakh.

The gross margin and selling, general and administrative expenses will remain unchanged at 20% and 5% respectively.

Depreciation charges will be equal to new investments.

The asset turnover ratios will remain constant.

The discount rate will be 15%.

If Anuja Ltd. adopts a new strategy its sales will grow at a rate of 12% per year for 5 years. The margins, the turnover ratio, the capital structure and the discount rate, however, will remain unchanged.

What value will the new strategy create?

Financial Statement Analysis

111. Regency Ltd's net profit margin is 7%, total assets turnover ratio is 1.6 times, debt to total assets ratio is 0.6. What is the return on equity for Regency Ltd.?

112. Surya Ltd. has an EBIT of Rs.50 lakh. If the company's times interest covered ratio is 5, what is the total interest charge?

113. From the information on Box Ltd., you are required to ascertain the times interest covered ratio.

Interest charges	–	Rs.75,000
Sales	–	Rs.4,00,000
Tax rate	–	60%
Net profit margin	–	5%

114. A firm has total annual sales (all credit) of Rs.8,00,000 and accounts receivable of Rs.1,20,000. How rapidly (in how many days) must accounts receivable be collected if management wants to reduce the accounts receivable to Rs.1,00,000.

115. Determine the sales of Raj Ltd. from the following information.

Current ratio	=	1.7
Quick ratio	=	1.5
Current liabilities	=	6,00,000
Inventory turnover ratio	=	4 times

116. From the information given below, complete the balance sheet

Total debt to net worth ratio	0.75
Total assets turnover ratio	2
Gross Profit Margin	25%
Average collection period (360 day year)	42 days
Inventory turnover ratio	2.5 times
Acid test ratio	0.6

Balance Sheet

Liabilities	Amount Rs.	Assets	Amount Rs.
Equity	1,50,000	Plant and equipment	1,00,000
Retained earnings	2,50,000	Inventory	–
Accounts payable/debt	–	Accounts receivable	–
	–	Cash	–

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117. From the information given below calculate the average collection period.

	Rs.
Total gross sales	1,50,000
Cash sales (included in above)	25,000
Sales returns	5,000
Total debtors at the end	7,000
Bills receivable	3,500
Provision for doubtful debts at the end of the year	1,000
Total creditors at the end	12,000

118. From the following information, prepare the balance sheet of M/s Ravinder Limited

Inventory turnover ratio	5
Capital turnover ratio	1.5
Fixed assets turnover ratio	3
Gross profit margin	25%
Debtors collection period	2.5 months
Creditors payment period	70 days

The gross profit was Rs.75,000. Closing stock was Rs.6,000 in excess of opening stock.

119. From the information given below regarding M/s Hitech Ltd., analyze the company's financial condition and performance over the last 3 years. The company sells its products on terms of 2/10, net 40.

	1998	1999	2000
Cash	33,000	22,000	5,500
Accounts receivable	2,20,000	2,86,000	3,19,000
Inventory	4,40,000	5,28,000	6,60,000
Net fixed assets	8,80,000	8,80,000	8,80,000
	15,73,000	17,16,000	18,64,500
Accounts payable	2,53,000	3,30,000	4,18,000
Accruals	2,20,000	2,31,000	2,47,500
Short-term bank loan	1,05,000	1,05,000	1,47,000
Long-term debt	3,30,000	3,30,000	3,30,000
Equity	1,50,000	1,50,000	1,50,000
Retained earnings	5,15,000	5,70,000	5,72,000
	15,73,000	17,16,000	18,64,500
Sales	44,00,000	47,30,000	41,80,000
Cost of goods sold	35,20,000	39,60,000	36,30,000
Net profit	3,30,000	2,20,000	1,30,000

Calculate the financial ratios and analyze the company's financial performance over the last 3 years.

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120. A firm's current assets and liabilities are Rs.1,700 and Rs.800 respectively. How much can it borrow from a bank without reducing the current ratio below 1.75.

121. The following ratios pertain to Cheminor Drugs Limited for the last 4 years.

	1995-96	1996-97	1997-98	1998-99
Financial Ratios				
PBDIT/Income (%)	24.31	19.02	17.75	22.20
Cash Profit/Income (%)	18.80	9.97	7.88	16.07
Net Profit/Total Income (%)	14.64	5.70	3.00	9.42
Net Profit/Net Worth (%)	26.80	9.68	4.08	15.48
Current Assets/Total Turnover (%)	82.02	95.10	91.35	78.21
Performance Ratios				
Other Income/Total Income (%)	1.44	2.48	3.48	5.62
Raw Material Costs/Total Turnover (%)	56.18	59.69	62.19	57.61
Overheads/Total Turnover (%)	12.77	15.14	13.78	13.73
Interest/Total Turnover (%)	5.31	7.16	8.74	8.01
Depreciation/Total Turnover (%)	4.37	4.90	5.73	5.37
Research Spending/Total Turnover (%)	2.52	3.32	2.09	1.11
Balance Sheet Ratios				
Debt Equity Ratio	.96	1.80	1.14	1.15
Current Ratio	1.44	2.13	2.24	2.82
Quick Ratio	0.68	1.12	1.40	1.95
Depreciation/Gross Block (%)	7.29	5.87	6.53	7.37
Fixed Asset Turnover	2.31	1.60	1.60	1.97
Growth Ratios				
Growth in Turnover (%)	22.34	3.25	18.70	38.88
Growth in PBDIT (%)	15.14	(19.23)	10.81	83.00
Growth in PAT (%)	11.62	(59.76)	(35.35)	334.32
Per Share Data				
Dividend (%)	30.00	30.00	15.00	30.00
Book Value (Rs.)	55.77	57.02	84.70	87.19
Dividend Pay-out (%)	17.66	57.30	45.11	22.45
Price/Earnings	8.83	17.95	32.37	21.79

You are **required** to comment on the performance of the company and indicate the areas that require further investigation, if any.

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122. The Chalakudy Power Corporation has just issued a Rs.100 million 10 year, 8% bond. The corporation had set sinking fund so that equal annual amounts, payable at the end of each year, were paid into a sinking fund trust, held by the trustees to the issue, Federal Bank, with the proceeds being used to buy government bonds that pay 6% interest.

a. How much should be the annual sinking fund payments and what are the annual debt service costs?

b. Suppose the company can buy these bonds from open market (repurchase) utilizing the proceeds of the sinking funds, what factors do you think will govern the company's decision?

Working Capital Management

123. Unicorn Industries projects that cash outlays of Rs.45,00,000 will occur uniformly throughout the coming year. Unicorn plans to meet its cash requirements by periodically selling marketable securities from its portfolio. The firms marketable securities are invested to earn 10% and the cost per transaction of converting securities to cash is Rs.100.

a. Use the Baumol model to determine the optimal transaction size of transfers from marketable securities to cash.

b. What will be the company's average cash balance?

c. How many transfers per year will be required?

d. What will be the total annual cost of maintaining cash balances?

124. Raj Deep Ltd. requires Rs.75 lakh for meeting its transaction needs over the next six months, its planning horizon for liquidity decisions. The liquidity position is adjusted by purchase and sale of marketable securities, the company earns a 15% annual yield on its marketable securities. Conversion can be done in one of the following lot sizes Rs.10 lakh, Rs.15 lakh Rs.25 lakh and Rs.30 lakh, conversion involves a cost per transaction which is dependent on the lot size of conversion as indicated below.

Size of conversion	Cost per transaction
Up to Rs.4 including Rs.10 lakh	Rs.11,000
Above Rs.10 lakh to Rs.20 lakh	Rs.12,500
Above Rs.20 lakh to Rs.30 lakh	Rs.14,000
Above Rs.30 lakh	Rs.15,500

What is the optimal cash conversion size?

125. The following data is available for Orchid Ltd.

Sales are expected to be

July		August	
Sales	Probability	Sales	Probability
52,000	0.5	47,000	0.15
56,000	0.15	49,000	0.40
54,000	0.25	52,000	0.35
55,000	0.10	54,000	0.10

Credit sales will be 60% of total sales. The receivables are expected to be collected the month after the sales.

Raw material cost will be 15% of sales, the payment is made in the month of purchase.

Monthly cash expenses are expected to be

July		August	
Expenses	Probability	Expenses	Probability
12,000	0.4	10,000	0.25
14,000	0.6	15,000	0.75

Opening cash balance in July would be Rs.54,000.

Receivables collectible in July are Rs.15,000.

Calculate the average cash balance, and standard deviation for the respective months. Five simulation runs have given the following values.

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C_j	=	Cash balances at the end of July
C_a	=	Cash balances at the end of August
S_j	=	Sales for July
S_a	=	Sales for August
E_j	=	Cash expenses for July
E_a	=	Cash expenses for August

	Ist Run	2nd Run	3rd Run	4th Run	5th Run
S_j	54,000	52,000	56,000	52,000	54,000
S_a	49,000	54,000	47,000	49,000	52,000
E_j	12,000	14,000	12,000	12,000	14,000
E_a	15,000	10,000	10,000	15,000	15,000

126. The following information is available for 2 companies Raj Ltd. & Taj Ltd.

	Raj Limited	Taj Limited
Current assets	100 million	70 million
Net fixed assets	70 million	100 million
Total assets	170 million	170 million
Earnings before Interest and Taxes (EBIT)	20 million	20 million
ROI	16%	16%

Calculate the working capital leverage for a 15% reduction in current assets.

127. From the following information given for Micro Ltd. you are required to calculate the duration of the operating cycle.

Average stock of raw materials and stores	250
Average work-in-process inventory	325
Average finished goods inventory	175
Average accounts receivable	225
Average accounts payable	160
Average raw materials and stores consumed per day	10
Average work-in-process value of raw materials committed per day	12
Average cost of goods sold per day	17
Average sales per day	22

128. Given the following information for Garden Ltd, you are required to calculate the weighted operating cycle.

D_{rm} = 35 days

D_{wip} = 25 days

D_{fg} = 12 days

D_{ar} = 28 days

D_{ap} = 18 days

The Cost/Price structure for Garden Ltd. is as follows:

Raw materials and stores cost per unit	–	Rs.55
Processing cost per unit	–	Rs.28
Selling, administration and financial works per unit	–	Rs.12
Sales price	–	Rs.120

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129. Tally Ltd. requires Rs.3 million in cash for meeting its transaction needs over the next six months, its planning horizon for liquidity decisions. Tally Ltd. currently has the amount in the form of marketable securities. The cash payments will be made evenly over the six months planning period. Tally Ltd. earns 12% annual yield on its marketable securities. The conversion of marketable securities into cash entails a fixed cost of Rs.1,000 per transaction. What is the optimal conversion size as per the Baumol model?

130. From the information given you are required to determine the upper control limit and return point for M/s Karishma Ltd.

Annual yield on marketable securities is 12.5%.

Fixed cost of effecting a marketable securities transaction is Rs.2,000.

The standard deviation of the change in daily cash balance is Rs.5,600.

The management of Karishma Ltd. would like to maintain a minimum cash balance of Rs.1,20,000.

131. Mona Ltd. wants to find a way of discriminating between good accounts (customers) and bad accounts (customers). The firm defines a good account as one who pays on or before the due date and a bad account as one who does not pay on or before the due date. The finance manager of Mona Ltd. thinks that the two most important ratios helpful in discriminating between the good accounts (G) and the bad accounts (B) are current ratio represented by variable X and return on investments represented by Y. From the information which he furnished, you are required to estimate the discriminant function which best discriminates between the good and the bad applicants.

Data relating to twenty accounts is given below:

Good accounts			Bad accounts		
A/c No.	X_1	Y_1	A/c No.	X_1	Y_1
1.	1.09	14	11.	0.6	12
2.	1.40	16	12.	0.8	–3
3.	1.30	18	13.	0.7	7
4.	0.8	22	14.	1.2	3
5.	1.5	8	15.	1.0	7
6.	2.1	9	16.	0.4	9
7.	0.8	17	17.	0.2	9
8.	0.9	14	18.	1.3	7
9.	1.2	9	19.	0.8	4
10.	1.2	3	20.	1.0	15

132. M/s Sunlight Ltd. has the following data available:

Duration of raw materials stage = 35
Duration of work-in-process stage = 27
Duration of finished goods stage = 16
Duration of debtors stage = 30
Duration of creditors stage = 20

Raw materials cost per unit = 120

Processing cost per unit = 45

Selling and administration cost per unit = 25

Financing cost per unit = 12

Selling price per unit = 275

Per day sales = 3,20,000

Required cash balance = 6,50,000

Calculate the working capital requirement of the firm.

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133. The following data is available for Ms Capri Ltd;

		Rs.
Estimated cash requirement over a 6-month planning period	=	4,20,000
Fixed conversion costs	=	Rs.1000 per batch
Annual interest rate on marketable securities	=	11%

Calculate the amount of securities that should be liquidated per batch.

134. GPM Pens Ltd. is projecting its cash budget for the next two months. The following information is available regarding the same:

a. The sales are expected to be as follows:

Month 1		Month 2	
Amount (Rs.)	Probability	Amount (Rs.)	Probability
75,000	0.15	50,000	0.10
60,000	0.15	75,000	0.15
35,000	0.10	90,000	0.25
80,000	0.20	95,000	0.25
1,00,000	0.40	98,000	0.25

b. Credit sales are expected to be 75% of total sales. Of the credit sales, 50% is expected to be realized in the month of sale and the rest in the succeeding month.

c. Purchases of raw material are likely to be 40% of the selling price. They are paid for entirely in the following month of purchase.

d. The other expenses are expected to be as follows:

Month 1		Month 2	
Amount (Rs.)	Probability	Amount (Rs.)	Probability
15,000	0.20	12,000	0.30
20,000	0.30	20,000	0.30
22,000	0.50	30,000	0.40

e. The opening cash balance in Month 1 is Rs.20,000 and the receivables of the previous month to be realized in Month 1 amount to Rs.25,000.

f. The company wants to maintain a cash balance of Rs.5,000 at the end of every month. Shortfall of cash is brought in through short-term borrowing in multiples of Rs.5,000. The interest on the borrowings if any, may be ignored.

You are **required** to project the cash budget for the company for the period of two months using a single run of simulation. The following random numbers may be used for simulation.

Month 1	52	06
Month 2	37	63

135. Consider the following information relating to Jumbo Industries Ltd.

Duration of raw materials stage	35 days
Duration of work-in-process stage	28 days
Duration of finished goods stage	18 days
Duration of debtors stage	35 days
Duration of creditors stage	26 days
Raw material cost per unit	Rs.110
Processing cost per unit	Rs.60
Selling and administration cost per unit	Rs.25
Financing cost per unit	Rs.18
Selling price per unit	Rs.300
Sales per day	Rs.5,00,000
Required cash balance	Rs.20,000

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You are **required** to calculate:

a. The weighted operating cycle for the company.

b. The working capital requirement based on the weighted operating cycle.

136. ABCL needs cash to the extent of Rs.2.5 crore in the next six months for meeting its transaction needs. The company has funds in the form of marketable securities, enough to meet its needs. The marketable securities earn interest at 10% and converting them into cash involves expenses of Rs.12,000 per conversion.

You are **required** to

a. Calculate the optimal conversion size assuming that the amount of Rs.2.5 crore is required evenly over the period of six months.

b. Calculate the upper control limit and the return point for the cash balances assuming that the cash flows are random with a standard deviation of Rs.6,000 and the company wants to maintain a cash balance of Rs.50,000.

137. Satguru Finance Ltd. requires Rs.25 lakh in cash for meeting its transaction needs over the next six months. The company now holds the amount in marketable securities on which it earns an yield of 10%. Cash outflows take place evenly over the period of six months. Converting the marketable securities into cash involves a fixed cost of Rs.1,200 per transaction. The standard deviation of daily changes in cash balance is Rs.5,000 and the company wants to maintain a minimum cash balance of Rs.25,000.

You are **required** to calculate:

a. The optimal conversion size of marketable securities into cash according to Baumol model.

b. The return point and upper control limit for the cash balances according to Miller and Orr model.

138. Power Systems Ltd. requires Rs.1 crore for meeting its transaction needs over the next six months, its planning horizon for liquidity decisions. The liquidity position is adjusted by the purchase and sale of marketable securities. The company earns a 16% annual yield on its marketable securities. Conversion can be done in one of the following lot sizes: Rs.10 lakh, Rs.15 lakh, Rs.25 lakh and Rs.30 lakh. Conversion involves a cost per transaction which is dependent on the lot size of conversion as indicated below:

Size of conversion	Cost per transaction
Up to and including Rs.12 lakh	Rs.10,000
Above Rs.12 lakh to Rs.18 lakh	Rs.12,500
Above Rs.18 lakh to Rs.24 lakh	Rs.15,000
Above Rs.24 lakh	Rs.17,500

What is the optimal cash conversion size?

139. Prosperous Finance Ltd. wants to classify its customers into ‘good’ and ‘bad’ on the basis of Current ratio and EBDIT/Sales

The following information is available regarding 16 accounts of the company, 8 of which were good and 8 bad.

Good accounts			Bad accounts		
Account number	Current ratio	EBDIT/Sales (%)	Account number	Current ratio	EBDIT/Sales (%)
1	1.90	15	9	0.76	30
2	1.05	10	10	0.76	10
3	1.65	16	11	0.56	4
4	1.90	24	12	0.62	18
5	1.93	11	13	0.92	–4
6	1.78	18	14	0.58	20
7	1.96	12	15	0.52	15
8	1.02	25	16	0.45	6

From the above information, estimate the discriminate function which best discriminates between ‘good’ and ‘bad’ accounts.

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140. The following information is available regarding Sanghi Polyester Limited.

(Rs. in lakh)

Particulars	31.3.99	1.3.99	31.3.98	31.3.98
I. Sales		36506.25		36225.28
II. Expenditures:				
i. Manufacturing costs:				
a. Raw material	15079.77		16834.50	
b. Consumable stores	971.77		948.41	
c. Packing material	1620.11		1690.66	
d. Power and fuel	2416.68	20088.33	2190.33	21663.90
ii. Excise duty		9305.87		8826.70
iii. Salaries and wages		408.67		477.22
iv. Admn. & Selling expenses		2425.29		2057.88
III. Inventories				
i. Raw material		416.84		441.47
ii. Finished goods		331.79		262.58
iii. Stocks in process		253.89		214.79
IV. Accounts Receivables		2016.76		1399.15
V. Accounts Payables		1558.21		1324.04

You are **required** to find out

a. The duration of the weighted operating cycle for the year 1998-99.

b. The requirement of the working capital in the year 1999-2000, if company's sales are expected to increase by 10% and the minimum cash balance required is Rs.150 lakh.

141. The following information is available regarding Lambda Industries which produces ballpoint pens.

	(Rs. lakh)
Average stock of raw materials and stores	250
Average work-in-progress inventory	350
Average finished goods inventory	200
Average accounts receivable	325
Average accounts payable	200
Average work-in-progress value of raw materials consumed per day	20
Average cost of goods sold per day	16
Average sales per day	25

On an average, the firm produces 2,50,000 pens per day. The processing costs are Rs.0.75 per unit. The company wants to maintain a cash balance of Rs.2 lakh.

You are **required** to

a. Calculate the weighted operating cycle of the firm.

b. Estimate the working capital requirement of the firm based on the weighted operating cycle.

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142. The income statement and balance sheet of L&T Ltd. for the year ended March 31, 2000 are as follows:

Income Statement

	(Rs. crore)
Sales	5,768.35
Expenditure	5,289.29
PBT	590.04
PAT	556.85
Dividends	178.00

Balance Sheet

Equity	3,422.02
Debt	2,819.26
Current liabilities	2,134.12
Fixed assets	4,297.37
Current assets, loans and advances	3,713.84
Capital work-in-progress	348.24
Miscellaneous expenditure not written off	15.95

There is no change in the level of investments and scheduled repayment of debt can be assumed to be zero. The probability distribution of sales and net profit margin for next year is given below:

Sales (Rs. crore)	Probability	Net Profit Margin	Probability
		0.08	0.20
5000	0.1	0.09	0.50
		0.12	0.30
		0.08	0.20
7000	0.3	0.09	0.40
		0.11	0.40
		0.09	0.30
8000	0.3	0.10	0.40
		0.11	0.30
		0.08	0.10
10000	0.3	0.09	0.50
		0.10	0.40

You are **required** to calculate the external funds requirement of L&T for the next year, with the help of simulation. Carry out five simulation runs using the following random numbers.

Random Numbers: 346, 794, 256, 411, 958, 259, 993, 749, 731, 302.

143. Lease Finance Ltd. (LFL) is in the business of leasing plants and equipments to different kind of manufacturing companies. The company intends to use discriminant analysis to predict the ability of its clients regarding the timely payment of lease rentals. It has selected two ratios, i.e., current ratio and the return on investment for the purpose.

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The data relating to 12 clients (6 considered good and 6 considered bad) along with their current ratio and ROI figures is given below:

Good accounts			Bad accounts		
A/c No.	Current Ratio	ROI (%)	A/c No.	Current Ratio	ROI (%)
1	1.80	13	7	1.21	13
2	1.65	12	8	1.40	8
3	1.10	14	9	1.30	9
4	1.35	12	10	1.15	7
5	1.90	9	11	0.90	10
6	1.55	10	12	1.20	12

Find out the discriminant function and the cut-off point which the company can use for the purpose of its financing decisions in the future.

144. United Industries projects that cash outlays of Rs.37,50,000 will occur uniformly throughout the coming year. United plans to meet its cash requirements by periodically selling marketable securities from its portfolio. The firm's marketable securities are invested to earn 12% and the cost per transaction of converting securities to cash is Rs.40.

a. Use the Baumol Model to determine the optimal transaction size of transfers from marketable securities to cash.

b. What will be the company's average cash balance?

c. How many transfers per year will be required?

d. What will be the total annual cost of maintaining cash balances?

145. The Cyberglobe company has experienced a stochastic demand for its product, with the result that cash balances fluctuate randomly. The standard deviation of daily net cash flows is Rs.1,000. The company wants to impose upper and lower bound control limits for conversion of cash into marketable securities and vice versa. The current interest rate on marketable securities is 6%. The fixed cost associated with each transfer is Rs.1,000 and minimum cash balance to be maintained is Rs.10,000.

Compute the upper and lower limits.

Corporate Risk Management

146. Companies A and B have been offered the following rates per annum on a $10 million five year loan.

	Fixed Rate	Floating Rate
Company A	10%	Libor + 0.2%
Company B	11.2%	Libor + 0.6%

Company A requires a floating rate loan, while company B requires a fixed rate loan. Design a swap that will appear equally attractive to both companies.

147. White Ltd. and Black Ltd. both wish to borrow $210 million for five years and have been offered the following rates.

Borrowing rates

	Fixed	Floating
White Ltd	11%	Libor + 0.4%
Black Ltd	12.6%	Libor + 1.0%

White Ltd. requires a floating rate loan while Black Ltd. requires a fixed rate loan. Design a swap that will net a bank, acting as intermediary 0.1 percent per annum and that will appear equally attractive to both companies.

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148. Calculate the PV convenience yield for cheap wine from the following information.

Spot price	:	\$12,600 per 10,000 gallon tank
Futures price	:	\$13,800 per 10,000 gallon tank
Interest rate	:	8%
PV (storage costs)	:	\$250 per year

149. Price changes of 2 stocks alpha and gamma are positively correlated. The historical relationship is as follows:

Average percentage change in alpha = 0.015 + 0.85 (percentage change in gamma).

Changes in gamma account for 55% of the variation of changes in alpha ($R_2 = 0.55$).

a. If an investor owns Rs.1 million of alpha, how much of gamma should he sell to minimize his risk?

b. What is his hedge ratio?

c. How should he create a zero value hedge?

150. A portfolio manager has short sold Rs.10 million of alpha stock. There is a likelihood that the manager may incur a loss if the market moves up and the stock price rises.

The sensitivity of the stock price to changes in the market index is given by the following equation.

Changes in alpha's stock price = 1.15 + 1.40 (change in the market index)

$R^2 = 0.5$; where R^2 refers to the coefficient of multiple correlation

a. How much investment should the manager make to reduce his risk?

b. How can he create a zero value hedge?

c. In case the market index falls by 10% and the stock price rises by 5%; how much should the portfolio manager invest to maintain the same hedge ratio.

151. The stock index is currently at Rs.4,330 and the six-month stock index futures is trading at Rs.4,445. The risk-free annual interest rate is 8%. What is the average annual dividend yield on the stocks in the index?

152. The following information about steel scrap is given

Spot Price	Rs.5,200 per ton
Futures Price	Rs. 5,700 for a one year contract
Interest Rate	8.5%
PV (Storage costs)	Rs.300 per year.

What is the PV (convenience yield) of steel scrap?

153. Price changes on two stocks (A and B) have shown strong positive correlation. Their historical relationship is

Average percentage change in A = 0.0015 + 0.6 (Percentage change in B)

Change in B explains 55% of the valuation of the changes in A, ($R_2 = 0.55$)

a. Suppose you own 1 million of A, how much B should you sell to minimize the risk of your net position?

b. What is the hedge ratio?

E How would you construct a zero value hedge?

154. The following are the details relating to the borrowing requirements of two companies:

Company	Requirement	Rate offered	
		Fixed	Floating
A	Fixed rate dollars	9%	PLR + 4%
B	Floating rate dollars	10%	PLR + 6%

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Both companies need an amount of $ 5 million for a period of 5 years. The interest rates on the floating rate loans are reset annually. The current PLR for various maturities is as follows:

Maturity (Years)	PLR (%)
1	5.50
2	6.00
3	6.40
4	6.60
5	6.75

Company B bought an interest rate cap at 11.25% at an upfront premium payment of 0.50%.

You are **required** to:

a. Show how the two companies can reduce their borrowing costs by doing a swap. Assume that they share the total gain from the swap equally.

b. Calculate the cost of dollar funds to the companies assuming that the expectations theory holds good.

155. The following table lists the prices of some options on common stocks (prices are quoted to the nearest dollar). The risk-free interest rate is 10%. Can you spot any mispricing in the prices of the options and stock prices? If yes, how will you take advantage of it?

Stock	Time to exercise	Exercise price	Stock price	Call price	Put price
A	6 months	50	80	28	2
B	3 months	40	50	13	1

156. Technostock Ltd. has a AAA credit rating and is able to borrow directly in the market at a rate of 10% for a 10-year fixed rate loan and at MIBOR + 0.2% for a floating rate loan of the same maturity. Infomat Ltd. has a BBB credit rating and can borrow for a 10-year period at a fixed rate of 11.2% or at a floating rate of MIBOR + 0.75%. Technostock Ltd. wants floating rate funds while the requirement of Infomat Ltd. is fixed rate funds. Show how the two parties can reduce their funding costs through a swap. Also involved in the swap is an intermediary who retains 10 basis points as its margin for arranging the swap.

157. The current price of Britannia Industries Ltd. is Rs.1,530 per share. It is estimated that the same may vary between Rs.1,800 and Rs.1,200 in next 3 months depending on market sentiments. If risk-free rate of interest can be assumed to be 12%, you are required to find out the price of 3–m call option and put option of Britannia Industries Ltd. for an exercise price of Rs.1,500.

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Part II: Solutions

Introduction to Strategic Management

1. A collective effort from firms who are dealing in similar business often results in numerous benefits to the organization as a whole. The benefits may be in the form of increased competitive advantage resulting from factors like cost reduction, higher sales, availability of adequate resources, etc. As the people who framed the HP-Compaq merger are confident about the move, by identifying lot of opportunities and benefits, the decision is considered justifiable. The decision is a strategic issue and thus the following factors should be considered.

Commitment from top management: From the facts, it is clear that there is a lack of consensus among the management. The first and foremost step of the combined entity should be to resolve these conflicts. The coordination of the top management is required as it has the needed perspective to understand the broad implications of such decisions and the power to authorize the necessary allocations.

Long-term objectives: The merger between the firms is a long-term issue and as such the decisions often commit the firm for a long time period. The executives mentioned that the future lies in globally supporting and managing information technology infrastructure, not just building it. They claim that the combined entity can lead the changes transforming the industry and produce even greater value for the company's customers and shareholders.

External environment: The operations of the HP-Compaq combined entity may affect and get affected by the external conditions that are largely beyond its control. This issue can be managed only through the consolidated effort of the managers of the combined entity. They should look beyond the firm's operations to successfully position it in a comfortable competitive situation. An analysis of the firm's competitors, customers, suppliers, creditors, government, labor etc., is to be conducted before evolving a solution to manage the external environment.

Strategic Management Process

2. Baron's achievement is mainly attributable to the strategic strength maintained in its activities. These activities include aggressive marketing and promotion techniques, pricing strategies, customer relationship techniques, etc. The CEO himself attributed this success to the strategic plans and activities. Thus an appropriate strategic management process lead to the success of Baron International.

A review of the results attained after implementing any strategic management process is necessary to analyze whether the process was successful or not. The benefits attained by the firm need to be evaluated too. The benefits of the process can have an impact on the organization's overall performance and its financial performance. The process can prevent the creation of problems, select decisions from the best available alternatives, motivate employees, reduce the gaps and overlaps among activities and minimize resistance to change. The financial benefits can be exposed by analyzing various financial ratios such as profitability ratios, liquidity ratios, leverage ratios, activity ratios, etc. A favorable ratio contends that the strategic management process adopted has been successful in the organization.

Company Mission

3. The success story of Infosys is one among a few which reached heights due to the healthy attitude towards the shareholders and employees. In any organization, the strategic managers are responsible to recognize and acknowledge the legitimate role of the stakeholders in defining or redefining the company mission. The social responsibility of Infosys confers the obligation to include certain social criteria into its strategic decision-making. The reputation of the company has doubled as a result of providing quality services coupled with meeting the social duties and responsibilities. The company has concentrated in four major responsibilities classified as economic, legal, ethical and discretionary responsibilities.

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The economic responsibility of Infosys deals with developing software solutions and applications, which provide value to the society. The society at large can benefit if the company succeeds in fulfilling these responsibilities. The legal responsibilities include those defined by the government as laws and the company's management is expected to obey them. A solutions provider like Infosys should comply with the quality levels needed to maintain under the various certifications achieved. The ethical responsibilities may include disclosing correct information to the outsiders, payment of tax to the government etc. For instance, the government provides lot of support to the Information Technology industry, which even extends to a tax deduction of 90 percent on export profits. Thus, the company should not resort to numerous loopholes to avoid this minimal amount of tax. The discretionary responsibilities involve the voluntary obligations assumed by the company. Infosys has been keeping good its discretionary responsibilities like donating infrastructure to the state governments, providing funds for education, spending massive amounts in research and development etc.

4. ITC deals in business which often generates wide spread protest from a large section of the health conscious people. Two factors should be considered before analyzing whether ITC follows the guidelines prescribed for a socially responsible firm. One, manufacturing of cigarettes constitutes a major chunk of its business and two, the increased competition threat posed by other players. ITC is compelled to adopt aggressive marketing and promotion techniques to maintain its present market share. But it should not discard the fact that its business is the cause of death to a large number of people.

The main guidelines to be followed by a socially responsible firm are:

a. The business should not aim at unreasonable profit but should strive for an optimal profit level. But in this example, if the company prices its products low to achieve a reasonable profit, the number of smokers may increase and have an adverse affect on the society as a whole. Thus, compared to other products, maintaining a reasonable profit has certain disadvantages.

b. The costs incurred by the company should also be considered while ascertaining whether the company is adhering to the guidelines to be followed. The costs should be determined after conducting an analysis of the social balance between the firm and the society.

c. If there are social costs in areas where no objective standards for correction exist, managers should generate a corrective standard. These standards should be based on the manager's judgment of what ought to exist. They should encourage individual involvement of firm members in developing necessary social standards.

d. ITC faces stiff competition from other players and thus there is a chance that this competitive pressure precludes socially responsible action. The company should attempt to restore profitable operation through either better management or by advocating corrective legislation. ITC should accept the fact that if it operates in a depleting social capital arena, future loss is inevitable.

5. Strategic decisions taken by a multinational company should be in line with the corporate direction and the available strategic alternatives. The content of each mission component must be revised to incorporate multinational contingencies. The corporate mission statement must continue to encompass the additional strategic capabilities that result from internationalizing the operations. Therefore, the each basic component should be analyzed in light of specific considerations that serve to multi-nationalize the corporate mission.

Product or service, market and technology: The basic market need is defined by the mission statement. RFS being a financial service company, incorporated in its mission statement, its commitment to provide high quality and integrated financial services and products to its clients. It is to be noted that RFS offers a wide array of trust and financial services to clients nationwide and around the globe. This infers that the company should focus as a multinational corporation and develop product, service, market and technology. The competencies acquired by the company domestically can be exploited as competitive advantages when transferred internationally. However, faced with a multiplicity of contexts, some degree of prioritization and redefining of the primary market and customers is necessary.

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Company goals, survival, growth and profitability: The company's intention to secure its future through growth and profitability is included in the mission statement. RFS's mission statement states that its success depends on a relentless effort to build friends, provide consistent first-class client experiences, build partnerships to maintain an environment that would attract and retain quality people, enhance shareholder value through its pursuit of excellence in servicing the financial needs of clients and building communities.

Company philosophy: The company's philosophy should be properly formulated and implemented. A corporate philosophy cannot be assumed to maintain its relevance in variant cultures when developed from a singular perspective. As RFS operates in different markets, corporate values and beliefs should be defined primarily and culturally, reflecting the general philosophical perspective of the society in which the company operates. This should vary depending on the individual market in which it operates. Thus, when a company extends into another social structure, it encounters a new set of accepted corporate values and preferences, which must be assimilated and incorporated into its own.

Self concept: Management's understanding and evaluation of the company's strengths and weaknesses as a competitor in each of its operating arenas lead to the development of a multi-nationalized selfconcept. If the strategic decision makers do not understand the impact the company has or could have on the environment and vice-versa, then the firm's ability to survive in multiple dynamic and highly competitive environments will be severely minimized. RFS thus should engage in actions to proactively select and impact its environment, or it may decide to take a reactive stance thereby responding and adapting to changes in environment once their impact is known with greater certainty.

Public image: The public image is considered a marketing tool that is managed with an objective to make the customer accept the firm's product in the market. The public image of a financial services company should be to retain the customers or to attract new investors. In the multinational environment, although this dimension remains a critical consideration, it must be balanced properly with concern for organizational claimants other than the customer.

6. All the organizations are obliged to perform certain social responsibilities. Pfizer, as a pharmaceutical company, has embarked on the right path direction by launching a campaign to enroll low-income seniors in health benefit programs. This campaign is organized with very low charges to be paid by the citizens. Such programs develop the public image of a responsible organization in the minds of the customers, shareholders and other parties involved in the business. The company has to sacrifice its revenues to conduct such type of campaigns. But the 'responsible' image of the organization towards the society will help it to excel in its area of business.

As stated in the mission statement, the company strives to attain the position of the world's most valued company to patients, customers, investors, business partners, and the communities where they work and live. The programme was initiated in line with the purpose of the company to dedicate the organization to humanity's quest for longer, healthier, happier lives through innovation in pharmaceutical, consumer, and animal health products. Thus the campaign to enroll low-income seniors in health benefit program for a low fee supports the mission statement and the purpose defined by the company. In short, by providing this service, the company was able to provide value to its patients, customers and the society. As the approach will help the firm in gaining wide public image, it may result in gaining more business. This provides value to the other segments, namely, investors and business partners.

Analyzing the External Environment

7. Strategic decisions are aimed to achieve certain vital objectives of an organization. These objectives are achieved through the design, development and implementation of appropriate strategies. For Hero Honda, the intense competition from local competitors within the industry is an issue present in the external environment. The minor conflict with its foreign partner HONDA is an issue related to the internal environment.

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In most circumstances, the CEO or the decision maker's role is restricted to manage the internal activities of the firm. But he should be ready to respond to the challenges posed by the firm's immediate and remote external environments. The decision-making must anticipate, monitor, assess, and incorporate all the challenges posed by a firm's external environment. As in this case, the immediate external environment i.e., the competitors are posing a threat to the company. The strategic decisions can include a cut in price, heavy advertisement, quoting the fuel efficiency factor, tie-up with more financial institutions to provide loan facilities, heavy investment in R & D to introduce more variants of the existing models, increase dealer's commission to push their interest, approach organizations and offer discounts for bulk purchases etc.

The internal environment is also marked with arguments with the ally, the Honda Motor Corporation. This can be sorted out with discussions between the top management of both the allies. As a precedent there are instances of Kinetic and TVS groups snapping us ties with their partners. But it is not advisable for the Hero group to go ahead with a similar decision as it can cost it dearly in the future.

8. The decision to invest in China involves an analysis of the external environment in which ALSTOM was planning to operate. The analysis includes an active research on the social, political, economic, legal and operating environments.

Social environment is considered as an important factor as it creates threats and opportunities for an organization. Social environment considers the societal changes in values, beliefs, attitudes, opinions and life styles. Being in the power business, ALSTOM does not face any direct impact of the changes in society. As the company offers its customers a complete range of innovative components, systems and services covering design and manufacture, the societal culture of the people in China does have an impact indirectly even though the magnitude is small.

Political forces are very powerful especially in the power sector where there are restrictions from legal laws, government rules and regulations. The instance of the Dhabol Power Project in the country underlines this fact. ALSTOM also had to face these types of political constraints in the form of antitrust laws, fair trade decisions, tax programs, minimum usage legislation, pollution and pricing policies, administrative activities and other actions aimed at protecting the consumers and the local environment.

Economic factors clearly indicate the nature and direction of the economy in which a firm operates. Every market is unique and consumption patterns change along with the wealth of the consumers in various market segments. Since ALSTOM is involved in power generation, transmission, distribution, conversion and transport, the economic factors do have a direct impact on its business. The various economic trends that should be analyzed include the prime interest rates (as the investment requirement is large), inflation rates and trends in the growth of Gross National Product, general availability of credit, etc.

Legal factors also have to be considered by ALSTOM while foraying into the Chinese market. The cross-border trade has increased significantly over the years as most countries are moving towards deregulation, which involves the elimination of many legal restrictions. As the Chinese government has accepted the proposal to set up a manufacturing plant, ALSTOM can leverage on the competitive cost advantage derived mainly from low labor costs.

Operating environment includes factors in the immediate competitive environment regarding the procurement of resources, profitability for the company from its product or services etc. The significance of operating environment is high for ALSTOM, which operates in the power sector. The existing manufacturers in China have an early entry advantage. ALSTOM on the other hand, has to mark its presence among the sector players, by taking advantage of the cost leadership position.

9. The decision to move away from the retail banking business might have been adopted after analyzing the operating environment in those countries. The operating environment analysis provides an insight into various factors in the immediate competitive situation regarding the procurement of resources, profitability of the company from its products and services etc. Even if the consumer banking business is scraped, it is totally committed

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towards the wholesale (corporate and institutional) banking activities. The bank can leverage on its strong presence in wholesale banking activities like corporate finance, mergers and acquisitions, financial markets, cash management and trade services for an astounding growth. The company's decision to close its equities and corporate finance business was considered after analyzing the operating environment. The operating environment analysis include the study of the banking industry in which it operates, profitability of the retail banking business gained by similar players, cost of providing the retail service etc. The decision of the bank to terminate the retail operations can also be a result of the unfavorable market conditions resulting from economic slow down and weak stock markets.

10. The operating environment includes factors in the immediate competitive situation regarding the procurement of resources, profitability of the company from its products and services, etc. It consists of factors like competitive position, customer profile, reputation among suppliers and creditors, and an accessible labor market. This environment is also called the competitive or task environment. By assessing its competitor's position in the market, a firm can improve or formulate strategies to optimize its environmental opportunities. The firm must develop competitor profiles to forecast its short-term as well as long-term growth and profit potential. The factors to be considered in the operating environment include competitive position, and the profile of suppliers and creditors and customers.

Competitive position: To construct the competitor's profile, the factors to be considered include market share, breadth of product line, effectiveness of sales distribution, proprietary and key account advantages, price competitiveness, advertising and effective promotion, location and age of facility, capacity and productivity, experience, raw material costs, financial position, relative product quality, etc. These factors are weighed and a suitable rating is given to them in accordance with the competitor to be evaluated.

Customer profile: Customers are considered to be kings, because they generate profits for the manufacturer. So, it is essential for managers to understand their customers properly to retain their loyalty. Hence, managers should constantly monitor their customer's psychology and cater to their requirements whenever necessary by developing a suitable customer profile and making it a part of the company strategy. While developing a customer profile, managers should properly plan strategic operations, expect changes in the size of markets, forecast demand fluctuations, and appropriate allocation of the resources. The construction of the customer profile includes information pertaining to geographic, demographic, psychographic and buyer behavior.

Suppliers and Creditors: A business firm should maintain dependable relationships with its suppliers and creditors for its long-term survival. A firm relies on its suppliers for financial support, services, materials and equipment. In addition, it should request its suppliers and creditors for quick delivery, liberal credit terms, or broken lot orders. So, it is imperative for a firm to develop good relations with suppliers and creditors.

11. Customer satisfaction is the key to success in any organization. Customer satisfaction mainly includes delivering the product or service, which meets their specific requirements. The decision of Boeing to go backward on its proposed 747X Super Jumbo project was taken after consultations with its customers. This refers to the analysis of both operating and social environment. The operating environment includes factors in the immediate competitive situation of Boeing which includes the probability of competitors offering similar products which may result in the inability of the company to retain its existing customers. The social needs to be considered as it creates threats and opportunities for an organization. The threats can be the possibility of the competitors satisfying the company's client's needs. Boeing can enhance their existing share by dropping the 747X project and thus may gain more opportunity in the long run. This decision may dearly cost the company but as the business is an ongoing concern, it needs to sacrifice on certain terms to achieve greater benefits in the future. Boeing has huge investments in the aviation industry and thus may not be willing to adopt any strategies, which may have a negative impact on its customers.

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12. The Color Television segment is one of the most competitive products in the consumer durables market. Hefty advertising and promotion packages rule the day. The fact that the domestic player BPL, despite the significant presence of cash rich multinational companies is able to retain its leading position is widely applauded. The market share, which BPL is enjoying in an oligopoly market like CTV, is more than satisfactory considering the number of players present. But the critical fact to be considered is the margins available on individual units. It is clearly known that most of the players are operating on wafer-thin margins due to the high intensity of competition. The implementation of a customer satisfaction cell to meet their requirements is considered as a pre-requisite. From the case it is clear that BPL is considering its operating environment including competitors and customers. It should be ready to respond to any aggressive marketing strategies developed by the competitors. More over, the price sensitive mid range customers can be attracted by reducing the prices, which the company did by attaining a cost-competitive position.

Evaluating the Multinational Environment

13. The products or services offered by multinational companies are increasingly becoming more local, reason being the difference in the taste and approach of consumers towards the product, in the country other than the home market, where the product is introduced. Consider the example of Kellogg's, which was not able to dominate in the Indian market the way it expected to. The company was not able to change the traditional taste of the consumers overnight. McDonalds has changed its recipes, which it used internationally and adopted one, which satisfies the local consumers. Most of the financial services companies also tailor their products according to the customer movement in the local markets. All these multinational companies thus change their strategies and plans, which they use in international markets to suit the local circumstances.

14. The significance of analyzing the multinational environment is high in a business like SAN MARZANO is into. A service-oriented restaurant should concentrate more on the customer's taste and their interests. SAN MARZANO being a multinational company should study the tastes and preferences of the Indian consumers before setting up a chain of pizza restaurants. As the firm has already entered the fray, it should now decide the locations to expand its business.

The multiple political, economic, legal, social, and cultural environment as well as various rates of change within each of them should be analyzed. The situation is complex resulting from national issues and widely differing economic and social conditions. SAN MARZANO, being an established player in the UK may not find the Indian market an easy task. The economic, social and political conditions are entirely different in India compared to its home country. This may lead to an intense competition from the domestic companies, which know the taste of the Indian consumers better. Thus a study of all these factors is necessary before expanding the business in the country.

Internal Analysis of the Company

15. The mission statement reflects the values and priorities of strategic decision makers and guides future executive action, and the vision refers to the statement of intentions that are broad, all-inclusive and forward thinking. An organizations commitment towards its customers, shareholders, communities and the society in which it operates is critical for its success. The mission and vision statements should be so designed to attain these objectives. Even though the customer base of the company is not wide unlike FMCG companies, it is highly important to retain this limited segment. As instances of unethical and dishonest acts are rising gradually, the customers and shareholders are becoming very keen on selecting their destinations. Thus the need to maintain ethics and integrity is quite obvious.

Formulating Long-term Objectives and Strategy

16. BMW concentrates on the premium segment in the industry. The long-term strategy of the company to produce motorcars, which cater to the medium segment, is an appreciable move as the customer base is wider in this segment. The premium products segment, where the products are priced higher, may attain a stage of maturity by the next two years. This will induce the firms to invest more in research and development but the customers may not appreciate the result. Thus it is wise to identify their requirements in different segments and if found suitable to make a justified entry. Moreover, the brand reputation, which the

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company has developed over the years by catering the premium segment, will also help BMW in making a mark on the new segment. Even though there are plans to enter the middle segment, the company strategy still focuses on using these brands to build a full range of premium products. Thus the brand reputation present in the premium segment will not be diluted. The determination of BMW managers to go ahead without any alliance or association with other players is also a positive approach.

17. Customer relationship is essential to any business where the customer has a say in the product or service offered by the company. Rolls Royce Plc., which deals in heavy equipments, is justified in its approach to create a better relationship with its customers. In case of fast moving consumer goods, the manufacturers are able to position their products to a wider customer base whereas an organization like Rolls Royce, relies only on a diminutive customer base. Thus it is very critical to attract this narrow segment for its survival and growth. If a single customer decides to move away from the company, it can affect the reputation and will definitely prove costlier. The process of relationship marketing includes after sales services like continuous technical assistance, upgradation of engine specifications when a new technology is developed etc. Due to the above reasons, relationship marketing has a great significance in the growth and survival of an organization like Rolls Royce.

Strategy Analysis and Choice

18. The initiative to transform the company into a knowledge and service based organization, is a shift from its usual business strategy. The company is operating in an industry, which requires huge investments in assets as well as equipments. The company's aggressiveness must be appreciated as it forayed into a relatively new area. This shows the organization's commitment to diversify into unrelated, unexplored areas. This may prove costly some times, but the brand name and reputation, which it has built over the years, may aid ABB to succeed in this venture. But the area of financial services is very competitive and thus the company should categorize its strategies according to the growing market needs.

19. Wipro technologies is one of the leading technology solution partners in the country. The company by now has diversified its operations in various areas in the information technology sector. At Wipro, the shareholders hold only 25 percent of the capital and as such the promoters' influence on decision-making is high. The drawing up of strategies, to emerge as the world leader, is justifiable when one looks into the expertise and the market share attained by the company in the industry. The new areas identified by the company such as, infrastructure support services, business intelligence services and telecommunication, internet and application service providers are all related to the industry in which it operates. The plans does not constitute to unrelated diversification and as such is less risky. Thus the management's decision to explore the emerging growth areas is justifiable on these grounds.

20. The business will become more competitive once the administered pricing mechanism for petroleum products is dismantled. RPL may have developed a number of strategies to face this issue.

Strategic analysis can be conducted both at the corporate and the business level. The fundamental method of corporate strategic analysis is the business portfolio approach. Here, RPL being involved solely in the business of petroleum business has to decide how it should be managed to achieve corporate objectives. The corporate strategy adopted should set the basic thrust for each business unit in a manner consistent with the resource capabilities of the firm. The merger with the parent company will further strengthen RPL both in financial and administrative terms. Methods like BCG matrix and GE nine cell planning grid can be used to chart strategies at the corporate level.

When the individual business performed by RPL is considered, each business unit must identify and evaluate its strategy options. RPL can conduct the strategic analysis at the business unit level by SWOT analysis and also through the strategy selection matrix. By conducting a SWOT analysis, the company can perform a systematic study and identification of those aspects and strategies that best suit the company's position in a given situation. Strategy selection matrix is used when the analysis conducted using the company's strengths, weakness, and opportunities doesn't provide the expected results.

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21. The success of a channel depends on the timing of its programs and their quality. The target audience should also be analyzed properly before coming up with new programs. The behavioral considerations have a greater impact on the selection of channels and the time opted for the programs. The channel can adhere to its strategy, "Relevant Content for the Target Audience at the Right Time" by evaluating and selecting the best option available from the possible alternatives. The strategic choice to be made by the channel depends on various factors like the nature of past strategy, attitude towards risk, competitive reaction, degree of firm's external dependence, time constraints, values and preferences, etc.

The past strategy was not effective as was clear from the viewers' confusion over what to watch and when to watch. The new strategy should be developed after studying the pitfalls in the earlier timings and program contents. The channel should analyze whether it meets the target audience and also whether the quality of the program is satisfactory or not.

The attitude towards risk influences the range of available strategic choices. The risks involved in television channels include airing of new programs at timings, which are different from the conventional timings.

The strategic choice should incorporate the perception of the competitor's likely reaction. Here the competitor's reaction includes airing similar or minor variants of the successful programs. Thus the decision making body of the channel should consider such reactions, the capacity of the competitor to react, and the probable impact on the success of the chosen strategy.

22. The decision to put down the shutters of the retail operations of BNP Paribas in India is considered as a strategic move. The decision can affect the customer confidence unfavorably as they may wrongly perceive that the financial position is not stable and the termination of retail operations is the result of this situation. This loss of public image is extremely bad, especially for a financial services company. The various criteria that need to be considered are the criterion of suitability, criterion of feasibility and the criterion of acceptability.

The criterion of suitability attempts to measure the extent to which the proposed strategies fit the situation identified in the strategic analysis. Here the situation to be considered is the nature of the Indian financial services industry. The situation should also indicate the opportunities and threats that a firm faces. The evaluation should measure the suitability of the strategy to the situation.

The criterion of feasibility assesses the practical implementation and working of strategy. At this stage, the bank should review whether it has the financial resources to implement the strategy. Also, the capability of the company to perform its operations, possibility to achieve the market positions, ability to meet competitive challenges etc., should be considered at this stage.

The criterion of acceptability involves not only the consequences of the strategy but the personal considerations too. The factors which are analyzed at this stage include the financial position of the firm in terms of profitability, financial problems, effect of capital structure, level of acceptability of cultural changes within the organization, acceptability of the strategy by the company's environment, etc.

23. The major strategies to be followed by the firm include keeping the company retail, offering the best service and maintaining a competitive price. All these strategies are decided after evaluating the various options available to the company. The strategy adopted by BHFL, which is involved in the highly competitive financial services business, is considered as a significant move. It is to be noted that the formal sector finance accounts for only 30 percent of the total industry outflow. The alliance with BHW holdings and AG of Germany gives BHFL a competitive edge, as the former is one of the leading players in Europe. BHFL also has access to the most modern and innovative home finance products introduced in the country. Considering the above favorable points, the strategy followed by BHFL is justified.

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Operationalizing the Strategy

24. The subject of implementing standardization and a single HR strategy is crucial to any global company. The severity of the issue multiplies by the fact that the culture, taste, approach and lifestyle of the people differ from country to country. As Cadbury Schweppes operates in the beverages and confectionery industry, the taste of the consumers needs to be analyzed carefully before introducing any product in a foreign market. McDonalds, for instance, changed the preparation of its items according to the local tastes. Again, the introduction of a diet range of soft drinks from both Pepsi and Coke did not receive the extent of customer applause as expected in India. Thus the products should be manufactured considering the domestic demands and taste of the local consumers. The HR strategy should also be designed according to the market conditions, as the culture and approach of the employees will also vary from place to place.

25. The Financial Institution (FI) appointed four high power committees for strategy and policy, risk , product innovation and human resource development. The strategy and policy making body decides the long-term functioning plan of the FI. These decisions can be effectively implemented by analyzing the past strategies, the situation prevailing in the industry, the level of competition and the organization structure of IDBI.

Risk management is vital for a player in financial services industry as it decides the proper running of an FI. Its strategies can be implemented by analyzing the asset and liability structure of the FI. The main objective should be to reduce the level of NPAs.

Product innovation seems to be an essential requirement as most of the FIs bring to the market a large number of variants of the existing products with added features. The significance again increases mainly due to the increasing rate of technological changes in the banking industry. The new products with competitive features can be implemented successfully by adding more customer friendly features and services.

Human resource strategies are important in a financial institution, being a service oriented business. Personal management aids in implementing the strategies successfully by ensuring the development of managerial talent, the presence of systems to manage compensation and regulatory concerns, the competitive development and well-motivated employees.

Strategy and Structure

26. The success of an organization is strongly influenced by its management's leadership style. Some strategic leaders will be entrepreneurial and they seek opportunities for change and are willing to take necessary risks. Some leaders are conservative and they do not take or are less likely to take even minor risks. In relatively stable environments both the leaders can be adept and successful.

Maria Jones has adopted the autocratic style of leadership in which the manager makes decisions and announces them. Managers closely supervise employees to make sure that the task is performed satisfactorily. Getting the job done is given more emphasis than employees' growth or personal satisfaction. Generally small organizations adopt the autocratic style of management. Decentralized organizations depend on the amount of freedom and encouragement gives to strategic leaders of each division. However, autocratic leadership sometimes results in conflicts among the employees as they are forbidden to participate in the decision-making. But the autocratic style does work when the control mechanism adopted by the strategic leader is best suited for the implementation of the intended strategies. However, employee-oriented leadership style, in which the emphasis is on motivating the employees rather than controlling them, is always advisable for a strategic leader. This style encourages managers to delegate work and empower teams. Some strategic leaders consider this style to be the best way to get the amount of work done within the limited time available.

Resource Management and Control

27. Research and development is a major functional area of an organization. Its importance varies with the nature and the type of business in which the organization is into. The research and development function either supplements a product-oriented effort or improves the production processes. Although many firms develop new products, those with technically oriented

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products are mostly involved in R&D. In such organizations, research and development is accomplished at a great expense, but it is vital for the firm to prosper. The two areas of research and development are the product R&D and the process R&D. Product R&D is concerned with innovations/implementations of the firm's products whereas process R&D attempts to reduce the costs of operations and seeks constant improvement in quality through more efficient processes. Business units that adopt low-cost strategies emphasize on process R&D, whereas businesses that adopt differentiation strategies emphasize product R&D. If the organization has strengths in R&D, or if the external environment demands it, the company should commit itself to a strong R&D effort. Companies with less technical strength must develop a "fast follower" strategy that recognizes the ability to lead in R&D.

The Value Chain and Competitive Scope

28. The concept of a single market is devised to eliminate unhealthy competition between the companies. It is also helpful in reducing the escalating cost involved in business operations. This assumes high significance especially in the energy market where each player is required to make massive investments in equipments as well as assets. The earlier collective effort of the EU to introduce a common currency is widely acclaimed. Thus the preparation for a single market is justified as long as the development of an effective, secure and a competitive energy market is successful.

The Value Chain and Generic Strategies

29. Cost reduction and improved focus on technology are the two areas identified by TATA AIG to better its reach and market share. Cost advantage is one of the major competitive advantages that a firm possesses. Therefore, to capture the market, the company should be in a position to differentiate its cost with its competitor's cost, and should fix a price that can lure the customers.

TATA AIG relies on cost control as its main strategy. The company is able to curtail its management expenses to 9 percent of the total cost. Here, it has a cost advantage as the other players are incurring almost 23 percent. The insurance industry, being a service-oriented business, is very sensitive to customer satisfaction. Thus the firm should serve its customers at the maximum satisfaction level apart from controlling its overall cost. A differentiator will fail to achieve superior performance unless the resulting price premium exceeds the cost of differentiating. The company is more focused on this aspect. A cost control measure mainly involves analyzing the cost systems. Cost systems include the cost on direct labor, indirect labor, materials and machines, which must be efficiently managed. TATA AIG focuses on the labor part as revealed by its ability to control the management expenses. The huge costs of marketing and distribution can be sorted out by entering into alliances with banks or other independent marketing agencies. The scenario is same for the other new private players whereas the state-run competitors score favorably on this point.

The company's increasing focus on technology is considered as a strategic move. Technology has a greater impact on the insurance industry, which in this case is established by the fact that the company by now has invested Rs.15 crore. The firm can thus achieve growth through a proper coordination of factors like cost control and technological advancements.

30. A value chain represents a linked set of value creating activities starting with procuring basic raw materials from suppliers, moving on to producing and marketing a product or service and terminating with the distributors placing the final goods into the hands of the end users. The significance of value chain in an automobile industry is more as it generally out sources a large number of components required for the final product. The value activities that need to be identified for an automobile industry are the primary activities and the support activities. The primary activities include research and development, production, marketing/sales and service.

Research and development is concerned with the design of products and production process. The automobile industry should design and develop new products to cater the customer's needs. The production process can also be improved. An efficient production process may be a result of the effective work of research and development thus, leading to low production costs.

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The production function of an automobile company creates value by performing its activities efficiently. The instances of Nissan and Toyota in creating value added products by concentrating on their value chain are well-known. Value can also be created by production and by performing activities in an efficient manner to yield the product of superior quality, which leads to differentiation and lower costs.

The marketing function can increase the value that automobile customers perceive to be contained in a company's product through brand positioning and advertising. These create a favorable impression of the company's product in the minds of the customers and thus enhances value. Marketing and sales can also create value by discovering consumer needs and communicating them back to the research and development department of the company, which can then design products that better match those needs.

Providing better after sales service is a significant aspect of the automobile industry. By solving customers' problems and endorsing them after they have purchased the product, a company can instill its superior values in their minds.

Capital Structure

31. a. Expected EBIT for Plans I & II

$= (470 \times 0.15) + (500 \times 0.25) + (520 \times 0.5) + (550 \times 0.1)$

$= 70.5 + 125 + 260 + 55 = 510.5$ lakh

Standard Deviation in EBIT for Plans I & II

i.e. σEBIT

$= [(470 - 510.5)^2 \times 0.15 + (500 - 510.5)^2 \times 0.25 + (520 - 510.5)^2 \times 0.5 + (550 - 510.5)^2 \times 0.1]^{1/2}$

$= (246.03 + 27.56 + 45.125 + 156.025)^{1/2}$

$= \sqrt{474.74}$ = Rs.21.79 lakh.

Plan I: Issue of 12% debentures

(Rs. in lakh)

Probability	0.15	0.25	0.50	0.10
EBIT	470.0	500.0	520.0	550.0
Less: Interest (80 + 120 x 0.12)	94.4	94.4	94.4	94.4
PBT	375.6	405.6	425.6	455.6
Tax @ 40%	150.24	162.24	170.24	182.24
PAT	225.36	243.36	255.36	273.36
No. of shares	65.0	65.0	65.0	65.0
EPS (Rs.)	3.46	3.74	3.93	4.20

Expected EPS $= (3.46 \times 0.15) + (3.74 \times 0.25) + (3.93 \times 0.5) + (4.20 \times 0.1)$

$= 0.519 + 0.935 + 1.965 + 0.420 = 3.839$

$= [(3.46 - 3.839)^2 \times 0.15 + (3.74 - 3.839)^2 \times 0.25 + (3.93 - 3.839)^2 \times 0.5 \times (4.20 - 3.839)^2 \times 0.1]^{1/2}$

$= (0.0215 + 0.0025 + 0.0041 + 0.0130)^{1/2}$

$= 0.2027 \approx 0.203$

Coefficient of variation $= \dfrac{0.203}{3.839} = 0.05287 \approx 0.053$

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Plan II: Issue of shares

(Rs. in lakh)

Probability		0.15	0.25	0.50	0.10
EBIT		470	500	520	550
Less: Interest		80	80	80	80
PBT		390	420	440	470
Tax @ 40%		156	168	176	188
PAT		234	252	264	282
No. of shares	(65 + 12)	77	77	77	77
EPS (Rs.)		3.039	3.273	3.429	3.662

Expected EPS

$= (3.039 \times 0.15) + (3.273 \times 0.25) + (3.429 \times 0.5) + (3.662 \times 0.1)$

$= 0.456 + 0.818 + 1.715 + 0.366 = \text{Rs.}3.355$

σEBIT $= [(3.039 - 3.355)^2 \times 0.15 + (3.273 - 3.355)^2 \times 0.25 + (3.429 - 3.355)2 \times 0.5 + (3.273 - 3.355)2 \times 0.1]½$

$= [0.015 + 0.002 + 0.003 + 0.009]^{1/2} = 0.172$

Coefficient of variation $= \frac{0.172}{3.355} = 0.051$

As coefficient of variation is a little lower in case of issue of shares, it is preferable.

b. EBIT indifference point

$= \frac{(\text{EBIT} - I_1)(1 - t)}{n_1} = \frac{(\text{EBIT} - I_2)(1 - t)}{n^2}$

$= \frac{(\text{EBIT} - 94.4)(0.6)}{65} = \frac{(\text{EBIT} - 80)(0.6)}{77}$

$(0.6\ \text{EBIT} - 56.64)77 = (0.6\ \text{EBIT} - 48)65$

$46.2\ \text{EBIT} - 4{,}361.28 = 39\ \text{EBIT} - 3{,}120$

$7.2\ \text{EBIT} = 1{,}241.28$

$\text{EBIT} = \text{Rs.}172.4$ lakh.

The EBIT indifference point of Rs.172.4 lakh means that if EBIT is below Rs.172.4 lakh equity financing is preferable to debenture financing.

32. a. Number of new shares issue= $\frac{12}{3}$ = 4 million new shares

Amount of money raised = 4 x 6 = 24 million

b. Three rights

c. Value of a right $= \frac{8 - 6}{3 + 1} = \frac{2}{4} = \text{Rs.}0.5$

d. Ex-rights price $= \frac{NP_0 + S}{N + 1} = \frac{(3 \times 8) + 6}{3 + 1} = \text{Rs.}7.5$

e. The price has to fall to Rs.6 per share to make the rights issue unattractive.

∴ Value should fall to 6 x 12 = 72 million i.e., by 24 million.

f. The rights price does not affect the shareholders wealth, therefore, shareholders will be as well off if shares are issued at Rs.5.

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33. a. NI approach

	April Ltd.	May Ltd.
NOI (20 x 0.18)	3,60,000	3,60,000
Interest on debt	84,000	–
Equity earnings	2,76,000	3,60,000
K_e	16%	16%
Market value of equity	17,25,000	22,50,000
Market value of debt	7,00,000	–
Total value of firm	24,25,000	22,50,000

Modigiliani and Miller approach

$$V = \frac{O(1 - t_e)}{k} + t_e B$$

Where,

O = EBIT

t_c = Tax rate

k = Overall capitalization rate

B = Market value of debt

Value of unlevered firm $= \frac{O(1-t_e)}{k} = \frac{3,60,000(1-0.4)}{0.16} = 13,50,000$

Value of levered firm

= Value of unlevered firm + t_c x B

= 13,50,000 + (0.4 x 7,00,000)

= 13,50,000 + 2,80,000 = 16,30,000

b. $k_o = k_d \left[\frac{B}{B+S}\right] + ke\left[\frac{S}{B+S}\right]$

April Ltd.

k_d = 12(1 – 0.4) = 12 x 0.6 = 7.2%

$$k_e = \frac{\text{Equity earning}}{\text{Market value of equity}}$$

Market value of April Ltd. = 16,30,000

Market value of debt = 7,00,000

Market value of equity = 9,30,000

$$k_e = \frac{2,76,000}{9,30,000} = 29.6\%$$

$$k_o = 7.2\left[\frac{7,00,000}{16,30,000}\right] + 29.6\left[\frac{9,30,000}{16,30,000}\right]$$

= 19.98%

May Ltd.

k_o for May Ltd. is 16%.

c. Since the value of levered firm (VL) = Value of unlevered firm + Gain from leverage (t_cB) is agreed by MM also, this implies that the optimal strategy of a firm should be to maximize leverage in its capital structure. But Merton Miller went on to say that financial leverage does not matter even in a world where both corporate and personal taxes exist. Which means that there is nothing like an optimal capital structure for any single firm in the economy.

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34. i.

(Rs. in lakh)

EBIT		75
Less: Interest on debentures	1.275	
Interest on term loans	1.920	
	3.195	3.195
		71.805
Tax @ 40%		28.722
PAT		43.083
No. of equity shares outstanding		15
EPS		2.87
Market price of share		20
P/E ratio		6.97

Present Capital Structure

(Rs. in lakh)

Equity share capital (15 x 10)	150
Reserves and Surplus	40
8.5% Debentures $\left(\frac{1,275}{0.085}\right)$	15
12% Term loan (1.92/0.12)	16
Total capital employed	221
Return on capital employed	33.94%

Revised Capital Structure

(Rs. in lakh)

Existing capital	221
Less: Debenture redeemed	15
	206
Add: Additional capital to be raised	50
Total capital employed	256

Plan I : Loan Rs.50 lakh

Plan II : Loan Rs.27.5 lakh

Equity Rs.22.5 lakh

(Rs. in lakh)

	Plan I	Plan II
EBIT (36.94% of capital employed (i.e. 33.94 + 3%)	94.57	94.57
Less: Interest on term loan @ 12%	1.92	1.92
Interest on additional term loan @ 12.5%	6.25	3.44
EBT	86.4	89.21
Less: Tax @40%	34.56	35.68
PAT	51.84	53.53
No. of equity shares	15.00	16.05
EPS	3.46	3.24
Expected P/E ratio [6.97–(6.97x0.5)]	6.62	6.97
Expected market price per share [EPSxP/E ratio]	22.90	22.58

Therefore, Plan I is advisable to be adopted.

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ii.

Total interest payment under Plan I	Rs.8.17 lakh
Financial break even under Plan I	Rs.8.17 lakh
Total interest payment under Plan II	Rs.5.36 lakh
Financial break even point under Plan II	Rs.5.36 lakh

iii. **Indifference point**

$$\frac{(\text{EBIT} - I_1)(1-t)}{n_t} = \frac{(\text{EBIT} - I_2)(1-t)}{n_2}$$

$$\frac{(\text{EBIT} - .17)(0.6)}{15} = \frac{(\text{EBIT} - 5.36)(0.6)}{16.5}$$

$$\frac{0.6\ \text{EBIT} - 4.902}{15} = \frac{0.6\ \text{EBIT} - 3.216}{16.5}$$

9.9 EBIT – 80.883 = 9 EBIT – 48.24

0.9 EBIT = 32.643

EBIT = Rs.36.27 lakh.

35. The average cost of capital for firm Alpha as per the net income approach is

$$7\%\ \text{x}\ \frac{0}{2,00,000} + 10\%\ \text{x}\ \frac{2,00,000}{2,00,000} = 10\%$$

The average cost of capital for firm Beta is

$$7\%\ \text{x}\ \frac{64,286}{2,19,286} + 10\%\ \text{x}\ \frac{1,55,000}{2,19,286} = 9.12\%$$

36.

Net Operating Income (EBIT)	Rs.75,000
Less: Interest on 10% debentures	Rs.15,000
Earnings available to equity holders	60,000
Equity capitalization rate (k_e)	0.12
Market value of equity	5,00,000
Market value of debt	1,50,000
Total value of the firm	6,50,000

Total cost of capital

$$= 10\%\ \text{x}\left(\frac{1,50,000}{6,50,000}\right) + 12\%\left(\frac{5,00,000}{6,50,000}\right) = 2.3\% + 9.23\% = 11.53\%\ \text{approximately.}$$

37.

	Levered firm	Unlevered firm
EBIT(18% of Rs.22 lakh)	3,96,000	3,96,000
Less: Interest	1,44,000	–
Taxable Income	2,52,000	3,96,000
Earnings for equity holders	2,52,000	3,96,000
Equity capitalization rate (K_e)	0.14	0.14
Market value of equity	18,00,000	28,28,571
Market value of debt	12,00,000	–
Total value of firm	30,00,000	28,28,571

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38.

	Rs. in million
Net operating income	40
Less: Interest on debt capital @ 8%	7.2
Earnings available to equity shareholders	32.8
Equity capitalization rate	16%
Market value of equity	205
Market value of debt	90
Total value of the firm	295

39. a.

	Star Ltd.	Moon Ltd.
Net Operating Income	15,00,000	15,00,000
Less: Interest on debt	–	6,00,000
Earnings available for equity shareholders	15,00,000	9,00,000
Equity capitalization rate (16%)		
Market value of equity	93,75,000	56,25,000
Market value of debt	–	50,00,000
Total value of the firm	93,75,000	1,06,25,000

b. Average Cost of Capital for Star Ltd.

$$= \left(12\% \text{ x } \frac{0}{93,75,000}\right) + 16\%\left(\frac{93,75,000}{93,75,000}\right) = 16\%$$

Average Cost of Capital for Moon Ltd.

$$\left(12\% \text{ x } \frac{50,00,000}{1,06,25,000}\right) + 16\%\left(\frac{56,25,000}{1,06,25,000}\right) = 14.12\%$$

c. If Star Ltd. employs Rs.20 million of debt to finance a project that yields an operating income of Rs.4 million.

	Rs.
Net operating income (15,00,000 + 40,00,000)	55,00,000
Less: Interest on debt (12% of Rs.20 million)	24,00,000
Earnings available to equity shareholders	31,00,000
Equity capitalization rate	16%
Market value of equity	1,93,75,000
Market value of debt	2,00,00,000
Value of the firm	3,93,75,000

Average Cost of Capital,

$$12\%\left(\frac{2,00,00,000}{3,93,75,000}\right) + 16\%\left(\frac{1,93,75,000}{3,93,75,000}\right)$$

= 13.97%

Average cost of capital decreases.

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d. When Moon Ltd. sells Rs.3 million of additional equity (at par) to retire 3 million of outstanding debt.

	Rs.
Net Operating Income	15,00,000
Interest on debt	2,40,000
Earnings available to equity shareholders	12,60,000
Market value of equity	78,75,000
Market value of debt	20,00,000
Value of firm	98,75,000

Average cost of capital = $12\%\left(\frac{2,00,000}{98,75,000}\right)+16\%\left(\frac{78,75,000}{98,75,000}\right)$ = 15.18%

Average cost of capital increases.

40. $K_e = k_o + (k_o - k_d)\, B/S$

$0.22 = 0.14 + (0.14 - 0.10)\frac{B}{S}$

$0.22 = (0.14 + (0.04)\frac{B}{S}$

$0.22 - 0.14 = 0.04\frac{B}{S}$

$0.08 = 0.04\left(\frac{B}{S}\right)$

$\frac{B}{S} = \frac{0.08}{0.04} = \frac{2}{1}$

The ratio of debt and equity in the capital structure of the firm should be 2:1.

41. Equity capitalization rate of Delta Ltd.

$k_e = K_o + (k_o - k_d)\frac{B}{S}$

$k_e = 0.14 + (0.14 - 0.11)(0.269) = 0.14 + 0.008 = 14.80\%$

Equity capitalization rate of Sigma Ltd.

$k_e = k_o + (k_o - k_d)\frac{B}{S} = 0.14 + (0.14 - 0.11)(0.736) = 0.14 + 0.02208 = 16.20\%.$

42. k_o= (Cost of debt x Proportion of debt in the capital structure) + (Cost of equity x Proportion of equity in the capital structure)

k_d x w1 (%) (a)	k_e x w2 (%) (b)	K_o (%) (a + b)
0	10	10
0.55	9	9.55
1.2	8.4	9.6
1.95	7.7	9.65
2.8	6.9	9.7
4	6	10
5.1	5.2	10.3
6.3	4.2	10.5
7.6	3	10.6
9	1.8	10.8

Optimal capital structure will be the point where ko is the minimum.

In the given problem ko is minimum where 90% equity and 10% debt is used. Thus the optimal capital structure is 90% equity and 10% debt.

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43. X who owns 1% of equity of firm B Ltd. will sell his equity in firm B Ltd. for Rs.12,800. He will borrow Rs.8,000 @ 5% interest and buy 1.04% of the equity of firm A Ltd. with the amount of Rs.20,800.

Such an action will result in the following income

Income on investment in firm A Ltd.

(1.04% of 2,00,000)	2,080
Less: Interest @ 5% on 8,000	400
Net income	1,680

This net income of Rs.1,680 is higher than a net income of Rs.1,600 foregone by selling 1% equity of firm B Ltd.

44. As per MM, value of the firm may be represented as

$$V = \frac{O(1-t_e)}{k} + t_c B$$

Where,

V = Value of the firm

O = Net operating income

t_c = Corporate tax rate

k = Capitalization rate applicable to the unlevered firm

B = Market value of debt

$$V = \frac{15,00,000(1-0.4)}{0.125} + (0.4) \times 20,00,000 = 72,00,000 + 8,00,000 = \text{Rs.}80,00,000$$

45. Tax advantage of every rupee of debt is given by the formula

$$= \left[1 \frac{(1-t_c)(1-t_{ps})}{(1-t_{pd})}\right] = 1 - \left[\frac{(1-0.4)(1-0.07)}{(1-t_{pd})}\right]$$

$$= \left[1 - \frac{(0.6)(0.93)}{0.8}\right] = 0.3025 \text{ rupee.}$$

46. a. Average cost of capital in the absence of bankruptcy and agency costs.

Debt/Total assets (a)	Equity/ Total assets (b)	Interest % Pre-tax (c)	Interest % Post-tax (c) x (1-0.5)	Equity cost (d)	Average cost of capital (c x a) + (d x b)
0.0	1.0	–	–	12.0	12.00
0.1	0.9	11.0	5.05	12.0	11.35
0.2	0.8	11.0	5.05	12.5	11.10
0.3	0.7	11.5	5.75	13.0	10.83
0.4	0.6	12.0	6.00	13.5	10.50
0.5	0.5	12.5	6.25	14.0	10.13
0.6	0.4	13.0	6.05	14.0	09.50
0.7	0.3	13.0	6.05	15.0	09.05
0.8	0.2	14.0	7.00	16.0	08.80
0.9	0.1	16.0	8.00	18.0	09.00

Optimal capital structure is the point where the average cost of capital is the least. In this case 8.80, i.e., 80:20 debt-equity.

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b. Average cost of capital with bankruptcy and agency costs:

Debt Total assets	Equity Total assets	Interest Pre-tax %	Interest Post-tax %	Cost of equity with bankruptcy and agency costs %	Average cost of capital
0	1	–	–	12.5	12.50
0.1	0.9	11	5.5	12.5	11.80
0.2	0.8	11	5.5	13	11.50
0.3	0.7	11.5	5.75	13.5	11.18
0.4	0.6	12	6	14	10.80
0.5	0.5	12.5	6.25	14.5	10.38
0.6	0.4	13	6.5	14.5	9.70
0.7	0.3	13	6.5	15	9.05
0.8	0.2	14	7	18.5	9.30
0.9	0.1	16	8	20	9.20

Optimal capital structure is 70% debt; 30% equity.

47.

	(Rs.)
i. EBIT	6,00,000
Less: Interest @ 10%	80,000
Earnings available for equity sharehodlers	5,20,000
Equity capitalization rate 16%	
Market value of equity	32,50,000
Market value of debt	8,00,000
Total value of the firm	40,50,000
ii. Overall capitalization rate $\frac{EBIT}{V}$	14.81%
B/V	19.75%
B/S	24.62%

iii. In case the firm raises additional 4,00,000 debt to retire that amount of equity.

	(Rs.)
EBIT	6,00,000
Less: Interest @ 12.5% on 12,00,000	1,50,000
Earnings available to equity shareholders	450,000
Equity capitalization rate	18.5%
Market value of equity	2,432,432
Market value of debt	12,00,000
Value of firm	36,32,432

As the value of the firm decreases, hence the move is not advisable.

48. a. Value of the firm when no debt is employed

	(Rs. in lakh)
EBIT	60
Interest	–
PBT	60
Tax 50%	30
PAT	30
Required rate of return on equity	0.2
Value of the firm	150

Value with Rs.80 lakh debt

Value of the firm = Value of unlevered + Value of tax shield

= 150 + 0.5 (80) = 150 + 40 = Rs.190 lakh

Value with Rs.120 lakh debt = 150 + 0.5 (120) = 150 + 60 = Rs.210 lakh

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b. Value when taxes (both personal and corporate) exist:

Value of unlevered firm = Rs.150 lakh

Value with Rs.80 lakh debt

$$= \text{Value of unlevered firm} + \left[\frac{(1-t_c)(1-t_{ps})}{1-t_{pd}}\right]B$$

B Market value of the firms debt

Where,

t_c = Corporate tax rate

t_{ps} = Personal income tax applicable to common stock income

t_{pd} = Personal tax rate applicable to debt income

B = Market value of the firms debt

$$= 150 + \left[1 - \frac{(1-0.5)(1-0.22)}{1-0.28}\right]80$$

$$= 150 + \left[1 - \frac{(0.5)(0-0.78)}{0.72}\right]80$$

$$= 150 + [1 - 0.541]\ 80$$

= Rs.186.72 lakh

with Rs.120 lakh debt:

$$= 150 + \left[1 - \frac{(1-t_c)(1-t_{ps})}{(1-t_{pd})}\right]B$$

$$= 150 + \left[1 - \frac{0.5 \times 0.78}{0.72}\right]120$$

= 150 + 55.08 = Rs.205.08 lakh.

49.

(Rs. in lakh)

Level of debt	Value of firm (Unlevered)	PV of tax shield	PV of Bankruptcy agency and increased interest cost	Value of firm
1	2	3 (1 x 0.18)	4	5 (2 + 3 – 4)
0	125	0	0	125.0
45	125	8.1	0	133.1
90	125	16.2	5	136.2
135	125	24.3	10	139.3
180	125	32.4	18	139.4
225	125	40.5	30	135.5
270	125	48.6	45	128.6

The market value of the firm is maximized with Rs.180 lakh debt.

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50. Earnings per share under alternative financing plans

	Equity Financing		Debt Financing	
EBIT	20,00,000	30,00,000	20,00,000	30,00,000
Interest	–	–	7,25,000	7,25,000
Profit before tax	20,00,000	30,00,000	12,75,000	22,75,000
Taxes	8,00,000	12,00,000	5,10,000	9,10,000
Profit after taxes	12,00,000	18,00,000	7,65,000	13,65,000
No. of equity shares	20,00,000	20,00,000	15,00,000	15,00,000
EPS	0.6	0.9	0.51	0.91

Break even EBIT level

$$\frac{(EBIT - I_1)(1-t)}{n_1} = \frac{(EBIT - I_2)(1-t)}{n_2}$$

$$\frac{(EBIT - 0)(0.6)}{20,00,000} = \frac{(EBIT - 7,25,000)(0.6)}{15,00,000}$$

(0.6 EBIT) (15,00,000) = (0.6 EBIT – 4,35,000) x 20,00,000

9,00,000 EBIT = 12,00,000 EBIT– (4,35,000 x 20,00,000)

→ 4,35,000 x 20,00,000 = 3,00,000 EBIT

$$EBIT = \frac{4,35,000 \times 20,00,000}{3,00,000} = 2.9 \text{ million.}$$

51. a.

	Equity Financing	Debt Financing
EBIT	64,00,000	64,00,000
Interest	—	14,00,000
PBT	64,00,000	50,00,000
Tax @ 50%	32,00,000	25,00,000
PAT	32,00,000	25,00,000
Preference dividends	4,80,000	4,80,000
Earnings for equity shareholders	27,20,000	20,20,000
No. of equity shares	20,00,000	10,00,000
EPS	1.36	2.02

EPS – EBIT indifference point

$$\frac{(EBIT - I_1)(1-t) - D_P}{n_1} = \frac{(EBIT - I_2)(1-t) - D_P}{n_2}$$

$$\frac{(EBIT - 0)(0.5) - 4.8}{20} = \frac{(EBIT - 14)(0.5) - 4.8}{10}$$

$$\frac{0.5\ EBIT - 4.8}{20} = \frac{0.5\ EBIT - 11.8}{10}$$

(0.5 EBIT – 4.8) (10) = (0.5 EBIT – 11.8) (20)

5 EBIT – 48 = 10 EBIT – 236

5 EBIT = 188

EBIT = 37.6 lakh or 3.76 million

b. Of the two alternatives, the firms EPS is maximum when debt financing is used.

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52. Indifference point for alternative 1 and 2

$$I_2 \ \frac{(EBIT - I_1)(1-t)}{n_1} = \frac{(EBIT - 0)(1-0.4) - 1,60,000}{11,00,000}$$

$$\frac{(EBIT - 0)(1-0.4)}{13,00,000} = \frac{(EBIT - 0)(1-0.4) - 1,60,000}{11,00,000}$$

$$\frac{(EBIT - 0)(0.6)}{13,00,000} = \frac{(EBIT - 0)(0.6) - 1,60,000}{11,00,000}$$

(0.6 EBIT) (11,00,000) = (0.6 EBIT – 1,60,000) (13,00,000)

6,60,000 EBIT = 7,80,000 EBIT – (1,60,000 x 13,00,000)

$$\Rightarrow \quad EBIT = \frac{1,60,000 \times 13,00,000}{1,20,000}$$

⇒ Break even EBIT =17,33,333

Indifference point for alternatives 2 and 3

$$\Rightarrow \frac{(EBIT - I_1)}{n_1} = \frac{(EBIT - I_2)(1-t) - D_P}{n_2}$$

⇒ (0.6 EBIT – 2,79,000) (11,00,000) = (0.6 EBIT – 1,60,000) 10,00,000

⇒ 6,60,000 EBIT – (2,79,000 x 11,00,000) = 6,00,000 EBIT – (1,60,000 x 10,00,000)

EBIT = 24,48,333

Indifference point for alternatives 1 and 3

$$\frac{(EBIT - I_1)(1-0.4)}{n_1} = \frac{(EBIT - I_2)(1-t)}{n_2}$$

$$\frac{(EBIT - 0)(1-0.4)}{13,00,000} = \frac{(EBIT - 4,65,000)(0.6)}{11,00,000}$$

⇒ (0.6 EBIT) (10,00,000) = (0.6 EBIT – 2,79,000) 13,00,000

⇒ 6,00,000 EBIT = 7,80,000 EBIT – (2,79,000 x 13,00,000)

1,80,000 EBIT = 2,79,000 x 13,00,000

$$EBIT = \frac{2,79,000 \times 13,00,000}{(1,80,000)} = Rs.\ 20,15,000$$

Calculation of EPS for different alternatives.

	Equity	Equity and preference shares	Equity and debt
EBIT	54,00,000	54,00,000	54,00,000
Less: Interest	–	–	4,65,000
PBT	54,00,000	54,00,000	49,35,000
Taxes 40%	21,60,000	21,60,000	19,74,000
PAT	32,40,000	32,40,000	29,61,000
Less: Preference dividends	–	1,60,000	–
Earnings for equity shareholders	32,40,000	30,80,000	29,61,000
No. of equity shares	13,00,000	11,00,000	10,00,000
EPS	2.49	2.80	2.961

EPS is maximum under the 3rd alternative.

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53.

	Day Ltd.			Night Ltd.		
ROI	10%	15%	20%	10%	15%	20%
EBIT	20	30	40	20	30	40
Interest	0	0	0	15	15	15
Profit before tax	20	30	40	5	15	25
Tax	10	15	20	2.5	7.5	12.5
PAT	10	15	20	2.5	7.5	12.5
ROI	10%	15%	20%	10%	15%	20%
ROE	5%	7.5%	10%	2.5%	7.5%	12.5%

- ROE for Day Ltd. is higher than that of Night Ltd. when ROI of Day Ltd. is less than the cost of debt.
- ROE for both the firms is the same when the ROI is equal to the cost of debt.
- ROE for Night Ltd. is higher than that of Day Ltd. when ROI is greater than the cost of debt.

54. ROE = [ROI + (ROI – r) D/E] (1 – t)

Where,

ROE = return on equity

ROI = return on investment

R = cost of debt

D/E = debt-equity ratio

t = tax rate

Substituting the values given in the problem

0.165 = [0.15 + (0.15 – 0.10) D/E] (0.6)

= [0.15 + (0.05) D/E]

0.275 = 0.15 + 0.05 D/E

0.275 – 0.15 = 0.05 D/E

= 0.125 = 0.05 D/E

$$D/E = \left(\frac{0.125}{0.05}\right) = 2.5$$

55. ROE = [ROI + (ROI – r) D/E] (1 – t)

ROE = [0.11 + (0.11 – 0.08) 0.7] (1 – 0.4)

= (0.11 + 0.03 x 0.7) (0.6)

= (0.11 + 0.021) (0.6)

= 0.131 x 0.6 = 0.0786

= 7.86%

56. $$\text{Interest coverage ratio} = \frac{\text{Earnings before interest and taxes}}{\text{Interest on debt}} = \frac{\text{Rs.125 lakh}}{\text{Rs.25 lakh}} = 5$$

$$\text{Cash flow coverage ratio} = \frac{\text{EBIT + depreciation + other non-cash charges}}{\text{Interest on debt} + \dfrac{\text{Loan repayment installment}}{(1 - \text{tax rate})}}$$

$$= \frac{125 + 20}{25 + \dfrac{17.5}{0.6}} = \frac{145}{54.167} = 2.67$$

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57. $DSCR = \sum_{i}^{n} \frac{PAT_i + DEO_i + INT_i}{INT_i + LRI_i} / n$

Where,

PAT_i = Profit after tax for year i

DEP_i = Depreciation for year i

INT_i = Interest on long-term loan for year i

LRI_i = Loan repayment installment for year i

n = Period of the loan

$$DSCR = \frac{2.08 + 2.40 + 1.53 + 1.84 + 2.03}{5}$$

$$= \frac{9.87}{5} = 1.97.$$

58. Since the cash inflow is normally distributed the following variable has a standard normal distribution (Z-distribution).

$$\frac{\text{Cash inflow} - \text{Mean value of cash inflow}}{\text{Standard devaluation of cash inflow}}$$

The Z value corresponding to 5% cumulative probability (which reflects the risk tolerance of the management) is –1.645.

Since υ = 70 million and σ = Rs.40 million and the Z value corresponding to the risk tolerance limit is – 1.645, the cash available from the operations of the firm to service the debt is equal to $\frac{X - 70}{40} = -1.645$

X = Rs.4.2 million.

Total cash available for servicing the debt will be equal to

4.2 million (cash from operations)

+ 2.2 million (initial cash balance)

6.4 million

The level of debt that can be serviced with 6.4 million is as follows.

Amount Rs.	Annual fixed charges	
30 million	30 x 12%	= 3.6 million
22.4 million	22.4 x 12.5%	= 2.8 million
52.4 million		= 6.4 million

59. Indifference point for the two alternatives is given by the formula

$$\frac{(EBIT - I)(1 - t)}{n_1} = \frac{(EBIT - I)(1 - t)}{n_2}$$

$$\frac{(EBIT - I)(0.6)}{25,00,000} = \frac{(EBIT - 10,50,000)(0.6)}{20,00,000}$$

0.6 EBIT x 20,00,000 = (0.6 EBIT – 6,30,000)= 25,00,000

$\Rightarrow$ 12,00,000 EBIT = 15,00,000 EBIT – (6,30,000 x 25,00,000)

$$EBIT = \frac{6,30,000 \text{ x } 25,00,000}{3,00,000}$$

EBIT = 52,50,000

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EPS under the debt alternative will be higher if EBIT under debt alternative is more than 52.5 lakh.

Profitability of the debt alternative being better $Z = \frac{x - \mu}{\sigma}$

$$= \frac{52,50,000 - 1,00,00,000}{40,00,000}$$

= –1.18 rounded off to –1.20

Probability = 0.3849 + 0.5 = 0.8849

Probability that EPS under debt alternative will be greater is 88.49%.

60. a. Cash inadequacy during a recessionary year will arise if the net cash flow without reckoning interest on new debt (NCF hereafter) is less than the post-tax interest burden. Given that the entire outlay of Rs.50 crore is raised by way of debt capital and assuming that the corporate tax rate is 40% there will be a cash inadequacy in a recessionary year 't' if NCFt < Rs.4.20 crore.

Assuming uniform annual net cash flows during the recessionary years the probability of cash inadequacy in any given recessionary year can be expressed as prob. (NCF < 4.2). If we also assume that the probability distribution of net cash flows during any given recessionary year as normal with

μ = 14 and = 4 then probability (NCF < 4.2)

can be determined as follows. $Z = \frac{4.2 - 14}{4} = 2.45$

Corresponding probability from the table = 0.5 – 0.49829 = 0.71%

so there is a 0.71% chance of cash inadequacy during a recessionary year.

b. The management of the company does not want the likelihood of cash insolvency to exceed 5%. The Z value corresponding to 5% cumulative probability is – 1.645.

$$\frac{X - 14}{4} = -1.645$$

X = (4 x –1.645) + 14

= Rs.7.42 crore

Pre-tax burden = Rs.12.37 crore

Desired level of perpetual debt

$$= \frac{12.37}{0.14} = \text{Rs.88.33 crore.}$$

61. a. The values of the firms Alpha and Beta can be calculated as follows:

$$\text{Value of Alpha} = \frac{\text{Operating income}}{\text{Overall capitalization rate}} = \frac{400}{0.10} = \text{Rs.4,000 lakh.}$$

$$\text{Value of Beta} = \frac{400}{0.08} = \text{Rs. 5,000 lakh.}$$

As the levered firm, Beta has a higher value, Ramesh should sell his stake in Beta, borrow money at 5% on his personal account and invests the entire amount in the equity of Alpha. The amount of borrowed funds as a ratio to the own funds of Ramesh should be the same as the debt-equity ratio of Beta.

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b. Total value of Beta = Rs.5,000

Value of debt $= \frac{100}{0.05}$ = Rs.2,000 lakh

Value of equity = 5000 – 2000 = Rs.3,000 lakh

Stake of Ramesh = 3000 x 0.10 = Rs.300 lakh

Amount to be borrowed $= \frac{2000}{3000} \times 300$ = Rs.200 lakh

Total investment in Alpha = 300 + 200 = Rs.500 lakh

Income from stake in Beta at present = Net income x stake %

$= 300 \times \frac{300}{3,000}$ = Rs.30 lakh

Income from Alpha $= 400 \times \frac{500}{4,000}$ = Rs.50 lakh

Additional income = 50 – 30 = Rs.20 lakh

Amount borrowed = Rs.200 lakh

Maximum rate of interest $= \frac{20}{200}$ = 10%

62. Number of shares after bonus issue

$= 10 \text{ lakh} + \frac{500}{10} \text{ lakh} = 60 \text{ lakh}$

Number of shares after stock split

= 60 x 5 = 300 lakh

The expression for EPS, if funds are raised through equity is as follows:

$$= \frac{(\text{Total EBIT} - \text{Interest on existing debt})(1 - \text{tax rate})}{\text{Total number of shares}}$$

$$= \frac{(\text{Total EBIT} - 24)(1 - 0.30)}{300 + \frac{500}{2}}$$

$$= \frac{\text{Total EBIT} - 0.70 \;\; - 16.80}{550}$$

The expression for EPS will be as follows, if funds are raised through debt:

$$= (\text{Total EBIT} - 24 - 70)\ \frac{(1 - 0.30)}{300}$$

$$= \frac{\text{Total EBIT} \times 0.70 - 65.80}{300}$$

The EBIT – EPS indifference point can be calculated by equating the two:

$$= \frac{\text{Total EBIT} \times 0.70 - 16.80}{550}$$

$$= \frac{\text{Total EBIT} \times 0.70 - 65.80}{300}$$

210 x Total EBIT – 5,040 = 385 x Total EBIT – 36,190

(385 – 210) Total EBIT = 36,190 – 5,040

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Total EBIT = Rs.178 lakh.

The minimum level of EBIT that is expected (given indifference EBIT and) at which debt is better than equity by 95% can be found out as follows:

$$\frac{X - \mu}{\sigma} = Z$$

i.e. $$\frac{EBIT^* - EBIT\text{ (expected)}}{\sigma EBIT} = Z$$

$$\frac{1.78 - EBIT\text{ (expected)}}{1.8} = -1.65$$

(Z value found out from the normal distribution table)

EBIT (expected) = 2.97 + 1.78 = Rs.4.75 cr.

63. a. The investor holds 10% of X. He may sell his holding for Rs.200 lakh and invest in the equity and debt of Y.

Market value of Y = Equity + Debt = 1,000 + 400 = Rs.1,400 lakh

Investment in equity of Y = $\frac{1,000}{1,400}$ x 200 = Rs.143 lakh

Income for the investor from X = 100 x 0.10 = Rs.10 lakh

Income for the investor from Y = $(100 - 20) \text{ x } \frac{143}{1,000} + 20 \text{ x } \frac{57}{400}$

= 11.44 + 2.85 = Rs.14.29 lakh

As the income from Y is higher, the arbitrage is profitable.

b. The market value of Y = Rs.2,000 lakh

Market value of equity of Y = 2,000 – 400 = Rs.1,600 lakh

The investor holds 10% of equity of Y. He may sell it for Rs.160 lakh. He borrows Rs.40 lakh

@ of 5% (i.e., $\frac{20}{400}$ x 100) and invests Rs.200 lakh in the equity of X.

His income from Y = (100 – 20) x 0.10 = Rs.8 lakh

His income from X = 100 x $\frac{200}{1,000}$ = Rs.18 lakh

As income from X is higher, the arbitrage is profitable.

64. The indifference point for raising funds through debt or equity (in terms of EPS) can be calculated as follows:

$$= \frac{[EBIT - (50 \text{ x } 0.40)]\,(1 - 0.30)}{10 + (100 \div 25)}$$

$$= \frac{[EBIT - (50 \text{ x } 0.14)] - (100 \text{ x } 0.15)](1 - 0.30)}{10}$$

$$\frac{(EBIT - 7)\,(0.70)}{14} = \frac{(EBIT - 7 - 15)\,(0.70)}{10}$$

$$\frac{0.70\ EBIT - 4.9}{14} = \frac{0.70\ EBIT - 15.4}{10}$$

7 EBIT – 49 = 9.80 EBIT – 215.6

2.80 EBIT = 215.6 – 49 = 166.6

EBIT = Rs.59.5 lakh

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Assuming that the EBIT before raising funds is Rs.25 lakh, the probability that equity will be better than debt can be calculated as follows.

Total expected earnings = 50 + 25 = Rs.75 lakh

$$Z = \frac{59.5 - 75}{10} = -1.55 \quad = -1.55$$

Probability corresponding to –1.55 is (0.5000 – 0.4394) or 6.06%

65. Equity raised $= \frac{1,05,26315}{0.95} = 1,05,26,315$

Number of shares $= \frac{1,05,26,315}{18} = 5,84,796$

Amount of debt raised $= \frac{1,00,00,000}{0.96}$

$= 1,04,16,66$

Indifference EBIT is the value of EBIT in the following equation

$$\frac{(\text{EBIT} - 0) \times 0.65}{10,00,000 + 5,84,796} = \frac{(\text{EBIT} - 1,04,16,666 \times 0.13) \times 0.65}{10,00,000}$$

$$\frac{0.65\ \text{EBIT}}{15,84,796} = \frac{(\text{EBIT} - 1,04,16,666 \times 0.13) \times 0.65}{10,00,000}$$

6,50,000 EBIT = 10,30,117 EBIT – 1.39495 x 1012

$$\text{EBIT} = \frac{1.39495 \times 10^{12}}{3,80,117} = 36,69,791$$

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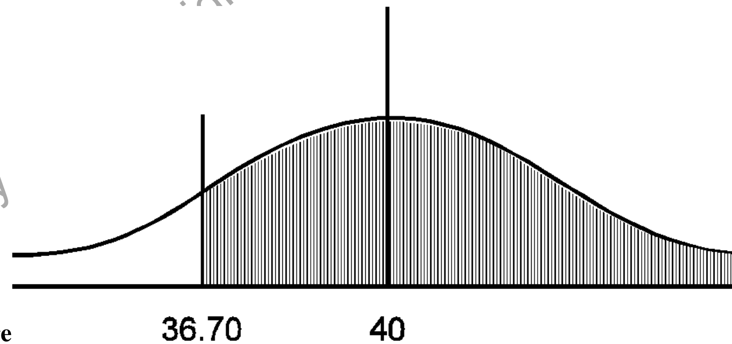
As the expected EBIT is more than the indifference EBIT, debt financing alternative is better. The probability of EBIT being more than Rs.36.70 lakh can be found out as follows:



Figure

Z value $= \frac{x - \mu}{0.96}$, where x = 36.7, μ = Expected EBIT = 40, = $\sigma = \sigma$EBIT = 4

$$Z = \frac{36.70 - 40}{4} = -0.825$$

P (36.70 ≤ EBIT ≤ 40) = 0.29%.

Therefore, the probability of EBIT being more than Rs.36.70 lakh = 0.5 + 0.29 = 0.79, i.e., 79%

Hence, there is a 79% probability that the EPS for the debt financing alternative will be higher than the EPS for the equity financing alternative. Since this exceeds 60%, the debt financing alternative may be chosen.

66. a. Because the firms are identical except for capital structure, in the absence of taxes and other market imperfections, the total value of both the companies would be the same. Thus Beta's stock is worth 500 – 400 or Rs.100.

b. By investing Rs.20 in Alpha's equity, you own 4% of Alpha's equity which entitles you to Rs.6 (150 x 0.04) in a boom and Rs.2 (50 x 0.04) in a slump. The equivalent investment in Beta would be to purchase 4% of Beta's outstanding stock (100 x 0.04) = Rs.4 and to invest Rs.16 at the risk-free rate of 10%. The total investment remains the same. Pay offs are also the same as shown below:

Boom = 0.04 (150 – 40) + (16 x 0.10) = Rs.6

Slump = 0.04 (50 – 40) + 1.6 = Rs.2

c. If you own Rs.20 lakh of Beta's equity you own 20%

Pay offs : Boom = 0.2 (150 – 40) = Rs.22

Slump = 0.2 (50 – 40) = Rs.2

The equivalent investment strategy would be to borrow Rs.80 lakh at 10% and invest Rs.80 lakh + Rs.20 lakh (own) to purchase 20% of Alpha's shares (Rs.100) and to borrow Rs.80 at 10%. The total investment is the same 100 – 80 = 20.

Pay offs : Boom = 0.2 (150) – 0.1 (80) = Rs.22

Slump = 0.2 (50) – 0.1 (80) = Rs.2

67. a.

(Rs. in lakh)

EBIT		54.00
Less: Interest on debenture	1.80	
Interest on term loan	2.40	4.20
		49.80
Tax @ 30%		14.94
PAT		34.86
No. of equity shares outstanding		10 lakh
EPS		3.49
Market price of shares		17
P/E ratio		4.87
Present capital structure		
Equity share capital (10 x 10)		100
Reserves and surplus		35
9% Debenture (Rs.1.8 0.09)		20
12% Term loan (Rs.2.4 0.12)		20
Total capital employed		175
ROCE = $\frac{\text{Rs.54.00}}{\text{Rs.175.00}}$		30.86%
Revised capital structure		
Existing capital		175
(–) Debenture redeemed		20
		155
(+) Additional capital to be raised		65
Total capital employed		220

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(Rs. in lakh)

	Plan I	Plan II
EBIT (33.36% of capital employed) (30.86 + 2.5 = 33.36)	73.39	73.39
(–) Interest on term loan @ 12%	2.40	2.40
(–) Interest on additional term loan @ 13%	8.45	4.55
EBT	62.54	66.44
(–) Tax @ 30%	18.76	19.93
PAT	43.78	46.51
No. of equity shares	10 lakh	12 lakh
EPS	4.38	3.87
Expected P/E ratio	4.38	4.87
Expected market price per share	19.18	18.90

b. Total interest payment under

Plan I = 2.40 + 8.45

= Rs.10.85 lakh

∴ Financial break even point under

Plan I = Rs.10.85 lakh

Total interest payment under

Plan II = 2.40 + 4.55

= Rs.6.95 lakh

∴ Financial break even point under

Plan II = Rs.6.95 lakh

c. $$\frac{(EBIT - I_1)(1-T)}{N_1} = \frac{(EBIT - I_2)(1-T)}{N_2}$$

or, $$\frac{(EBIT - 10.85)(0.70)}{10} = \frac{(EBIT - 6.95)(0.70)}{12}$$

or, 12 x EBIT – 130.20

= 10 x EBIT – 69.50

or, EBIT = $\frac{60.70}{2}$ = Rs.30.35 lakh

68. Expected EBIT for plan I and II = (250 x 0.1) + (450 x 0.30) + (540 x 0.5) + (630 x 0.1) = Rs.493 lakh

σ EBIT for Plan I and II

$= \{(250-493)^2 \times 0.10 + (450-493)^2 \times 0.3 + (540-493)^2 \times 0.5 + (630-493)^2 \times 0.1\}^{1/2}$

$= \sqrt{9,411}$ = Rs.97.16 lakh

Plan I – Issue of 15% debentures

EBIT	250.00	450.00	540.00	630.00
Less: Interest	65.00	65.00	65.00	65.00
PBT	185.00	385.00	475.00	565.00
Tax @ 35%	64.75	134.75	166.25	197.75
PAT	120.25	250.25	308.75	367.25
No. of Shares	50.00	50.00	50.00	50.00
EPS	2.41	5.01	6.18	7.35

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Expected EPS = $2.41 \times 0.10 + 5.01 \times 0.30 + 6.18 \times 0.50 + 7.35 \times 0.10$ = Rs.5.57

σ (EPS) = $[(2.41 - 5.57)^2 \times 0.10 + (5.01 - 5.57)^2 \times 0.30 + (6.18 - 5.57)^2 \times 0.50 + (7.35 - 5.57)^2 \times 0.10]^{1/2}$

= $[0.9986 + 0.09401 + 0.1861 + 0.3168]^{1/2}$

= $(1.5955)^{1/2}$ = Rs.1.263

Coefficient of variation = $\frac{1.263}{5.57} = 0.227$

Plan II – Issue of Shares

EBIT	250.00	450.00	540.00	630.00
Less: Interest	50.00	50.00	50.00	50.00
PBT	200.00	400.00	490.00	580.00
Tax @ 35%	70.00	140.00	171.50	203.00
PAT	130.00	260.00	318.50	377.00
No. of shares	60.00	60.00	60.00	60.00
EPS	2.17	4.33	5.31	6.28

Expected EPS = Rs.4.80

σ (EPS) = $\sqrt{1.1071}$ = Rs.1.05

Coefficient of variation = $\frac{1.05}{4.80} = 0.22$

As the coefficient of variation is a little lower in case of issue of shares, it is preferable.

EBIT Indifference Point

$$\frac{(\text{EBIT}^* - I_1)(1 - t)}{n_1} = \frac{(\text{EBIT}^* - I_2)(1 - t)}{n_2}$$

$$= \frac{(\text{EBIT}^* - 65)(0.65)}{50} = \frac{(\text{EBIT}^* - 50)(0.65)}{60}$$

EBIT indifference point = Rs.140 lakh

The EBIT indifference point of Rs.140 lakh means that if EBIT is below Rs.140 lakh equity financing is preferable to debenture financing.

69. a. Value of Black = $\frac{0(1 - t)}{k}$

$= \frac{40,000 \times 0.6}{0.10}$

= Rs.2,40,000

Value of white = $\frac{0(1 - t)}{k} + t \times B$

$= \frac{40,000 \times 0.6}{0.10} + 0.40 \times 2,00,000$

= 2,40,000 + 80,000

= Rs.3,20,000

b. Current market value of white

= 1,60,000 + 2,00,000 = Rs.3,60,000

∴ White is overvalued by Rs.40,000 according to Modigliani–Miller position.

Assume an investor holds 10% of White's shares. His investment is equal to Rs.16,000 and his returns are [(40,000 – 10,000)(1 – 0.4)] x 0.10 = Rs.1,800

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The investor can get the same income by shifting his investment to Black Co.

Sell White's stock for = Rs.16,000

Borrow $\left(16,000 \times \frac{2,00,000}{2,40,000}\right)$ @ 5%

= Rs.13,300

= Rs.29,300

Buy 10% of Black's share at Rs.24,000 and have Rs.5,300 to invest in risk-free securities. His net return would be

40,000 x 0.60 x 0.10 = Rs.2,400

Less: Interest (13,300 x 0.05) = Rs. 665

Rs.1,735

Alternatively, he can invest Rs.29,300 in Black's share

Return = 40,000 x 0.60 x

= Rs.2,930

Less: Interest = Rs. 665

Rs.2,265

Arbitrage profit = 2,265 – 1,800 = Rs.465

The arbitrage process will continue till the value of both the firms are the same.

Assumptions to be made:

i. The total market value of a firm is equal to its expected operating income divided by the discount rate appropriate to its risk class.

ii. The expected yield on equity is equal to discount rate appropriate to its risk class plus a premium. This premium is equal to the debt-equity ratio times the difference between discount rate and yield on debt.

iii. The cut-off rate for investment decision-making for a firm is not affected by the manner in which investment is financed.

70. a. Conversion Value

= Conversion ratio x Price per share

= 4 x 22 = Rs.88

b. Conversion premium = $\frac{100}{88} - 1 = 13.63\%$

c. Before conversion (without dilution)

PAT = 5 x 50,00,000		2,50,00,000
Less:	Preference dividend (15%)	75,00,000
	Equity earnings	1,75,00,000
	Number of shares	50,00,000
	EPS	Rs.3.50

After conversion (with full dilution)

PAT	2,50,00,000
No. of shares	70,00,000
EPS	3.57

d. Without dilution – Rs.5.50

With dilution – Rs.5.00

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e. The existing shareholders will be harmed by the issue of convertibles. Because the stock is undervalued, the conversion provision will be worth more than what the convertible holders have paid for it. The new convertible holders will however gain less than what new shareholders would have gained had the company issued additional equity. This can be seen by considering the convertible as the stock plus the put option. In general, if the stock is truly underpriced, the existing shareholders are better off by issuing the debt as this prevents the holders of the equity from sharing the rewards of the stock value increase when the underpricing becomes known in the market and the market reacts.

71. a. **NI Approach**

	Delta	Gamma
NOI (15 x 0.2)	3,00,000	3,00,000
Interest on debt	90,000	–
PBT	2,10,000	3,00,000
Tax (50%)	1,05,000	1,50,000
Equity earnings	1,05,000	1,50,000
k_e	15%	15%
Market value of equity	7,00,000	10,00,000
Market value of debt	9,00,000	–
Total value of firm	16,00,000	10,00,000

MM Approach

$$V = \frac{0\,(1-t_c)}{k} + t_c\,B$$

Where,

0 = EBIT

t_c = Tax rate

k = Overall capitalization rate

B = Market value of debt

$$\text{Value of unlevered firm} = \frac{0\,(1-t_c)}{k}$$

$$\therefore \text{Value of Gamma} = \frac{3,00,000\,(0.5)}{0.15}$$

= 10,00,000 Value of levered firm

= Value of unlevered + t_c x B

∴ Value of delta = 10,00,000 + 0.5 x 9,00,000

= Rs.14,50,000

b. $$k_0 = k_d\left[\frac{B}{B+S}\right] + k_e\left[\frac{S}{B+S}\right]$$

Delta

k_d = 10(1 – 0.5) = 5%

$$k_e = \frac{\text{Equity Earnings}}{\text{Market Value of Equity}}$$

EBIT	3,00,000
Less: Interest	90,000
	2,10,000
Less: Taxes	1,05,000
Equity earnings	1,05,000

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Total MV of firm = 14,50,000

MV of debt = 9,00,000

$\therefore$ MV of equity = 5,50,000

$\therefore k_e = \frac{1,05,000}{5,50,000} = 19.1\%$

$k_o = 5$

$$k_0 = 5\left[\frac{9,00,000}{14,50,000}\right] + 19.1\left[\frac{5,50,000}{14,50,000}\right]$$

$= 10.34\%$

Gamma

k_0 for gamma is $k_e = 15\%$.

c. Since the value of levered firm (VL): Value of unlevered firm (V_u) + Gain from leverage (t_c B) as agreed by MM also, this implies that the optimal strategy of a firm should be to maximize leverage in its capital structure, i.e., a 100% debt. That way both these firms do not have an optimal capital structure. But Merton Miller went on to say that financial leverage does not matter even in a world where both corporate and personal taxes exist - which means there is nothing like an optimal capital structure for any single firm in the economy.

72. No. of shares = 10 million, Price per share = Rs.6

a. No. of new shares issued $= \frac{10}{4} = 2.5$ million

$\therefore$ Money raised = 5 x 2.5 = 12.5 million = Rs.1.25 crore

b. Four rights

c. Value of right $= \frac{(6-5)}{4}$ = Rs.0.25

d. Ex. rights price $= \frac{12.5 + 60}{10 + 2.5}$ = Rs.5.8

e. The price has to fall to Rs.5 per share to make the rights issue an attractive. $\therefore$ The value should fall to 5 x 10 = 50 million i.e. by Rs.10 million.

f. The rights price does not affect the shareholder's wealth therefore shareholders will be as well of if shares are issued at Rs.4.

73. a. (Except ratios, all figures in Rs. lakh)

	1996	1997	1998
Sales	6,256.18	6,409.43	6,516.00
Current Assets	4,527.31	3,451.25	3,420.14
Fixed Assets	5,393.56	5,526.40	6,300.04
Total Debt	3,842.07	4,082.65	4,579.14
PBT	0566.22	542.21	363.33
Tax Rate (%)	43.00	73.75	41.25
PAT	322.74	142.33	213.45
Current Liabilities	1,625.31	1,665.92	1,715.87
Total Assets	9,920.87	8,977.65	9,720.18
Total Debt + Current Liabilities	5,467.38	5,748.37	6,295.01
Equity	4,453.49	3,229.28	3,425.17
PBT/Net Sales	0.091	0.084	0.056
Net Sales/TA	0.6306	0.7139	0.6703
TA/NW	2.227	2.780	2.838
PAT/PBT	0.57	0.26	0.587
ROE	0.0724	0.044	0.0623

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From the above analysis, it can be said that the profit margin of the company has been falling steadily. Though the total assets turnover ratio has increased in 1997, it has decreased in 1998. The ROE has fallen steeply in 1997. The main reason for this appears to be indicated by the PAT/PBT ratio. In the year, PAT has been just 26% of PBT, which means 74% of PBT has been consumed by taxes. The reason for such a sharp rise in tax payment is not apparent from the information given.

b.

	1996	1997	1998
PAT (Rs. lakh)	322.740	142.330	213.450
d	0.450	0.450	0.450
m	0.051	0.022	0.033
A/E	2.227	2.780	2.837
A/S	1.586	1.401	1.491

$$g96 = \frac{0.051\,(0.55)\,2.227}{1.586 - 0.051 \times 0.55 \times 2.27} = 0.0410$$

$$g97 = \frac{0.022\,(0.55)\,2.78}{1.491 - 0.022 \times 0.55 \times 2.27} = 0.0246$$

$$g98 = \frac{0.033\,(0.55)\,2.837}{1.491 - 0.033 \times 0.55 \times 2.78} = 0.0358$$

c. To know the impact we should calculate the working capital leverage

$$WC = \frac{CA}{TA - \Delta CA}$$

$$= \frac{3420.14}{9720.18 - (0.25 \times 3420.14)}$$

$$= 38.57$$

This means 25% reduction in CA will result in 38.57% change in ROI.

Dividend Policy

74.

(Rs. in lakh)

Year		1	2	3	4	5	Total
Net Profit		75	60	45	40	25	–
Capital Expenditure		40	45	55	47	50	–
a.	Residual	35	15	–	–	–	50
	External funds requirement	–	–	10	7	25	42
	Dividend	35	15	–	–	–	50
b.	Dividend	117	117	117	117	117	585
	External fundsrequired	82	102	127	124	142	577
c.	Dividend 50%	37.5	30	22.5	20	12.5	122.5
	External requirement	2.5	15	32.5	27	37.5	114.5
d.	Maximum dividend	585 lakh under policy B					
	Minimum external finance	42 lakh under policy A					

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75. a. Let 'n' shares be bought at price P so that the shareholders wealth is not affected.

$$\text{Current EPS} = \frac{65}{13} = 5 \text{ per share}$$

$$\text{Current P/E} = \frac{25}{5} = 5$$

$$\text{New EPS} = \frac{65}{(13-n)}$$

$$\text{New PE (as P/E is constant)} = \frac{P}{\left(\frac{65}{13-n}\right)} = \frac{P(13-n)}{65} = 5$$

$$(13 - n) \times P = 325$$

$$nP = 65 \times 0.4 = 26$$

$$n = \frac{26}{P}$$

$$(13 - 26/P)\,P = 325$$

$$\left(\frac{13P-26}{P}\right)P = 325$$

$$13P - 26 = 325$$

$$13P = 351$$

$$P = 27$$

b. $n = \frac{26}{P} = \frac{65}{12.04} = 0.9629$ lakh shares

i.e. 96,000 shares approximately

c. $\text{EPS} = \frac{65}{13-0.96} = \frac{65}{12.04} = 5.39$

Price = 5.39 x 5 = 26.99; i.e. 27

76. a.

Projected net income	=	Rs.25,00,000
Investments in new projects	=	10,00,000
Residual income	=	15,00,000

$$\therefore \text{DPS} = \frac{15,00,000}{2,50,000} = 6.0 \text{ per share}$$

b. $\text{Pay out ratio} = \frac{15,00,000}{25,00,000} = 60\%$

c. $P_1 = \frac{DPS}{k-g} = \frac{6.0}{0.16-0.04} = \text{Rs.}50.0$

The intrinsic value is much lower than the market price of Rs.140.

According to Graham and Dodd's model

$$P = m\left[\frac{4D}{3} + \frac{R}{3}\right]$$

Where,

P = Share price

m = Multiplier

D = Dividend per share

R = Retained earnings

$$\text{DPS} = \frac{25,00,000 \times 0.75}{2,25,000} = \text{Rs.}2.50$$

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Retained earnings per share $= \frac{25,00,000 \text{ x } 0.25}{2,50,000}$

$= \text{Rs.}7.50$

For the current price of Rs.140, the multiplier can be calculated as follows

$$140 = \left[\frac{4 \text{ x } 2.5}{3} + \frac{7.5}{3}\right] = \frac{17.5 \text{ m}}{3}$$

$$\text{m} = \frac{140 \text{ x } 3}{17.5} = 24;$$

The DPS and retained earnings per share for the next year also will remain the same, as the net income is expected to be maintained at Rs.25,00,000, the dividend payout ratio is to be maintained at the current level and the company is not raising any fresh capital; therefore, using a multiplier of 24, the share price should remain at Rs.140. But using the constant growth model, we obtained a price of Rs.50. Therefore, the price obtained is not in consonance with the model propounded by Graham and Dodd;

77. a. **Assumption:** The P/E of the stock remains the same under both the alternatives.

Alternative I

Pay Rs.400 thousand in the form of dividend

Number of shares $= \frac{1,700}{10} = \text{Rs.}170$ thousand

Dividend per share $= \frac{400}{170} = 2.35$ per share

As P/E is constant, the share price depends only on earning power of the company and suppose earnings are going to remain at Rs.2 per share, then the price will remain at Rs.20 per share.

Alternative II

Repurchase 400 thousand worth of shares

Number of shares

repurchased $= \frac{400}{20} = 20$ thousand shares.

Shares remaining $= 85 - 20 = 65$thousand shares

Changed EPS $= 2 \text{ x } \frac{85}{65} = 2.62$

Revised price $= 2.62 \text{ x } \frac{20}{2} = \text{Rs.}26.15$

b. Alternative II is better as the price of the share increases to Rs.26.15 from Rs.20.

78. The dividend per share is

Rs.5.45 x 0.6 = Rs.3.27

Based on the Graham Dodd model, the expected market price would be

$$\text{P} = \text{m (D + E/3)}$$

$$= 8(3.27 + \frac{5.45}{3}) = \text{Rs.}40.69 \text{ per share}$$

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79. The EPS of the company is

$$EPS = \frac{Dividend}{Pay\ out\ ratio} = \frac{Rs.5.00}{0.6} = Rs.8.33 \text{ per share}$$

According to the Walter model

$$P = \frac{D + (E - D) \times r/k}{k}$$

$$= \frac{5 + (3.33 - 5)\ 0.20/0.14}{0.14} = \frac{9.755}{0.14} = Rs.69.69 \text{ per share}$$

80. Expected EPS for 2000–01

= 4.50 x 1.20 = Rs.5.40 per share

Retention ratio of the firm

= 1 – Pay out ratio

= 1 – 0.8 = 0.20

According to the Gordon model, the expected value of the share is

$$P_0 = \frac{Y_0\ (1 - b)}{k - br}$$

$$= \frac{5.40\ (1 - 0.2)}{0.15 - (0.2 \times 0.18)}$$

$$= \frac{5.4 \times 0.8}{0.15 - 0.036} = \frac{4.32}{0.114}$$

= Rs.37.89

81. a.

Year	Income available for dividends	Dividends per share	External financing
1	15	0.5	0
2	15	0.5	0
3	20	0.67	0
4	10	0.33	0
5	0	0	3 lakh
	60 lakh		3 lakh

b.

(Rs. in lakh)

Year	Net Income	Dividends	Capital Expenditure	External Financing
	1	2	3	(2) + (3) – (1)
1	40	30	25	15
2	35	30	20	15
3	55	30	35	10
4	47	30	37	20
5	36	30	39	33
		150		93

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c.

Year	Net income	Dividends	Dividend per share	Capital expenditure	External financing
	1	2	3	4	2 + 4 – 1
1	40	20.0	0.67	25	5
2	35	17.5	0.58	20	2.5
3	55	27.5	0.917	35	7.5
4	47	23.5	0.780	37	13.5
5	36	18.0	0.600	39	21
		106.5			49.5

82. As per Walters model

$$P = \frac{D + (E - D)r / k}{k}$$

Where,

P = Price per equity share

D = Dividend per share

E = Earnings per share

(E – D) = Retained earnings per share

r = Internal rate of return on investments

k = Cost of capital

When pay out ratio is 75%

$$P = \frac{1.5 + (2 - 1.5)\frac{0.18}{0.16}}{0.16}$$

$$= \frac{1.5 + (0.5) \text{ x } 1.125}{0.16}$$

$$= \frac{1.5 + 0.5625}{0.16} = \text{Rs.}12.89$$

When pay out ratio is 100%

$$P = \frac{2 + (2 - 2)\frac{0.18}{0.16}}{0.16}$$

$$= \frac{2}{0.16} = \text{Rs.}12.5$$

83. According to the Gordon Model

$$P_0 = \frac{Y_0 (1 - b)}{k - br}$$

Where,

P_0 = Price per share at the beginning of year 0.

Y_0 = Earnings per share at the end of year 0.

$(1 - b)$ = Fraction of earnings the firm distributes by way of dividends.

b = Fraction of earnings the firm ploughs back.

k = Rate of return required by shareholders.

r = Rate of return earned on investments made by the firm.

br = Growth rate of earnings and dividends.

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Substituting the value in the equation:

$$40 = \frac{4.00\,(1 - 0.75)}{0.15 - 0.75r}$$

$\Rightarrow$ 40(0.15) – 0.75r x 40 = 4.00 x 0.25

= 6 – 30r = 1

$\Rightarrow$ 30r = 5

$\Rightarrow$ r = 0.167

= 16.7%

The firm should earn a return of 16.7% on its investments.

84. Price of the share when dividend is declared

$$P_0 = \frac{1}{1-\rho}\,(D_1 + P_1)$$

$$125 = \frac{1}{1.12}\,(4 + P_1)$$

$\Rightarrow$ 140 = Rs.4 + P_1

$\Rightarrow$ P_1 = Rs.136

Price of the share when dividend is not declared

$$\Rightarrow 125 = \frac{1}{1.12}\,(4 + P_1)$$

P_1 = Rs.140

85. a. Price of the share when dividend is declared

$$P_0 = \frac{P_1 + D_1}{1 + \rho}$$

$$80 = \frac{P_1 + 4}{1.125}$$

P_1 = Rs.86

Price of the share when dividend is not declared

$$80 = \frac{P_1 + 0}{1.125}$$

P1 = Rs.90

b. Number of new shares to be issued

mP_1 = I – (X – nD_1)

= 21,00,000 – (15,00,000 – 4,00,000)

= 21,00,000 – (11,00,000)

= 10,00,000

$$= \frac{10,00,000}{86} = 11,628 \text{ shares}$$

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86. Given the planned capital expenditure and the target debt:equity ratio of 1:1, the retained earnings required to support the capital expenditures over the five year period will be

$$\frac{120+140+110+130\,160}{2} = 330$$

The expected net income over the 5-year period is

135 + 160 + 140 + 150 + 190 = 775

Hence, the total dividend to be paid over the 5-year period is

expected to be 775 – 330 = 445.

This means that the average dividend pay out ratio will be

$$= \frac{445}{775} = 0.57 \text{ or } 57\%$$

The expected dividend stream under the two approaches is as follows:

	1	2	3	4	5	Total
Net Income	135	160	140	150	190	775
Capital Expenditure	120	140	110	130	160	660
Equity Investment	60	70	55	65	80	330
Pure Residual Dividends	75	90	85	85	110	445
Fixed Dividend Pay out Ratio Dividends (Pay out Ratio 0.57)	76.95	91.2	79.8	85.5	108.3	441.75

87. Dividend per share as per the Lintner model is given by the formula.

Dt = (CrEPSt + (1 – LCC) Dt-1)

= 0.4 x 0.5 x 5 + (1 – 0.4) 2.50 = 2.5

88. a. Assuming that Ram Ltd. has a debt: equity ratio of 1:1. If the company follows a pure residual policy dividend per share over the 4-year period will be as follows:

DPS under the pure dividend residual policy

Year	1	2	3	4
Earnings	12,000	14,000	8,000	13,000
Capital Expenditure	8,000	7,000	11,000	9,000
Equity Investment	4,000	3,500	5,500	4,500
Pure Residual Dividends	8,000	10,500	2,500	8,500
Dividends per Share	1.14	1.5	0.35	1.21

b.

	Year	1	2	3	4
A.	Net Income	12,000	14,000	8,000	13,000
B.	Targeted DPS	1	1.1	1.1	1.21
C.	Total Dividends	7,000	7,700	7,700	8,470
D.	Retained Earnings (A – C)	5,000	6,300	300	4,530
E.	Capital Expenditures	8,000	7,000	11,000	9,000
F.	External Financing Requirement (E – D) if E > D or 0 otherwise	3,000	700	10,700	4,470

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c. Given that the company follows a constant 50% pay out ratio, the dividend per share and external financing requirement over the 4-year period is given below:

Dividend per share and external financing requirements

Rs.

Year		1	2	3	4
A.	Net income	12,000	14,000	8,000	13,000
B.	Dividends	6,000	7,000	4,000	6,500
C.	Retained earnings	6,000	7,000	4,000	6,500
D.	Capital expenditures	8,000	7,000	11,000	9,000
E.	External financing (D – C) if D > C or 0	2,000	Nil	7,000	2,500
F.	Dividends per share	0.85	1	0.57	0.92

89. Dividend per share as per Lintner model is given by the equation.

D_t = Cr. EPSt + (1 – c) Dt–1

Given EPSt = 2

Dt-1 = 0.75

r = 0.4

and c = 0.5

Dt = (0.5) (0.4) (2) + (1 – 0.5) 0.75

= 0.4 + 0.375 = 0.775

90. Computation of Maximum Permissble Bonus Ratio:

Computation of Eligible Reserves

Particulars		Rs.cr.
Share premium	1.25 – 0.4	0.85
General reserve		2.00
Contingency reserve		0.75
		3.60

Note: Rs.0.4 crore was accrued to the share premium account because of notional premium charged to the machinery supplier. As this premium amount was not collected in cash, the same is not included in the computation of eligible reserves.

Computation of number of shares entitled to receive bonus shares

Shares issued and paid-up	10,00,000
Shares arising out of conversion of 13% FCD	5,00,000
	15,00,000

Par value of each share = Rs.10

Number of shares that can be issued to capitalize the

eligible reserves of Rs.3.6 crore $= \frac{3,60,000}{10} = 36,00,000$

Hence, the maximum permissible bonus ratio as per current SEBI guidelines is 2.4:1.

91. a. $P_0 \frac{Y_0(1-b)}{k-br} = \frac{10 \text{ x } 1.3\,(1-0.40)}{0.20-(1-0.60) \text{ x } 0.25}$

$\frac{13 \text{ x } 0.60}{0.20-0.10} = \frac{7.8}{0.10} = \text{Rs.}78$

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b. Theoretically, there will not be any difference, as the two models are equivalent. The term 'br' in the denominator is the same as the growth rate of the company. Y0(1 – b) is the dividend expected at the end of one year. So both the models should yield the same result. However, in the given case, as the growth rate expected in EPS is different from the growth rate of the past (i.e. product of retention ratio and return on investments), both the models will yield different results. Moreover, in the given the case, growth rate is more than the cost of equity and hence value cannot be derived according to the dividend discount model.

92.

	Year	1	2	3	4	5	Total
	Net Profit	50	40	25	20	15	
	Capital Expenditure	20	25	32	40	50	
a.	Residual	30	15	–	–	–	45
	External fund requirement	–	–	7	20	35	62
	Dividend	30	15	–	–	–	45
b.	Dividend	50	50	50	50	50	250
	External fund requirement	20	35	57	70	85	267
c.	Dividend 50%	25	20	12.5	10	7.5	75
	External requirement	0	5	19.5	30	42.5	97
d.	Maximum Dividend : Rs.250 lakh, under policy (b)						
	Minimum External Finance: Rs.62 lakh, under policy (a)						

93. The company may go in for bonus issue. But, it has to meet two criteria.

i. The residual reserves after proposed capitalization shall be 40% of the increased paid-up capital.

or
$(155 - 150 \text{ x } b) \geq 0.4 \text{ x } 150\ (1 + b)$

$155 - 150b \geq 60 + 60b$

$95 \geq 210b$

$b < \frac{95}{210}$ or $b \leq 0.452$

0.452 x 150 = 67.8 lakh.

Surplus can only be capitalized.

$\therefore$ 1:5 bonus issue is in acceptable range.

ii. 30% of the average profits before tax for last 3 years should yield a rate of dividend on the expanded capital base at 10%.

or $0.3 \text{ x PBT} \geq 0.1\ S\ (1 + b)$

or $0.3 \text{ x } \frac{3}{1}\left[\frac{50.50}{1-0.4} + \frac{40}{1-0.4} + \frac{35}{1-0.4}\right] \geq 0.1 \text{ x } 150 \text{ x } 1.452$

or $20.91 \geq 21.78$ which is not true.

$\therefore$ Company cannot go in for a bonus issue in the ratio of 1 : 5.

Note: According to the current guidelines, there are no restrictions on the amount of free reserves that can be capitalized.

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94. a. Let n shares be bought at price p so that the shareholders' wealth is not affected.

Current EPS $= \frac{44}{11}$ = Rs. 4 per share

Current P/E $= \frac{20}{4} = 5$

New EPS $= \frac{44}{(11-n)}$

New P/E $= \frac{P}{44/(11-n)} = \frac{P(11-n)}{44}$

(as P/E is constant)

$(11 - n) \times P = 220$ ..... (1)

$np = 44 \times 0.5 = 22$ ..... (2)

(Value of shares repurchased)

From equation (2)

$n = 22/p$

From equation (1)

$(11 - 22/p)p = 220$

$\Rightarrow p$ = Rs.22

b. $n = 22/p = 22/22$ = 1 lakh shares

c. EPS $= \frac{44}{(11-1)} = 4.4$

Price = 4.4 x 5 = Rs.22

95. a. Projected net income = Rs.20,00,000

Investments in new projects = Rs.8,00,000

Residual income = 20,00,000 – 8,00,000 = Rs.12,00,000

$\therefore$ DPS $= \frac{12,00,000}{2,00,000}$

= Rs.6 per share

Note: The residual dividend policy requires that the dividend is distributed only after all capital investment expenditures are met from current earnings. Here since earnings exceed the investments, dividends can be paid at the rate of Rs.6 per share.

b. Pay-out ratio $= \frac{12,00,000}{2,00,000}$ = 60%

c. $P_1 = \frac{DPS}{2,00,000} = \frac{6}{0.14 - 0.05}$ = Rs.66.67

The intrinsic value is much lower than the market price of Rs.120.

According to Graham and Dodd's model,

$$P = m\left(\frac{4D}{3} + \frac{R}{3}\right)$$

Where,

P = Share price

m = Multiplier

D = Dividend per share

R = Retained earnings

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DPS $= \frac{20,00,000 \text{ x } 0.20}{2,00,000}$ = Rs.2.00

Retained earnings per share = $\frac{20,00,000 \text{ x } 0.80}{2,00,000}$ = Rs.8.00

For the current price of Rs.120, the multiplier can be calculated as follows:

$$120 = m \left(\frac{4x2}{3} + \frac{8}{3}\right) = m \text{ x } \frac{16}{3}$$

$$m = \frac{120 \text{ x } 2}{16} = 22.50$$

The DPS and retained earnings per share for the next year also will remain the same, as the net income is expected to be maintained at Rs.20,00,000, the dividend pay out ratio is to be maintained at the current level and the company is not raising any fresh capital. Therefore, using a multiplier of 22.50, the share price should remain at Rs.120. But, using the constant growth model, we obtained a price of Rs.66.67. Therefore, the price obtained is not in consonance with the model propounded by Graham and Dodd.

d. g = b x r = 0.8 x 0.075 = 0.06

$$\therefore p = \frac{2 \text{ x } 1.06}{0.14 - 0.06}$$

= Rs.26.5

Information Asymmetry and the Markets for Corporate Securities

96. a. NPV(A) = (0.5) × (Rs.120 million + Rs.60 million) - Rs.100 million = –Rs.10 million

NPV(B) = (0.5) × (Rs.101 million + Rs.101 million) - Rs.100 million = Rs.1 million

b. E[equity|A selected] = (0.5) × (Rs.120 million - Rs.100 million + Rs.0 million) = Rs.10 million

E[equity|B selected] = (0.5) × (Rs.101 million - Rs.100 million + Rs.101 million - Rs.100 million) = Rs.1 million

Equity holders prefer project A, a negative NPV project, because debt holders bear most of the downside risk while equity holders receive the upside gain. Thus, equity holders prefer the more risky project. This is an example of asset substitution.

97. a. All equity firm: (0.5)(Rs.210 + Rs.66)(2/3)(1/1.10) = Rs.83.64

b. Since the debt will be repaid in either state of the economy: D=Rs.44 (1/1.10) =Rs.40

c. $E = \frac{(0.5) \text{ x } [\$210(/3) - \$44(0.95)] + (0.5) \text{ x } [\$66(2/3) - \$44(0.05)]}{1.10}$

d. The firm would be worth (Rs.40 + Rs.45.64) = Rs.85.64, so that the debt increases the firm's value.

e. The firm would be bankrupt if the economy were bad, which would decrease firm value by Rs.20 in the badstate. This reduction more than offsets the tax saving. To see this:

$$D = \frac{(0.5) \text{ x } [\$70 + (2/3)(\$66 - \$20)]}{1.10} = \$45.76$$

$$E = \frac{(0.5) \text{ x } [\$210 + (2/3) - (\$70 - 0.95)]}{1.10} = \$33.41$$

Therefore, firm value = (Rs.45.76 +Rs.33.41) = Rs.79.17, which is less than the Rs.85.64 Value computed in part (d).

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98. a. The present values of the three alternatives are:

PV(liq) = Rs.120

PV(A) = (0.5) x (Rs.135+Rs.135) = Rs.135

PV(B) = (0.5) x (Rs.161+Rs.69) = Rs.115

Thus, project A has the highest present value.

b. Yes, Jack and Jill should agree to loan the firm Rs.20. If they do not make the loan, the firm is liquidated, and they receive nothing. If they make the loan of Rs.20, they will receive Rs.35 if the managers choose project A, and they will receive an expected [0.5 x (Rs.40 + Rs.20.5)] = Rs.30.25 if the managers choose project B. In either case, their Rs.20 investment to save the company from liquidation is a positive NPV investment for them.

c. The managers, acting in the interests of equity holders, will choose project B. If the firm Is liquidated, equity holders receive nothing. If project A is chosen, equity holders also receive nothing because all of the cash flows go to debt payments. If project B is chosen, however, equity holders have a 50% chance of receiving (161 - 100 - 40 - 20.5) > 0. Therefore, equity holders prefer the risky, lower NPV project.

99. a. NPV[Dress] = (0.3) × (Rs.2 million) + (0.7) × (Rs.9 million) – Rs.6 million = Rs.0.9 million

NPV[Cosmetic] = (0.3) × (Rs.7 million) + (0.7) × (Rs.6 million) – Rs.6 million = Rs.0.3 million

If HFC is all equity financed, then Project Dress is the better project because it has the Greater NPV.

b. If HFC has a Rs.5,000,000 bond obligation at the end of the year, then:

E[equity|Dress] = (0.3)(Rs.0 million) + (0.7)(Rs.9 million – Rs.5 million) – Rs.6 million + Rs.5

Million = Rs.1.8 million

E[equity| Cosmetic] = (0.3)(Rs.7 million – Rs.5 million) + (0.7)(Rs.6 million – Rs.5 million) – Rs.6 million + Rs.5 million = – Rs. 0.3 million

Therefore, from the stockholders perspective, even with the Rs.5 million bond obligation, The Project Dress has the higher value

100. NPV(equity) = [(0.9)(Rs.153,000) + (0.1)(Rs.61,000) – Rs.53,000](.9) – Rs.50,000 = Rs.31,720

NPV(debt) = [(0.9)(Rs.153,000 – Rs.53,000)](0.9) – Rs.50,000 = Rs.31,000

Sigma Design is lower with debt financing since the firm passes up the positive NPV project when the economy is unfavorable.

101. If the firm is all equity financed:

E[NPVA] = (0.5) × (Rs.120 + Rs.90) – Rs.100 = Rs.5

E[NPVB] = (0.5) × (Rs.140 + Rs.60) – Rs.100 = Rs.0

Thus, equity holders prefer project A with the higher expected NPV. If the firm has an Rs.85 bond obligation due next year:

E[NPVA] = (0.5) × (Rs.120 – Rs.85) + (0.5) × (Rs.90 – Rs.85) – Rs.15 = Rs.5.00

E[NPVB] = (0.5) × (Rs.140 – Rs.85) + (0.5) × (Rs.0) – Rs.15 = Rs.12.50

Thus, equity holders will prefer project B, the project with the lower expected NPV, since the bond holders bear the loss in the bad state.

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102. You need to distinguish between a positive NPV project for the firm and a positive NPV Project for equity holders. This risk-free project will reduce the value of Tailways equity since the firm can borrow at 12% while the project yields only 10%. But, debt holders will be better off since the risk-free project will reduce the overall riskiness of the firm's debt, increasing the value of that debt. Thus, the total value of the firm will increase. This must be the case since a riskless project yielding a return greater than the risk-free rate is an arbitrage opportunity, when combined with appropriately designed financing in the financial markets, and thus must create value for the firm.

103. Equity holders prefer risky projects since equity holders essentially own an option on the value of the firm s assets. In addition, equity holders are less likely to liquidate since this will effectively terminate the option, and they will attempt to keep the firm s operations going in order to maintain a positive probability of having a high payoff in the future. Debt holders, on the other hand, prefer safe projects, and are likely to liquidate the firm, especially if they will receive payment on most of their claims through the liquidation.

104. Debt holder-equity holder incentive problems are less severe for firms that borrow short-term because the value of short-term debt is much less sensitive to changes in a firm's investment strategy. Also, short-term debt makes it more difficult for equity holders to gain at the expense of debt holders by choosing riskier projects.

105. The NPV is: [(0.20) x (Rs.85 million) + (0.80) x (Rs.150 million)] - Rs.75 million = Rs.62 million The firm cannot issue equity to fund the project because equity holders will not be willing to finance the project. Equity holders will not be willing to finance the project because the value of the equity [(0.20)(Rs.85 million) + (0.80)(Rs.150 million) – Rs.70 million = Rs.67 million] is less than the project cost (Rs.75 million).

106. The firm can issue equity to fund the more capital-intensive project since the value of the equity [(0.80)(Rs.170 million – Rs.70 million) = Rs.80 million] is greater than the project cost (Rs.75 million). In the bad state of the economy, the firm would be unable to meet its bond obligation and would be bankrupt.

107. The existing debt holders can benefit from DIP financing because the weakening of their Seniority allows the firm to make good investments (i.e., it eliminates the debt overhang problem). In equilibrium, this will be true if DIP financing can only be obtained in extreme situations, that is, when the firm has promising and profitable projects that will increase firm value, rather than projects designed to expropriate wealth from debt holders to equity holders. Consequently, DIP financing must impose a cost on firms so that high quality firms (those with projects that increase firm value) can credibly signal their intention to invest in good projects. Using the costly process of obtaining DIP financing provides such a signal.

108. Now that Emax Industries has become more flexible, it can change its investment strategy more quickly, enabling it to invest in riskier projects or to pursue other strategies that transfer wealth from debt holders to equity holders more quickly. Thus, the value of Emax Industries bonds is likely to decline.

109. Since Atways Industries can default on the Montana project without going bankrupt, the Montana project is more likely to be subject to equity holder-debt holder conflicts. Specifically, the incentive to increase risk is likely to be greater for the Montana project. If the borrowing rate on the Montana project is higher than the corporation's borrowing rate, then the underinvestment problem is also likely to be greater for the Montana project.

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Decision Support Models

110. Determination of Value Created by a New Strategy

(Rs. in lakh)

	Current Values	Income	Statement	Projections			Residual Value
	(Year 0)	1	2	3	4	5	5+
Sales	200	224	251	281	315	352	352
Gross Margin (20%)	40	45	50	56	63	70	70
Selling and administrative expenses	10	11	13	14	16	18	18
Profit before tax	30	34	37	42	47	52	52
Tax	12	14	15	17	19	21	21
Net Profit	18	20	23	25	28	31	31

Balance Sheet Projection

(Rs. in lakh)

Fixed Assets	50	56	63	70	79	88	88
Current Assets	50	56	63	70	79	88	88
Total Assets	100	112	126	140	158	176	176

Cash Flow Projections

(Rs. in lakh)

	1	2	3	4	5	RV 5+
Profit after Tax	20	23	25	28	31	31
Depreciation	6	7	7	9	9	9
Capital Expenditure	12	14	14	18	18	9
Increase in Current Assets	6	7	7	9	9	0
	8	9	11	10	14	32

Present Value Factor (15% discount rate)	0.870	0.756	0.658	0.572	0.497
PV of operating cash flow	7.10	6.91	7.24	5.72	6.96

PV of operating cash flow stream = 34

Residual value $= \frac{32}{0.15} = 213$

PV of residual value = 213 x 0.497 = 106

Total shareholders value = 140

Pre-value strategy $= \frac{18}{0.15} = 120$

Value of the strategy = 140 – 120

= Rs.20 lakh

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Financial Analysis

111. Return on equity is given by the formula

$$ROE = \frac{\text{Net Profit}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Total Assets}} \times \frac{\text{Total Assets}}{\text{Equity}}$$

Where,

$$\frac{\text{Net profit}}{\text{Sales}} = \text{Net profit margin}$$

$$\frac{\text{Sales}}{\text{Total assets}} = \text{Total assets turnover ratio}$$

$$\frac{\text{Total assets}}{\text{Equity}} = \frac{1}{(1 - DR)}$$

Where,

DR = Debt ratio

Substituting the values in the equation we get

$$ROE = 0.07 \times 1.6 \times \left(\frac{1}{I - 0.06}\right)$$

$$= 0.28 \text{ or } 28\%.$$

112. Interest coverage ratio

$$\frac{\text{Earnings before interest and taxes}}{\text{Interest}}$$

$$\therefore \text{Interest} = \frac{\text{Rs.50 lakh}}{5} = \text{Rs.10 lakh}$$

113. Interest coverage ratio

$$= \frac{\text{Earnings before interest and taxes}}{\text{Interest charges}}$$

Net profit = 5% of 4,00,000
= 20,000

$$\text{Profit before tax} = \frac{20,000}{(1 - 0.6)} = 50,000$$

Profit before interest and tax = 50,000 + 75,000 = 1,25,000

$$\text{Interest coverage ratio} = \frac{1,25,000}{75,000} = 1.67$$

114. If accounts receivable is 1,00,000

Debtors turnover ratio will be

$$= \frac{\text{Net credit sale}}{\text{Average accounts receivable}}$$

$$= \frac{8,00,000}{1,00,000} = 8 \text{ times}$$

Average collection period

$$\text{(Assuming 360 days in a year)} = \frac{360}{8} = 45 \text{ days}$$

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115. Current ratio $= \frac{\text{Current Assets}}{\text{Current Liabilities}}$

$\therefore$ Current assets $= 1.7 \times 6{,}00{,}000$

$= \text{Rs.}10{,}20{,}000$

Quick ratio $= \frac{\text{Quick Assets}}{\text{Current Liabilities}}$

Quick assets = 1.5 x 6,00,000 = 9,00,000

Inventory = Current assets – Quick assets

= 10,20,000 – 9,00,000 = 1,20,000

Inventory Turnover Ratio $= \frac{\text{Net Sales}}{\text{Average Inventory}}$

Net sales = 4 x 1,20,000 = Rs.4,80,000

116. 1. Debt to net worth ratio $= \frac{\text{Total debt}}{\text{Net worth (Equity + Retained earning)}}$

$0.75 = \frac{\text{Total debt}}{4{,}00{,}000}$

Total debt = 3,00,000

2. Total assets turnover ratio $= \frac{\text{Sales}}{\text{Total assets}}$

$2 = \frac{\text{Sales}}{7{,}00{,}000}$

Sales = 14,00,000

3. Gross profit ratio $= \frac{\text{Gross profit}}{\text{Sales}} \times 100$

$25 = \frac{\text{Gross profit}}{14{,}00{,}000} \times 100$

Gross profit = 3,50,000

Cost of goods sold = Sales – Gross profit

= 14,00,000 – 3,50,000

= Rs.10,50,000

4. Accounts receivable turnover ratio

$= \frac{\text{360 days}}{\text{Average collection period}}$

$= \frac{360}{42} = 8.57$

5. Accounts receivable turnover ratio

$= \frac{\text{Credit sales}}{\text{Average debtors}}$

$8.57 = \frac{14{,}00{,}000}{\text{Average debtors}}$

Average debtors = Rs.1,63,360 (represents balance of accounts receivable at the end of the year.)

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6. Inventory turnover ratio $= \frac{\text{Cost of goods sold}}{\text{Closing inventory}}$

$2.5 = \frac{10,50,000}{\text{Closing inventory}}$

Inventory $= \frac{10,50,000}{2.5}$

= Rs.4,20,000

7. Acid test ratio $= \frac{\text{Liquid assets}}{\text{Current liabilities}}$

$0.6 = \frac{\text{Liquid assets}}{3,00,000}$

Liquid assets = Rs.1,80,000

Rs.1,80,000 = Cash + accounts receivable

Cash = Rs.1,80,000 – Rs.1,63,360

Cash = Rs.16,640

Balance Sheet

Liabilities	Amount Rs.	Assets	Amount Rs.
Equity	1,50,000	Plant and equipment	1,00,000
Retained earnings	2,50,000	Inventory	4,20,000
Accounts payable/Debt	3,00,000	Accounts receivable	1,63,360
		Cash	16,640
	7,00,000		7,00,000

117. Total net credit sales

= Gross sales – Cash sales – Sales returns

= 1,50,000 – 25,000 – 5,000

= 1,20,000

Average collection period $= \frac{360}{\text{Debtors turnover}}$

Debtors turnover ratio $= \frac{\text{Credit sales}}{\text{Debtors turnover}}$

$= \frac{1,20,000}{10,500} = 11.43$

Substituting this figure in the formula for average collection period $= \frac{360}{11.43} = 31.5$ days

118. a. Gross profit ratio $= \frac{\text{Gross profit}}{\text{Sales}} \times 100$

$= \frac{75,000}{\text{Sales}} \times 100$

Sales $= \frac{75,00,000}{25} = 3,00,000$

Cost of goods sold = Sales – Gross profit

= 3,00,000 – 75,000

= 2,25,000

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Inventory turnover ratio $= \frac{\text{Cost of good sold}}{\text{Average inventor}}$

$$5 = \frac{2,25,000}{\text{Average inventory}}$$

Average inventory = 45,000

$$\frac{\text{Opening Stock} + \text{Closing stock}}{2} = 45,000$$

Closing Stock + Opening Stock = 90,000

Opening Stock – Closing Stock = 6,000

2 x Closing Stock = 96,000

Closing Stock $= \frac{96,000}{2}$

= 48,000

b. Capital turnover ratio $= \frac{\text{Cost of goods sold}}{\text{Capital}}$

$\Rightarrow$ 1.5 = 2,25,000/Capital

Capital $= \frac{2,25,000}{1.5}$

= 1,50,000

Fixed assets turnover ratio $= \frac{\text{Cost of goods sold}}{\text{Fixed assets}}$

$$3 = \frac{2,25,000}{\text{Fixed assets}}$$

Fixed assets $= \frac{2,25,000}{3}$

= 75,000

Average collection period = 2.5 months

Debtors turnover ratio $= \frac{360}{2.5} = \frac{360}{75} = 4.8$

Also debtors turnover ratio $= \frac{\text{Credit sales}}{\text{Average debtors}}$

Assuming sales to be credit sales and debtor turnover ratio is based on year end figures, we have

$$4.8 = \frac{\text{Rs.}3,00,000}{\text{Debtors}}$$

Debtors $= \frac{3,00,000}{48} = 62,500$

Creditors payment period = 70 days

Creditors turnover ratio $= \frac{360 \text{ days}}{\text{Creditors payment period}}$

$$= \frac{360}{70} = 5.14$$

Creditors payment period = 70 days

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Creditors turnover ratio $= \frac{360}{70} = 5.14$

Assuming all purchases to be credit purchases, the amount of credit purchases is

Cost of goods sold = Opening stock + Purchases – Closing stock

2,25,000 = 42,000 + Purchases – 48,000 Purchases = 2,31,000.

Assuming that creditors turnover ratio is based on the year end figure, the amount of creditors is as follows:

$$\text{Creditors turnover ratio} = \frac{\text{Credit purchases}}{\text{Closing creditors}}$$

$$5.14 = \frac{\text{Rs.}2,31,000}{\text{creditors}}$$

$$5.14 = \frac{\text{Rs.}2,31,000}{\text{creditors}}$$

Creditors = Rs.44,942.

Balance Sheet

Liabilities	Rs.	Assets	Rs.
Capital	1,50,000	Fixed assets	75,000
Creditors	44,942	Closing stock	48,000
		Debtors	62,500
		Cash (Balancing figure)	9,442
	1,94,942		1,94,942

119.

	1998	1999	2000
Current ratio	1.190	1.255	1.212
Acid test ratio	0.438	0.462	0.399
Average collection period	18.25	19.52	26.4
Inventory turnover ratio	–	8.18	6.11
Total debt to net worth	1.37	1.38	1.58
Long-term debt to total capitalization	0.50	0.46	0.46
Gross profit margin	20%	16%	13%
Net profit margin	7.5%	4.65%	3.11%
Asset turnover	2.797	2.756	2.242
Return on assets	0.210	0.128	0.070

The profitability of the company has declined over the years. From the figures of retained earnings it can be concluded that the company pays high dividends to its shareholders. The average collection period is within the limits (i.e., 40 days).

There is a decrease in inventory turnover ratio indicating accumulation of inventory. The current and quick ratios have been fluctuating with both ratios below the ideal standard of 2:1 and 1:1; Profitability margins have also come down over the 3 years. The asset turnover ratio has come down, owing to the building of receivables and inventory. Consequently the return on assets ratio has fallen over the 3 years.

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120. Let the maximum short-term borrowing be B. The current ratio with this borrowing should be 1.75

$$\frac{\text{Rs.}1,700 + \text{B}}{\text{Rs.}800 + \text{B}} = 1.75$$

Rs.1,700 + B = Rs.1,400 + 1.75B

300 = 0.75B

B = 400

121. All the financial ratios except current assets to total turnover ratios are decreasing for 1996-97 and 1997-98 and then increased in 1998-99. The operating profit (PBDIT/Income) for the year 1998-99 has increased to 22.20% from 17.75% previous year level. Cash profit as a percentage of income also increased to 16.07% from 7.88%. Net profit margin and return on net worth also improved drastically in 1998-99. So it is evident that the company have turned around in the year 1998-99. Current asset as a percentage of total turnover has decreased from 95.10% in 1996-97 to 78.21% in 1998-99 which signifies that the company is able to reduce its investment in current assets.

Performance ratios are also showing improved performance in the year 1998-99. Other income as a percentage of total income is consistently rising for last four years. The company is also able to reduce its raw material costs. Overheads also reduced from 1996-97 level of 15.14% to 13.73% in 1998-99. Interest payment is also reduced to 8.01% from the 8.74% previous year level, which indicates less reliance on external debt. This trend has been reflected in the debt equity ratio, where it is decreased from 1.80 in 1996-97 level to 1.15 in 1998-99.

Current ratio of the company is consistently rising for the last four years which implied that the liquidity position of the company is improving consistently. Same thing has been reflected in the quick ratio. Depreciation as a percentage of gross block and fixed asset turnover ratios for past three years is also increased which indicates that the company consistently invested in the fixed assets.

Dividend for the last four years is maintained at the fixed level except in 1997-98 when the dividend was decreased to 15% from 30%. Dividend pay-out ratio in 1998-99 decreased to 22.45% from the previous year level of 45.11%, signifying higher profit after tax for the year 1998-99. Price earnings multiple of the company has decreased from 32.37 of previous year level to 21.79 in 1998-99, which may indicate the market's dissatisfaction about the company's performance. This fact is not reflected in the growth ratios. Company's growth in turnover has increased to 38.88% in 1998-99 from 3.25% in 1996-97. Also growth in operating profit has increased to 83% in 1998-99 from 1996-97 level of –19.23%. Net profit also grows astronomically by 334.32% against the negative growth of previous two years.

So from the above analysis it is not clear that how the company become so much successful in turning around his fortune within a span of a single year. So it is necessary to check the following areas:

i. Growth in sales

ii. Control of operational expenses

iii. Asset utilization

iv. Adequacy of provisions

v. Future growth prospect of the industry and its market share.

122. a. Let the amount X be allocated in the sinking fund semi-annually.

$\therefore$ X . FVIFA (3.20) = 100

$$\text{X.}\left[\frac{(1.03)^{19} - 1}{0.03}\right] = 100$$

$\therefore$ X = 3.982 million

The company should allocate Rs.3.981 million every six months into the sinking fund.

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The semi-annual interest payment on the bonds will be

$\frac{1}{2}$ x 100 x 0.08 = Rs.4 million

Annual debt service cost = (3.981 + 4) x 2

= Rs.15.962 million per annum.

b. If the interest rates rise. The price of bonds will fall. The company may go in for utilizing the sinking fund to buy the bonds in the open markets. This will enable the company to reduce its debt service costs further.

Working Capital Management

123. a. According to Baumol model

$$c = \sqrt{\frac{2bT}{I}}$$

$$= \sqrt{\frac{2 \times 100 \times 45,00,000}{0.10}} = \text{Rs.}94,868.$$

b. Average cash balance = $\frac{94,868}{2}$ = Rs.47,434.

c. No. of transfers = $\frac{94,868}{2}$ = 47.

d. Total cost $= I \times \left(\frac{c}{2}\right) + b\left(\frac{T}{c}\right)$

= 0.10 x 47434 + 100(47)

= Rs.9,443.

124.

1. Cash conversion size	10,00,000	15,00,000	25,00,000	30,00,000
2. Number of conversions during the planning period of 6 months 7,50,000 line 1	7.5	5	3	2.5
3. Average cash balances 2	5,00,000	7,50,000	12,50,000	15,00,000
4. Interest income foregone line 3 x 0.075	37,500	56,250	93,750	1,12,500
5. Cost of cash conversion	82,500	62,500	42,000	35,000
6. Total cost of ordering and holding cash	1,20,000	1,18,750	1,35,750	1,47,500

The total cost is minimized when the conversion order is Rs.15,00,000. This means that at the beginning of the planning period Rajdeep Ltd. should convert only Rs.15,00,000 of its marketable securities into cash. The remaining amount should be converted into cash in lots of Rs.15,00,000 as deducted by the disbursal needs of the firm.

125. Given the above information, cash balances for the 2-months will be given by

C_j = 54,000 + 0.4 x Sj + 15,000 – (0.15 x Sj) – Ej

C_a = Cj + (0.4 x Sa) + (0.6 x Sj) – (0.15 x Sa) – Ea

Cash balances for the first simulation run will be

C_j = 54,000 + 21,600 + 15,000 – 8,100 – 12,000 = 70,500

C_a = 70,500 + 19,600 + 32,400 – 7,350 – 15,000 = 1,00,150

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Cash balances for the 2nd run

C_j = 54,000 + 20,800 + 15,000 – 7,800 – 14,000 = Rs.68,000

C_a = 68,000 + 21,600 + 31,200 – 8,100 – 10,000 = Rs.1,02,700

Cash balances for the 3rd run

C_j = 54,000 + 22,400 + 15,000 – 8,400 – 12,000 = Rs.71,000

C_a = 71,000 + 18,800 + 33,600 – 7,050 – 10,000 = Rs.1,06,350

Cash balances for the 4th run

C_j = 54,000 + 20,800 + 15,000 – 7,800 – 12,000 = Rs.70,000

C_a = 70,000 + 19,600 + 31,200 – 7,350 – 15,000 = Rs.98,450

Cash balances for the 5th run

C_j = 54,000 + 21,600 + 15,000 – 8,100 – 14,000 = Rs.68,500

C_a = 68,500 + 20,800 + 32,400 – 7,800 – 15,000 = Rs.98,900

Average cash balance

$$C_j = \frac{70,500 + 1,02,700 + 1,06,350 + 98,450 + 98,900}{5}$$

= Rs.69,600

$$C_a = \frac{1,00,150 + 1,02,700 + 1,06,350 + 98,450 + 98,900}{5}$$

= Rs.1,01,310

Standard deviation is 1,157.58 and 2,921.19 respectively.

126. WCL when there is a reduction in current assets = $\frac{CA}{TA - \Delta\, CA}; \frac{CA}{TA - 0.15\, CA}$

WCL for Raj Ltd. = $\frac{100}{170 - 0.15\,(100)} = 0.65$

WCL for Taj Ltd = $\frac{100}{170 - 0.15\,(70)} = 0.44$

127. Duration of raw materials and store stage

$(D_{rm}) = \frac{250}{10} = 25$ days

Duration of work-in-process stage

$(D_{wip}) = \frac{325}{12} = 27$ days

Duration of finished goos stage

$(D_{fg}) = \frac{175}{17} = 10$ days

Duration of accounts receivable stage $(D_{an}) = \frac{225}{22} = 10$ days

Duration of accounts payable stage

$(D_{ap}) = \frac{160}{10} = 16$ days

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Duration of the operating cycle is

$D_{rm} + D_{wip} + D_{fg} + D_{ar} - D_{ap}$

= 25 + 27 + 10 + 10 – 16 = 56 days

128. Given the cost/price structure, the weights applicable to the different stages of the operating cycle are

$$W_{rm} = \frac{\text{Raw materials and stores cost per unit}}{\text{Sales price per unit}} = \frac{55}{120} = 0.458$$

$$W_{ip} = \frac{\text{0.5 processing cost per unit + 0.5 processing cost per unit}}{\text{Sales price per unit}} = \frac{55+14}{120} = 0.575$$

$$W_{fg} = \frac{\text{Cost of goods sold per unit}}{\text{Sales price per unit}} = \frac{95}{120} = 0.79$$

$$W_{ar} = \frac{\text{Sales price per unit}}{\text{Sales price per unit}} = \frac{120}{120} = 0.79 = = 1.00$$

$$W_{ap} = \frac{\text{Raw materials and stores cost per unit}}{\text{Sales price per unit}} = \frac{55}{120} = 0.458$$

Dwoc = W_{rm} x Dr_m+ W_{wip}, x D_{wip} + W_{fg} x D_{fg} + War x D_{ar} – W_{ap} x D_{ap}

= (0.458 x 35) + (0.575 x 25) + 0.79 x 12) + (1 x 28) – (0.458 x 18)

= 16.03 + 14.375 + 9.48 + 28 – 8.244

= 59.641 days.

129. The optimal conversion size (c) as per Baumol's model is given by the expression.

$$c = \sqrt{\frac{2bT}{I}}$$

Where,

b = Fixed cost per transaction

T = Cash required for meeting transaction needs during the planning period

I = Interest rate relevant to the planning period

T = 30,00,000; b = 1000; $I = \frac{0.12}{2} = 0.06$

Substituting the given values in the formula

we get,

$$c = \sqrt{\frac{2 \text{ x } 1,000 \text{ x } 30,00,000}{0.06}} = \text{Rs.}3,16,228$$

130. The return point (RP) and the upper control limit (UL) as per the Miller and Orr model is given by the expression:

$$RP = 3\sqrt{\frac{3b\sigma^2}{4I}} + LL$$

UL = 3RP – 2LL

Where,

RP = Return point

b = Fixed cost per order for converting marketable securities into cash

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I	=	Daily interest rate marked on marketable securities = Variance of daily charges in the expected cash balance
LL	=	Lower control limit
UL	=	Upper control limit
b	=	Rs.2,000
I	=	$\frac{1.125}{360} = 0.0003472$
σ^2	=	$(5,600)^2$
LL	=	Rs.1,20,000

Substituting

$$RP = 3\sqrt{\frac{3 \text{ x } 2,000 \text{ x } 3,13,60,000}{4 \text{ x } 0.0003472}} + 1,20,000$$

$$= 3\sqrt{\frac{3 \text{ x } 2,000 \text{ x } 3,13,60,000}{0.0013888}} + 1,20,000 = \text{Rs.}1,71,360.4$$

UL = 3 x 1,71,360.4 – 2 (1,20,000) = 2,74,081.4

131. The discreminant function is $Z_i = aX^i + bY^i$

Where,

Z_i = Discriminant score for the ith account

Xi = Current ratio for the ith account

Yi = Return on investment for the ith account

The estimates for a and b are:

$$a = \frac{\sigma_y^2, \sigma_x, -\sigma_{xy,} d_y}{\sigma_x^2, \sigma_y^2, -\sigma_{xy,} d_{xy}}$$

$$b = \frac{\sigma_y^2, \sigma_y, -\sigma_{xy,} d_x}{\sigma_x^2, \sigma_y^2, -\sigma_{xy,} d_{xy}}$$

From the information given in the table, we find that

$\sum X_i = 20.29; \sum Y_i = 130; \bar{X} = 1.0145; \bar{Y} = 10;$

$\sum(X_i - \bar{X})^2 = 3.34; = \sum(Y_i - \bar{Y})^2 = 692;$

$\sum(X_i - \bar{X}) \sum(Y_i - \bar{Y}) = 0.26$

Basic Calculations

	A/c No.	(X_i)	(Y_i)	$(X_i - \bar{X})$	$(Y_i - \bar{Y})$	$(X_i - \bar{X})^2$	$(Y_i - \bar{Y})^2$	$(X_i - \bar{X})(Y_i - \bar{Y})$
Good accounts	1	1.09	14	0.08	4	0.01	16	0.3
	2	1.4	16	0.39	6	0.15	36	2.31
	3	1.3	18	0.129	8	0.08	64	2.28
	4	0.8	22	–0.21	12	0.05	144	–2.57
group I	5	1.5	8	0.49	–2	0.24	4	–0.97

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	A/c No.	(X_i)	(Y_i)	$(X_i - \bar{X})$	$(Y_i - \bar{Y})$	$(X_i - \bar{X})^2$	$(Y_i - \bar{Y})^2$	$(X_i - \bar{X})(Y_i - \bar{Y})$
	6	2.1	9	1.09	–1	1.18	1	–1.09
	7	0.8	17	–0.21	7	0.05	49	–1.50
	8	0.9	14	–0.11	4	0.01	16	–0.46
	9	1.2	9	0.19	–1	0.03	1	–0.19
	10	1.2	3	0.19	–7	0.03	49	–1.30
	11	0.6	12	–0.41	2	0.17	4	–0.83
	12	0.8	– 3	–0.21	–13	0.05	169	2.79
Group II	13	0.7	7	–0.31	–3	0.10	9	0.94
	14	1.2	3	0.19	–7	0.03	49	–1.3
Bad accounts	15	1	7	–0.01	–3	0	9	0.04
	16	0.4	9	– 0.61	–1	0.38	1	0.61
	17	0.2	9	–0.81	–1	0.66	1	0.81
	18	1.3	7	0.29	–3	0.08	9	–0.86
	19	0.8	4	–0.21	–6	0.05	36	1.29
	20	1	15	–0.01	5	0	25	–0.07

$$\bar{X}_1 = \frac{\text{Sum of } X_i \text{ for group I}}{10} = 1.229$$

$$\bar{X}_2 = \frac{\text{Sum of } X_i \text{ for group II}}{10} = 0.8$$

$$\bar{Y}_1 = \frac{\text{Sum of } Y_i \text{ for group I}}{10} = 13$$

$$\bar{Y}_2 = \frac{\text{Sum of } Y_i \text{ for group II}}{10} = 7$$

$$\sigma^2 x = \frac{1}{n-1} \Sigma (X_i - \bar{X}_i)^2 = 0.176$$

$$\sigma^2 y = \frac{1}{n-1} \Sigma (Y_i - \bar{Y}_i)^2 = 36.421$$

$$\sigma xy = \frac{1}{n-1} \Sigma (X_i - \bar{X}_i)(Y_i - \bar{Y}_i)^2 = 0.014$$

$$dx = \bar{X}_i - \bar{X}_2 = 0.429$$

$$dy = \bar{Y}_i - \bar{Y}_2 = 6$$

Substituting these values we get

$$a = \frac{(36.421 \text{ x } 0.429) - (0.014) \text{ x } 6}{(0.176 \text{ x } 36.421) - [(0.014 \text{ x } 0.014)]} = 2.425$$

$$b = \frac{(0/176 \text{ x } 6) - (0.014 \text{ x } 0.429}{(0.176 \text{ x } 36.421) - [(0.014 \text{ x } 0.014)]} = 0.164$$

Hence the discriminate function is

$= 2.425X_i + 0.164Y_i$.

Z_i Scores for various accounts

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Account	Z_i Score $Z_i = 2.425X_i + 0.164Y_i$
1.	4.936
2.	6.016
3.	6.101
4.	5.544
5.	4.948
6.	6.566
7.	4.725
8.	4.476
9.	4.384
10.	3.401
11.	3.421
12.	1.448
13.	2.844
14.	3.401
15.	3.571
16.	2.444
17.	1.959
18.	4.299
19.	2.595
20.	4.882

Z_i Scores arranged in an ascending order

A/c No.	Z_i Score	G and B
12.	1.448	b
17.	1.959	b
16.	2.444	b
19.	2.595	b
13.	2.844	b
10.	3.401	g
14.	3.401	b
11.	3.421	b
15.	3.571	b
18	4.299	b
9.	4.384	g
8.	4.476	g
7.	4.725	g
20.	4.882	b
1.	4.936	g
5.	4.948	g
4.	5.544	g
2.	6.016	g
3.	6.101	g
6.	6.566	g

Minimum number of misclassification is between account Nos. 18 and 9 when misclassifications are 2;

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132. Determination of weight for various stages of the operating cycle:

$$W_m = \frac{\text{Raw materials and stores cost per unit}}{\text{Sales price per unit}} = \frac{120}{275} = 0.436$$

$$W_{wip} = \frac{\text{Raw materials and stores cost per unit} + 0.5 \text{ processing cost per unit}}{\text{Sales price per unit}}$$

$$= \frac{120 + (0.5 \times 45)}{275} = 0.518$$

$$W_{fg} = \frac{\text{Cost of goods sold per unit}}{\text{Sales price per unit}} = \frac{202}{275} = 0.734$$

$$W_{ar} = \frac{\text{Sales price per unit}}{\text{Sales price per unit}} = 1$$

$$W_{ap} = \frac{\text{Raw materials and stores cost per unit}}{\text{Sales price per unit}} = \frac{120}{275} = 0.436$$

Weighted operating cycle

= (35 x 0.436) + (27 x 0.518) + (16 x 0.734) + (30 x 1) – (20 x 0.436) = 62.27 days

Working Capital

Requirement = (3,20,000 x 62.27) + 6,50,000 = Rs.2,05,76,400.

133. As the annual interest rate is 11%, the interest rate for a six-month period will be 5.5%.

Thus,

$$C = \sqrt{\frac{2bT}{I}}$$

$$= \sqrt{\frac{2 \times 1{,}000 \times 4{,}20{,}000}{0.055}} = \text{Rs.}1{,}23{,}583$$

Therefore, the company needs to convert to Rs.1,23,583 worth of securities per batch.

134. The random number ranges for sales are as follows:

Month 1			Month 2		
Amount (Rs.)	Probability	Range	Amount (Rs.)	Probability	Range
75,000	0.15	0 – 14	50,000	0.10	0 – 9
60,000	0.15	15 – 29	75,000	0.15	10 – 24
35,000	0.10	30 – 39	90,000	0.25	25 – 49
80,000	0.20	40 – 59	95,000	0.25	50 – 74
1,00,000	0.40	60 – 99	98,000	0.25	75 – 99

The random number ranges for other expenses are as follows:

Month 1			Month 2		
Amount (Rs.)	Probability	Range	Amount (Rs.)	Probability	Range
15,000	0.20	0 – 19	12,000	0.30	0 – 29
20,000	0.30	20 – 49	20,000	0.30	30 – 59
22,000	0.50	50 – 99	30,000	0.40	60 – 99

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On running the simulation, the following values are obtained:

	Sales	Other expenses
Month 1	80,000	15,000
Month 2	90,000	30,000

The cash budget can now be projected as follows:

(Rs.)

	Month 1	Month 2
Sales	80,000	90,000
Cash sales	20,000	22,500
Realization from credit sales:		
Current month	30,000	33,750
Previous month	25,000	30,000
Total inflows	**75,000**	**86,250**
Payments for purchases	26,667	32,000
Other expenses	15,000	30,000
Total outflows	**41,667**	**62,000**
Surplus/(Deficit)	33,333	24,250
Opening balance	20,000	53,333
Closing balance	53,333	77,583

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Working Note:

The outflow due to payments for purchases in Month 1 can be calculated as follows:

Amount to be received from credit sales

= Rs.25,000

Total credit sales of previous month

= 25,000 x 2 = Rs.50,000

Total sales $= \frac{50,000}{0.75}$ = Rs.66,667

Purchases = 66,667 x 0.40 = Rs.26,667

135. a. Weight of raw material stage

$= \frac{110}{300} = 0.37$

Weight of work-in-process stage $= \frac{110 + 0.5 + 60}{300}$ = 0.47

Weight of finished goods stage $= \frac{110 + 60 + 25 + 18}{300} = \frac{213}{300}$ = 0.71

Weightage of debtors stage $= \frac{300}{300}$ = 1.00

Weightage of creditors stage $= \frac{110}{300}$ = 0.37

Duration of the weighted operating cycle = 0.37 x 35 + 0.47 x 28 + 0.71 x 18 + 1.00 x 35 – 0.37 x 26 = 64.27 days

b. The required working capital = 64.27 x 5,00,000 + 20,000 = Rs.321.55 lakh.

136. a. Optional conversion size C = $\sqrt{\frac{2bT}{I}}$

Where,

b is the conversion cost

T is the projected cash requirement during the planning period, and

I is the interest rate per planning period

$$= \sqrt{\frac{2 \text{ x } 12,000 \text{ x } 2,50,00,00}{0.05}} = \text{Rs.}34,64,102$$

b. RP = $\left(\frac{3b\sigma^2}{4I}\right)^{1/3} + LL$

Where,

RP is the return point

σ^2 is the variance of daily changes in the expected cash flows

I is the daily interest rate, and

LL is the lower limit.

$$RP = \left(\frac{3 \text{ x } 12,000 \text{ x } 6,000 \text{ x } 6,000}{4 \text{ x } \frac{0.10}{365}}\right)^{1/3} 50,000$$

= 1,05,750 + 50,000 = 1,55,750

UL = 3RP – 2LL

= 3 x 1,55,750 – 2 x 50,000

= 4,67,250 – 1,00,000 = Rs.3,67,250.

137. a. Optimal cash conversion size (C) = $\sqrt{\frac{2bT}{I}}$

Where, b = Transaction cost = Rs.1,200

T = Required amount of cash

= Rs.25 lakh

I = Interest rate per planning period = $\frac{10}{2}$ = 5%

$$\therefore C = \sqrt{\frac{2 \text{ x } 1,2000 \text{ x } 25,00,000}{0.05}}$$

= Rs.3,46,410

b. Return point (RP) = $\left(\frac{3b\sigma^2}{4I}\right)^{1/3} + LL$

Where,

LL = Lower control limit = Rs.25,000

b = Rs.1,200

σ^2 = Variance of daily changes in expected cash balance

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daily interest rate = Rs.25,000

$$I = \frac{0.10}{360} = 0.00028$$

$$\therefore RP = \left(\frac{3 \text{ x } 1,200 \text{ x } 25,000}{4 \text{ x } 0.00028}\right)^{1/3} + 25,000 = 43,153 + 25,000$$

$$= Rs.68,153$$

Upper control limit (UL) = 3RP – 2LL

= 3(68,153) – 2(25,000) = Rs.1,54,459.

138.

i.	Cash conversion size	10,00,000	15,00,000	25,00,000	30,00,000
ii	No. of conversions	10	6.67	4	3.33
iii.	Average cash balance	5,00,000	7,50,000	12,50,000	15,00,000
iv.	Interest income foregone	40,000	60,000	1,00,000	1,20,000
v.	Cost of cash conversion	1,00,000	83,375	70,000	58,275
vi.	Total cost	1,40,000	1,43,375	1,70,000	1,78,275

∴ The optional cash conversion size is Rs.10,00,000.

139. Let the discriminant function be $Z_i = aX_i + bY_i$

Where,

Zi = Discriminant score for the ith account

X_i = Current ratio for the ith account

Y_i = EBDIT/Sales ratio for the ith account.

The estimates for a and b are

$$a = \frac{\sigma y^2 dx - \sigma xy\, dy}{\sigma x^2\, \sigma y^2 - \sigma xy^2}$$

$$b = \frac{\sigma y^2 dy - \sigma xy\, dy}{\sigma x^2\, \sigma y^2 - \sigma xy^2}$$

$$\bar{X} = \frac{18.36}{16} = 1.15,\ \bar{Y} = \frac{230}{10} = 14.38$$

$$\bar{X} = \frac{18.36}{16} = 1.15,\ \bar{Y} = \frac{230}{16} = 14.38$$

$$\bar{X}_1 = \frac{\text{Sum of } X_i \text{ for Gr.I}}{8} = \frac{13.19}{8} = 1.65$$

$$\bar{Y}_2 = \frac{\text{Sum of } Y_i \text{ for Gr.I}}{8} = \frac{131}{8} = 16.38$$

$$\bar{X}_2 = \frac{\text{Sum of } Y_i \text{ for Gr.II}}{8} = \frac{5.17}{8} = 0.65$$

$$\bar{Y}_2 = \frac{\text{Sum of } Y_i \text{ for Gr.II}}{8} = \frac{99}{8} = 12.38$$

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$$\sigma x^2 = \frac{1}{n-1}\Sigma(X_i - \bar{X}_i)^2 = \frac{1}{15} \text{ x } 5.2612 = 0.351$$

$$\sigma y^2 = \frac{1}{n-1}\Sigma(Y_i - \bar{Y}_i)^2 = \frac{1}{15} \text{ x } 1081.75 = 72.117$$

$$\sigma xy = \frac{1}{n-1}\Sigma(X_i - \bar{X}_i)(Y_i - \bar{Y})$$

$$= \frac{1}{15} \text{ x } 11.5852 = 0.772$$

$$dx = X_i - \bar{X}_2 = 1.0$$

$$dy = Y_i - \bar{Y} = 4.0$$

$$a = = \frac{72.117 \text{ x } 1 - 0.772 \text{ x } 4}{0.315 \text{ x } 72.117 - (0.772)^2} = \frac{69.029}{24.717} = 2.79$$

$$b = = \frac{0.351 \text{ x } 4 - 0.772\,1}{24.717} = 0.026$$

Hence, the discriminant function is

$$Z_i = 2.79X_i + 0.026Y_i$$

Account number	X_i	Y_i	$(X_i - \bar{X})$	$(Yi - \bar{Y})$	$(Xi - \bar{X})^2$	$(Yi - \bar{Y})^2$	$(Xi - X)(Yi - \bar{Y})$
Gr. II 1	1.90	15	0.75	0.62	0.5625	0.3844	0.4650
2	1.05	10	–0.10	–4.38	0.0100	19.1844	0.4380
3	1.65	16	0.50	1.62	0.2500	2.6244	0.8100
4	1.90	24	0.75	9.62	0.5625	92.5444	72.150
5	1.93	11	0.78	–3.38	0.6084	11.4244	–2.6364
6	1.78	18	0.63	3.62	0.3969	13.1044	2.2806
7	1.96	12	0.81	–2.38	0.6561	5.6644	–1.9278
8	1.02	25	–0.13	10.62	0.0169	112.7844	–1.3806
Gr. II 9	0.76	30	–0.39	15.62	0.1521	243.9844	–6.0918
10	0.76	10	–0.39	15.62	0.1521	19.1844	1.7082
11	0.56	4	–0.59	–4.38	0.3481	107.7444	6.1242
12	0.62	18	–0.53	–10.38	0.2809	13.1044	1.9186
13	0.92	–4	–0.23	3.62	0.0529	337.8244	4.2274
14	0.58	20	–0.57	–18.38	0.3249	31.5844	–3.2034
15	0.52	15	–0.63	5.62	0.3969	0.3844	–0.3906
16	0.45	6	–0.70	0.62	0.4900	70.2244	5.8660
	18.36	230		–8.38	5.2612	1081.75	11.5852

140. a. Average sales per day

$$= \frac{36,506.25 + 36,225.28}{2 \text{ x } 360} = \text{Rs.}101.02 \text{ lakh}$$

Average stock of raw materials and stores $= \frac{4,16.84 + 441.47}{2}$ = Rs.429.16 lakh

Average finished goods inventory $= \frac{331.79 + 262.58}{2}$ = Rs.297.18 lakh

Average WIP inventory $= \frac{253.89 + 241.79}{2}$ = Rs.234.34 lakh

Average accounts receivable $= \frac{1,558.21 + 1,324.02}{2}$ = Rs.1707.96 lakh

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Average accounts payable $= \frac{1,558.21 + 1.324.02}{2}$ = Rs.1441.12 lakh

Average raw material and stores consumed per day

$$= \frac{15,079.77 + 16,834.50 + 971.77 + 948.41 + 1,620.11 + 1,690.66}{(2 + 2 + 2)\ 360}$$

= Rs.17.20 lakh

Average cost of production per day

$= \frac{20,457.9}{360}$ = Rs.56.83 lakh

Average cost of goods sold per day

Durations of various stages of the operating cycle

Duration of raw material and stores stage (D_{rm}) = $\frac{429.16}{17.20}$ = 24.95 days

Duration of WIP stage (D_{wip}) = $\frac{297.18}{89.22}$ = 4.12 days

Duration of finished goods stage (D_{fg}) = $\frac{297.18}{89.22}$ = 3.33 days

Duration of accounts receivable stage (D_{ar}) = $\frac{1,707.96}{101.02}$ = 16.91 days

Duration of accounts payable stage (D_{ap}) = $\frac{1,441.12}{17.20}$ = 83.79 days

Weights for various stages of the operating cycle

Raw material and stores stage, W_{rm} = $\frac{17.20}{101.02}$ = 0.17

Work-in-process stage = $\frac{17.20 + 0.5 \text{ x } 56.83}{101.22}$ = 0.45

Finished good stage, W_{fg} = $\frac{101.02}{101.02}$ = 0.88

Accounts receivable stage, W_{ar} = $\frac{101.02}{101.02}$ = 1.00

Accounts payable = $\frac{17.20}{101.02}$ = 0.17

Duration of weighted operating cycle

$D_{woc} = W_{rm} . D_{rm} + W_{wip} . D_{wip} + W_{fg} . D_{fg} + W_{ar}. D_{ar} – W_{ap}. D_{ap}$

= 0.17 x 24.95 + 0.45 x 4.12 + 0.88 x 3.33 + 1 x 16.91 – 0.17 x 83.79 = 11.7 days

b. Working capital requirement = Sales per day x Weighted operating cycle + Cash balance requirement

= (101.02 x 1.10) x 11.7 + 150

= Rs.1,450.13 lakh.

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141. We will assume that average sales per day is equal to the average daily production of 2,50,000 pens.

$$\text{Selling price per unit} = \frac{25,00,000}{2,50,000} = \text{Rs.}10$$

Selling average cost of goods sold per day	=	16.000
(–) Average processing costs (2,50,000 x 0.75)	=	1.875
Average raw material and stores consumed per day	=	Rs.14.125 lakh

$$\text{Raw material and stores cost per unit} = \frac{14,12,500}{2,50,000} = \text{Rs.}5.65$$

Durations:

Raw material storage period,

$$D_{rm} = \frac{\text{Average stock of RM and Stores}}{\text{Average WIP value of RM consumed per day}} = \frac{250}{14.125} = 17.70 \text{ days}$$

Work-in-progress period,

$$D_{wip} = \frac{\text{Average finished goods inventory}}{\text{Average cost of goods sold per day}} = \frac{350}{20} = 17.50 \text{ days}$$

Finished goods period,

$$Dfg = \frac{\text{Average accounts receivable}}{\text{Average sales per day}} = \frac{200}{25} = 12.50 \text{ days}$$

Accounts receivable period,

$$D_{ar} = \frac{\text{Average accounts receivable}}{\text{Average sales per day}} = \frac{325}{25} = 13.00 \text{ days}$$

Accounts payable period,

$$D_{ap} = \frac{\text{Average accounts payable}}{\text{Average credit purchases per day}} = \frac{200}{14.125} = 14.16 \text{ days}$$

Weights associated with different stages:

Raw material storage,

$$W_{rm} = \frac{\text{RM and stores cost per unit}}{\text{Sales price per unit}} = \frac{5.65}{10} = 0.565$$

WIP,

$$W_{wip} = \frac{\text{Average finished goods inventory}}{\text{Average cost of goods sold per day}} = \frac{6.40}{10} = 0.603$$

Finished goods,

$$W_{fg} = \frac{\text{RM and stores cost per unit} + 0.5 \text{ processing cost per unit}}{\text{Sales price per unit}} = \frac{6.40}{10} = 0.64$$

Accounts receivable,

$$W_{ar} = \frac{\text{Sales price per unit}}{\text{Sales price per unit}} = \frac{10}{10} = 1$$

Accounts payable,

$$W_{ap} = \frac{\text{RM and stores cos per unt}}{\text{Sales price per unit}} = \frac{5.65}{10} = 0.565$$

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a. Weighted operating cycle = $W_{rm} . D_{rm} + W_{wip} . D_{wip} + W_{fg} . D_{fg}$

$+ W_{ar} . D_{ar} - W_{ap} . D_{ap}$

= 0.565 x 17.7 + 0.603 x 17.5 + 0.64 x 12.5 + 1 x 13.0 – 0.565 x 14.16

= 10.0 + 10.55 + 8 + 13 – 8

= 33.55 days

b. Working capital requirement

= Sales per day x Weighted operating cycle + Cash balance requirement

= 25 x 33.55 + 2

= Rs.840.75 lakh

142. External funds requirement of a firm can be stated as follows:

$$EFR = \frac{A}{S}(\Delta S) - \frac{L}{S}(\Delta S) - mS_1(1-d) + (\Delta IM + SR)$$

When there is no change in the level of investments and schedule payment of debt is zero, the EFR reduces to

$$EFR = \frac{A}{S}(\Delta S) - \frac{L}{S}(\Delta S) - mS_1(1-d)$$

Here Assets A = 8,375.4

Sales S = 5,768.35

Current liabilities, provisions

L = 2,134.12

Dividend pay-out d = $\frac{178.0}{556.85} = 0.3196$

$\Delta S = (S_1 - S)$

Substituting above values in the above equation we get

$$EFT = \frac{8375.4}{5768.35}(\Delta S) - \frac{2134.12}{5768.35}(\Delta S)\, m(S_1)$$

$(1 - 0.3196)$

Δ EFR = $1.081S - m(S_1)(1 - 0.3196)$

= $1.082S - 0.6804\, mS1$

= $1.082\,(S_1 - 5768.35) - 0.6804\, mS_1$

= $1.082S_1 - 6241.28 - 0.6804\, mS_1$

Now the sales and cumulative probability and associated random numbers are found out as follows:

Sales	Probability	Cumulative probability	Random nos. range	Net profit margin	Probability	Cumulative probability	Random nos. range
5000	0.1	0.1	000 - 099	0.06	0.2	0.20	000- 199
				0.09	0.5	0.70	200 – 699
				0.12	0.3	1.00	700 - 999
7000	0.3	0.4	100 - 399	0.08	0.2	0.20	000 – 199
				0.09	0.4	0.60	200 – 599
				0.11	0.4	0.30	600 - 999
8000	0.3	0.7	400 – 699	0.9	0.3	0.30	000 – 299
				0.10	0.4	0.70	300 – 699
				0.11	0.3	1.00	700 – 999
10000	0.3	1.0	700 – 999	0.08	0.10	0.10	000 - 099
				0.09	0.50	0.60	100 – 599
				0.10	0.40	1.00	600 - 999

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The sales and net profit margin for 5 pairs of random numbers will be as follows:

Random no.	Sales	Random no.	Net profit margin
346	7000	794	0.11
256	7000	411	0.09
958	10000	259	0.09
993	10000	749	0.10
731	10000	302	0.09

EFR for the five runs will be as follows:

EFR1 = 1.082 x 7,000 – 6241.28 – 0.6804 x 0.11 x 7,000

= 7,574 – 6241.28 – 523.908 = 808.81 crore

EFR2 = 1.082 x 7,000 – 6,241.28 – 0.6804 x 0.09 x 7,000

= 7,574 – 6,241.28 – 428.65 = 904.07 crore

EFR3 = 1.082 x 10,000 – 6,241.28 – 0.6804 x 0.09 x 10,000

= 10,820 – 6,241.28 – 612.36

= 3,966.36 crore

EFR4 = 1.082 x 10,000 – 6,241.28 – 0.6804 x 0.10 x 10,000

= 10,820 – 6241.28 – 680.4

= 3898.32 crore

EFR5 = Same as EFR_3 as S_1 and m are same as 3rd run.

143. Basic Calculations

A/c No.	CR X_i	ROI Y_i	$(X_i - \bar{X})$	$(Y_i - \bar{Y})$	$(X_i - \bar{X})(Y_i - \bar{Y})$	Z-Score*
1	1.8	13	0.424	2.25	0.9540	9.781
2	1.65	12	0.274	1.25	0.3425	8.997
3	1.10	14	–0.276	3.25	–0.8970	8.236
4	1.35	12	–0.026	1.25	–0.0325	8.175
5	1.90	9	0.524	–1.75	–0.9170	8.563
6	1.55	10	0.174	–0.75	–0.1305	7.997
7	1.21	13	–0.166	2.25	–0.3735	8.164
8	1.40	8	0.024	–2.75	–0.0660	6.820
9	1.30	9	–0.076	–1.75	0.133	6.919
10	1.15	7	–0.226	–3.75	0.8475	5.762
11	0.90	10	–0.476	–0.75	0.357	6.196
12	1.20	12	–0.176	1.25	–0.2200	7.764
					–0.0025	

$\bar{X}_1 = 1.558$ $\bar{Y}_1 = 11.67$

$\bar{X}_2 = 1.193$ $\bar{Y}_2 = 9.83$

$X_1 = 1.376$ $Y_1 = 10.75$

$\sigma_X = 0.298$ $\sigma_Y = 2.221$

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Let the discreminant function be $Z_i = aX_i + bY_i$

$$\sigma_{xy} = \frac{-0.0025}{n-1} = -0.000227$$

dx = 1.558 – 1.193 = 0.365

dy = 11.67 –, 9.83 = 1.84

*Please refer the discriminant function calculated below:

$$a = \frac{\sigma_x^2\ dx - \sigma_{xy} dy}{\sigma_x^2\ \sigma_y^2 - \sigma_{xy}\ \sigma_{xy}} = \frac{(0.365)^2\ (1.84) - (-0.000227)(1.84)}{(0.365)^2 (2.221)^2 - (-0.000227)^2} = 2.74$$

$$b = \frac{\sigma_x^2\ dy - \sigma_{xy} dx}{\sigma_x^2\ \sigma_y^2 - \sigma_{xy}\ \sigma_{xy}} = \frac{(0.365)^2\ (1.84) - (-0.000227)(0.365)}{(0.365)^2 (2.221)^2 - (-0.000227)^2} = 0.373$$

The discriminant function will be $Z_i = 2.74X_i + 0.373Y_i$. The Z-score for all the 12 accounts is calculated and shown in the table.

Ranking the account numbers in the descending order of their Z-score, we see that the mid-point between the Z-scores of account numbers 6 and 7 will lead to minimum errors of misclassification.

$$\therefore \text{Cut off point} = \frac{7.997 + 8.164}{2} = 8.081$$

144. a. According to Baumol model

$$C = \sqrt{\frac{2bT}{I}}$$

$$= \sqrt{\frac{2 \times 40 \times 37{,}50{,}000}{0.12}} = \text{Rs.}50{,}000$$

b. Average cash balance = $\frac{50{,}000}{2}$ = Rs.25,000

c. Number of transfers = $\frac{37{,}50{,}000}{50{,}000}$ = 75

d. Total cost = I(C/2) + b(T/C)

= 0.12 x 25,000 + 40(75)

= 3,000 + 3,000 = Rs.6,000.

145. C = 1,000; I = 6%; σ = 1,000

Minimum balance = 10,000

$$\text{Return point} = \sqrt[3]{\frac{3 \times 1000\ (1000)^2}{4 \times 6/365}}$$

= 3,573.28 + 10,000

= 13,563.28

Upper limit = 3RP – 2LL

= 20,719.84

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Corporate Risk Management

146. A has an apparent comparative advantage in fixed rate markets but wants to borrow floating. 'B' has an apparent comparative advantage in floating rate markets but wants to borrow fixed. This forms the basis for the swap. There is a 1.2% per annum differential between the fixed rates offered to the 2 companies and a 0.4% differential between the floating ratio offered. The total gain is, therefore, 0.8% per annum. This means that both the companies will be better off by 0.4% per annum each. That is A's borrowing will be at LIBOR – 0.2 percent and B's borrowing will be at 10.8% per annum.

Company A will pay LIBOR to Company B. While Company B will pay 10.2% to Company A.

147. White Ltd. has an apparent comparative advantage in fixed rate markets but wants to borrow floating. Black Ltd. has an apparent comparative advantage in floating rate markets but wants to borrow fixed. The differential in fixed rate markets is 1.6% while it is 0.6% in floating rate markets. The gain, thus will be 1 percent to all parties involved in the swap. Because the bank get 1% per annum, the swap should make White Ltd. and Black Ltd. better off by 0.45% per annum each. This means that it should lead to White Ltd. borrowing at LIBOR – 0.05% while Black Ltd. to 12.15% p.a.

White Ltd. will thus pay LIBOR and receive 11.05% Black Ltd. will pay 11.15% and receive LIBOR

148. PV (convenience yield)

$$= \text{Spotprice} - \frac{\text{Futuresprice}}{(1+r_f)^t} + \text{PV of storage cost}$$

$$= \$12{,}600 - \frac{\$13{,}800}{1.08} + \$250$$

$$= \$12{,}600 - \$12{,}778 + \$250$$

$$= \$72$$

149. a. In order to minimize his risk, the investor should short sell Rs.1 million x 0.85 = 0.85 million of gamma.

b. This hedge ratio is 0.85.

c. He can create a zero value hedge by borrowing 1 – 0.85 = 0.15 million.

150. a. In case the price of the stock rises, the manager should invest 1.40 x 10 million = 14 million to mitigate his risk.

b. He can create a zero value hedge by borrowing Rs.4 million from the bank. When the market index and the stock price changes as given he should invest in the following way. When market index falls by 10% and the stock price goes up by 5%; the investment in the market portfolio will be (Rs.12.6 ml/10.5 ml) i.e., 120% of the short position in alpha. In order to restore the hedge ratio to 1.4 he must invest Rs.2.10 million in the market portfolio.

151. The amount required to be set aside in order to meet the obligation at the end of six-months is

$$\frac{4{,}445}{(1.08)^{0.5}} = 4{,}277$$

Since the amount to be set aside is equal to the pay off.

4,277 = Spot price – PV of dividend

$$4{,}277 = 4{,}330 - \frac{4{,}330(X)}{(1.08)^{0.5}} = 4{,}330 - 4{,}277$$

$$\frac{4{,}330(X)}{(1.08)^{0.5}} = 53$$

$$4{,}330(X) = 53 \times 1.039$$

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$$4{,}330(X) = 55.08$$

$$X = \frac{55.08}{4{,}330} = 1.27\%$$

Dividend yield on the stocks in the index is 1.3%.

Therefore, average annual dividend yield = 2.54%.

152. $\frac{\text{Future Price}}{(1+r_f)^t}$ = Spot price + Present value of storage costs – Present value of convenience yield

Present value of convenience yield = Spot price + Present value of storage costs – $\frac{\text{Future Price}}{(1+r_f)^t}$

$$= 5{,}200 + 300 - \frac{5{,}700}{[(1.085)]}$$

= 5,200 + 300 – 5,253 = 247

153. a. By short selling 0.6 x 1 million = 0.6 million of B, risk is minimized.

b. 0.6 is the hedge ratio.

c. A zero value hedge can be constructed by borrowing 0.4 million from bank.

154. a. A borrows floating at PLR + 4% and lends them to B at PLR + 4% and borrows from B at fixed 8.5%.

B borrows fixed at 10% and lends them to A at 8.5% and borrows floating from A at PLR + 4%.

b. Cost of funds to A = PLR + 4% – (PLR + 4%) + 8.5 = 8.5%.

Cost of funds to B = 10% – 8.5% + PLR + 4% = PLR + 5.5%.

Assuming expectations theory holds good. Cost of funds to B can be calculated as follows:

Year	Expected annual PLR rates	Loading	Effective rates	Effective rate under cap
1	5.50%	5.50	11.00	11.00
2	$(1.06^2 \div 1.055) - 1 = 6.5\%$	5.50	12.00	11.25
3	$(1.064^3 \div 1.06^2) - 1 = 7.20\%$	5.50	12.70	11.25
4	$(1.066^4 \div 1.064^3) - 1 = 7.20\%$	5.50	12.70	11.25
5	$(1.0675^5 \div 1.066^4) - 1 = 7.35\%$	5.50	12.85	11.25

Effective cost = $[(1.11)(1.1125)^4]^{1/5} - 1$
= 0.111999 ≅ 11.2% per annum.

155. To find out the mispricing we have to use put-call parity:

Value of call + PV (exercise price)
= Value of put + Share price

Stock A

28 + should be equal to 2 + 80

LHS = 75.62, RHS = 82. So there is a price mismatch.

The strategy to be adopted:

Buy call, sell put and stock

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Buying a call : Outflow of $28

Selling a put : Inflow of $2

Short selling the stock : Inflow of $80

Net inflow = 80 + 2 – 28 = $54

Invest $54 for 6 months to get

$54 x (1 + 0.05) = $56.70

After 6 months: Inflow from investment:	:	$56.70
Outflow due to exercise of option:	:	–$50.00
Net gain	=	$ 6.70

Stock B

13 + should be equal to 1 + 50

LHS = 52.02, RHS = 51.

Hence, there is a price mismatch.

The strategy to be adopted:

Sell call, buy put and stock

Selling a call : Inflow of $13

Buying a put : Outflow of $1

Buying a stock : Outflow of $50

New outflow = 50 + 1 – 13 = $38,

This amount to be borrowed for 3 months.

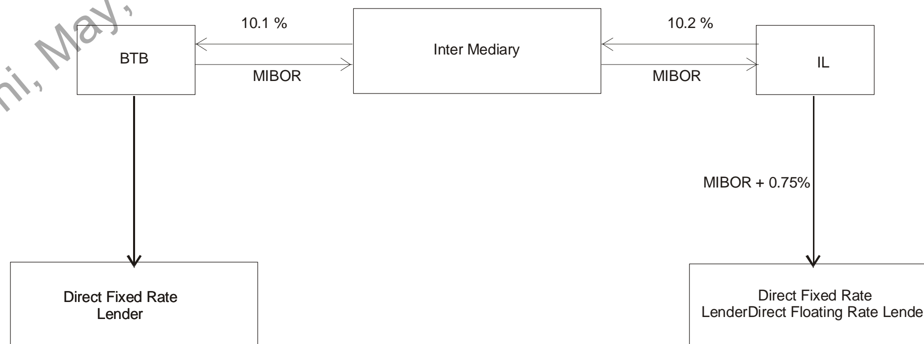
After 3 months : Repayment of borrowing [38 (1 + 0.025)]	:	$38.95
Inflow due to exercise of option	:	$40.00
Net gain	:	$ 1.05

156.

	Fixed rate	Floating rate
Techno Stock Ltd. (TS)	10.0%	MIBOR + 0.20%
Infomat Ltd. (IL)	11.2%	MIBOR + 0.75%

The swap can be as follows:

TS can borrow directly at 10% fixed rate and IL can borrow in the floating rate market at MIBOR+0.75% and agree to pay a fixed rate of 10.2% in the swap. The swap can be represented as follows:



Net costs:

TS = 10% – 10.1% + MIBOR = MIBOR – 0.1% (Floating)

IL = MIBOR + 0.75% + 10.2% – MIBOR = 10.95% (Fixed)

Savings:

TS = (MIBOR + 0.2%) – (MIBOR – 0.1%) = 0.3% (Floating)

IL = 11.2% – 10.95% = 0.25 (Fixed)

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157. S = Rs.1,530

E = Rs.1,500

uS = 1,800 or, $u = \frac{1,800}{1,530} = 1.176$

dS = 1,200 or, $d = \frac{1,200}{1,530} = 0.784$

r = 0.12, $R = 1 + \frac{0.12}{4} = 1.03$

Cu = Max (uS – E, 0)
= Max (1,800 – 1,500, 0) = 300

Cd = Max (dS – E, 0)
= Max (1,200 – 1,500, 0) = 0

$$\Delta = \frac{Cu - Cd}{uS - dS} = \frac{300}{1,800 - 1,200} = \frac{300}{600} = 0.5$$

$$B = \frac{uCd - dCu}{(u-d)R} = \frac{0 \times 1.176 - 0.784 \times 300}{(1.176 - 0.784) \times 1.03}$$

$$= \frac{-235.2}{0.392 \times 1.03} = \frac{-235.2}{0.404} = -582.18$$

Value of call option,

C = S + B = 0.5 x 1,530 + (–582.18)
= Rs.182.82 Value of put option,

P = C + PV of E – S

$$= 182.82 + \frac{1,500}{(1.12)^{0.25}} - 1,530$$

= 182.82 + 1,458.10 – 1,530
= Rs.110.92

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Part III: Applied Theory (Questions)

1. Dabur is a company with a set of business values, which direct its functioning as well as its operations. The company is committed to follow the ethical practices in doing the business. At Dabur, nature acts as not only the source of raw material but also an inspirational factor. The company is guided by the words "What is that life worth that cannot be comfort to others" as said by the founder Dr. S.K. Burman. All the above factors act as the components of strategy. In this context, discuss the components of business strategy involved.
2. Recently, Colgate Palmolive (India) Ltd. in collaboration with the Indian Dental Association has promoted 'Smiles for all-national oral health program'. Colgate has made considerable investment to support this project to increase hygiene awareness in society – a reflection of Colgate's continued commitment to oral hygiene in the society. Discuss the role of social responsibility in strategy formulation.
3. American Online vision is to build a global medium as central to peoples life as telephone or television and even more valuable. Discuss the role of company's mission for an organization and enlist the characteristics of a mission statement.
4. The mission statement of Aravind Mills states 'to achieve global dominance in select businesses built around our core competency, through continuous product and technical innovation and customer orientation, with a focus on cost effectiveness'. Discuss the need for a mission statement and the process of formulating it.
5. 'E bay' the online auction site was founded with a belief that people are honest and trust-worthy. All the decisions are based on sound ethical values. Explain the significance of ethical decision making in business strategy.
6. Enron's power project in Dhabol Maharastra, witness the impact of political environment from the day one. The subsequent changes in government at the state level created more confusion. As a result the company faced lot of problems. Discuss the importance of political environment in strategic formulation.
7. In view of slow down in US economy Satyam Computers want to reduce its dependence on US to 55% from 75% of revenues with in couple of years, and wants focus more on Europe. What role does economic environment play in formulating strategy?
8. Moser Baer India, the third largest manufacturer of optical media diskettes, plans to make a billion diskettes every year with an installed capacity of 760 million diskettes. Higher capacity means bigger economies of scale, and aggressive planning. In fact the company is hoping that it will up Moser Baer global market share from 5% to 10%. How does an economy of scale play a role in designing a business strategy?
9. In an MNC like GE, the decisions taken has a multidimensional effect. The main reason being the company has a diversified business portfolio and operates in many countries. Discuss the importance of MNC strategic planning.
10. Mr. Kiran the Managing Director of 'Sunman Pharmaceuticals', the flourishing company wants to prepare Vision 2010 document for the company. As a first step towards this he wanted to have an internal analysis of the firm. You being a consultant advice the method of internal analysis by value chain and its process.
11. Nirma has a profit margin of 13.6% which is better than its competitor HLL'S 9.8%, Advertising to sales ratio is 2.5%. The company is expected to retain the same profit margin ratio for the fiscal year 2001. Based upon this figure the company wants to design the strategies for the future. Discuss the importance of finance and accounting in strategy formulations.
12. After a considerable market research 'ONIDA' launched its new color television model, IGO aimed at consumers upgrading from black and white to color television. According to the company's market research team the upgrade segment accounts for 40% of the 4.5 million sets strong Indian color television market. Based on this ONIDA has set ambitious targets for IGO. What role did marketing play in the product marketing strategy for ONIDA?

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13. At Zee telefilms the human resource department regularly conducts surveys within the organization to study and understand the problems of employees. Majority of the employees felt that there was a long-term career at Zee telefilms. In such a scenario explain the importance of HR in strategic management.

14. "An organization not guided by objectives is an organization not being managed properly". In the light of given fact, discuss the need of 'objective' for an organization.

15. Two wheeler companies like Bajaj, Kinetic, TVS, etc., include scooters, motorcycles, mopeds, scooterets, in their product portfolio, where as Hero Honda concentrates only in motorcycle segment with four stroke engines. Explain the concentration strategy of Hero Honda.

16. As an act of backward integration, Nirma has set up 80,000 tonnes per annum linear alkyl benzene plant, 4,00,000 tonnes per annum soda ash plant, the main ingredients for detergents. Moreover it has 400 strong fleet of trucks for distributing its products to the nook and corner of the country demonstrating the company's belief in forward integration also. Discuss the process of backward and forward integration.

17. Aurobindo Pharma is today the world's third largest maker of semi synthetic penicillin. The company wanted to formulate long-term objectives as growth could slowdown after the adoption of product patent by India post-2005 regime. What is the rational between long-term objectives and explain the criteria for preparing it.

18. The drawbacks of BCG matrix are supplemented by more refined GE Nine cell matrix. Discuss.

19. The long-term objective of Reliance Infocom is to penetrate into the nook and corner of the country by optical fiber lines. But the priority is to connect the capitals and district head quarters in the current fiscal year. Discuss the link between annual and long-term objectives.

20. As a part of financial strategy HLL willing to get out of the areas where they have not made enough ROI. (For example, Tiger tea). What is the role of finance and accounting in operationalizing the strategy.

21. "If strategies had to be implemented and objectives have to be achieved, the allocation of resources have to be planned." In view of the given fact highlight the importance of corporate resource planning

22. If policy is a general guide that specifies the border parameters within which the organizational members are expected to operate in persuit of organizational goals. How far policy helps to achieve goals?

23. With the aid of a chart provide value chain analysis for

a. Entertainment industry;

b. Physical distribution industry; and

c. Tourist industry.

24. 'Cost leadership' strategies undoubtedly provide competitive advantage; however the hurdles to attain are not conspicuous. Justify the statement.

25. If an organization has to be effective and efficient it has to be productive and change oriented. What is change? Discuss the forces that compell change.

26. Successful change programs always involve planning of both short-term and long-term changes. Suggest an ideal process of change.

27. Even though organizations might have identified the need for change at right time and convinced their employees of the need to change, they often fail to implement the change. Explain general strategic changes adopted by the organization.

28. The 'Can-do' culture that was critical to Xerox's success, was the brainchild of the company's then CEO. An influential role was played by him in reshaping the company. Discuss the influence of CEO in strategic management.

29. In the present competitive industry, organizations realized the importance of workers. Suggest different methods to make the employees real knowledge workers.

30. What are the global challenges likely to be faced in 21st century for strategic managers?

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31. Modigliani and Miller were able to say the surprising things they did about debt and equity because they took the corporate balance sheet out of the hurly-burly of the market place and brought it into the economist's laboratory. Discuss the assumptions made by M&M with regard to this and also elaborate on the propositions put forward by them.

32. The leverage irrelevance theorem of M & M is valid if the assumptions underlying their analysis are satisfied. However, in the real world, the presence of taxes has an impact on the capital structure. Examine the implications of corporate and personal taxes on capital structure.

33. In addition to information asymmetry, another market place reality that can hurt the value of a firm is bankruptcy. The risk of incurring these costs is a significant factor in financing decisions. Discuss the relationship between bankruptcy costs and capital structure.

34. The capital structure of a firm should be designed with the aim of maximizing the market valuation of the firm in the long run. In this context, you are required to discuss the strategic determinants of capital structure.

35. In their paper "Dividend policy, growth, and valuation of shares", Miller and Modigliani have spelled out what have come to be known as the dividend propositions. According to them in a perfect market, once they have chosen their investment policy, managers cannot increase the value of their firm by paying out a higher dividend. Discuss. Support your answer with appropriate formula.

36. Votaries of a regular dividend say that pay-out is a signal about the future of the company, especially when it is widely believed that the ordinary shareholder is not fully aware of what is going on. Discuss the strategic determinants of dividend policy of a firm.

37. After dividends, buy-back of shares have been the most popular form of cash distribution to shareholders. What are the different methods of buy-back? What is the signaling effect of a share buy-back? Discuss.

38. Corporate financial models are formal representations of a company's operations and processes in financial terms. What are the major steps in the process of using a model to arrive at the optimal decision?

39. An important part of Value Based Management is a deep understanding of the performance variables that will actually create the value of the business: the key value drivers. What according to the Marakon model are the financial and strategic forces that affect the value of a firm?

40. According to the Alcar model, the value of a company is determined by its discounted future cash flows. Discuss.

41. Adopting a value based mindset and finding the value drivers gets you only halfway home. Managers must also establish processes that bring this mindset to life in the daily activities of the company. What according to the McKinsey model are the management processes that collectively govern the adoption of VBM?

42. The cash budget prepared by a business firm is usually based on single value estimates of various factors. Some of these factors are subject to considerable variability. The technique of simulation takes into consideration the impact of variability characterizing these factors. Discuss.

43. Executives frequently attempt to optimize their company's cash management function by incorporating best practices to reduce external financing cost, improve liquidity, lower bank charges, minimize risk and manage long and short-term liquidity. Examine the role of cash management models in this context with specific reference to the Baumol model.

44. Timely and accurate cash forecasting can contribute to the overall objective of the firm. In situations where the cash balances fluctuate randomly, one can apply control theory to the problem. The Miller-Orr model is a stochastic model that is used to determine optimal behavior when the uncertainty of cash payments is large. Discuss.

45. In the context of the present business environment, risk management has become a critical activity for most of the firms. In the light of the above discuss the different approaches to managing risks?

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46. Risk management needs to be looked at as an organizational approach, as management of risks independently cannot have the desired effect over the long-term. What are the steps involved in the risk management function?

47. Strategic cost management involves usage of cost data to develop superior strategies to gain sustainable competitive advantage. An integral part of strategic cost management is activity based costing. What are the steps involved in an ABC system. Discuss.

48. Sony's Walkman was a classic example of how a company uses the "PROFITS = SALES – COSTS" equation to full advantage. Briefly discuss the methodology used in target costing.

49. The innovation of a new product and its degeneration into a common product is termed as its life cycle. What are the significant characteristics of the product life cycle concept. Discuss the distinct phases in the life cycle of a product.

50. Lack of congruence in the objectives of managers and that of the organization as a whole is a common phenomenon in many organizations. How do management control systems help in solving this problem. What are the factors to be taken into account while designing a management control system?

51. Periodic evaluation of performance of organizational segments is necessary not only for appraising their performance but also for enabling decisions about the future course of action. This task presupposes the establishment of suitable measures of performance. What are the criteria to be used by management while selecting measures of performance?

52. The Union Finance Minister in his budget speech last year hinted at the introduction of zero base budgeting in Government. What is zero base budgeting and what are the steps involved in incorporating zero base review in the budgeting exercise?

53. Elaborate on the requisites to be incorporated so that a budget can be used as an effective instrument of management control.

54. Performance budgeting is getting increasing popularity, the world over. In this context, discuss what is performance budgeting system? What is the purpose of performance budgeting system and what are the steps involved in launching a performance budgeting system?

55. A management control system can function effectively only when there is a sound reporting and feedback system in place in the organization. What is the purpose of management reporting? What are the requisites of a good management reporting system?

56. M/s Lalith Pharmaceuticals Limited is faced with imminent bankruptcy and has two alternatives to choose from: Reorganization and Liquidation. The company has opted for reorganization because it is felt that it will be in a better position to repay its debts, when it is alive and operating, than when it is liquidated. Discuss the steps involved in reorganization of a firm.

57. In the recent years, inflation rate in India has been quite low, though there has also been an uptrend in the past few months. Explain the impact of inflation on financial analysis.

58. Generation of shareholder value is now a widely discussed topic. We frequently find reports on companies that augment or reduce shareholder value in the financial press. In this context, explain the Mckinsey approach to value based management.

59. In India, the corporate tax rate is 35%. The tax on income of individuals from interest, dividend and short-term capital gains varies from 0% to 30% based on the total income of the individual. Does this have any implications for the validity of Merton Miller's argument on optimal debt capacity of firms? Explain along with a detailed description of Merton Miller's argument.

60. The opening sentences of a recent article on inflation in a leading finance magazine read as follows:

"Credibility of WPI-based inflation notwithstanding, the (current) situation could be a precursor to a looming deflationary spiral. To those who dare to look beyond the short-term, these are grim portents."

Describe the important innovations in the financial markets that have been brought about in response to inflation. Comment on their utility in a deflationary situation.

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61. The growth of a corporation depends on the support of its individual constituents. It is, therefore, necessary to clearly understand and define systems of corporate governance that safeguard the interests of all the groups concerned. This is, obviously, difficult, as the different groups of stakeholders participate in the management of the company with different degrees of interest. In this context, describe the two major models of corporate governance.

62. The Central Government has laid down that all foreign companies that have a joint venture with an Indian company, have to get a 'No Objection Certificate' from their respective Indian partners before setting up a 100% subsidiary in India. What prompted the government to issue such regulations? What are the general guidelines that should be borne in mind by any company before entering into a joint venture?

63. A firm's dividend policy must aim at having a beneficial effect on the wealth of the majority of its shareholders. This is, however, easier said than done as there are several considerations of shareholders which influence the dividend policy of the firm. What are those factors? Explain and examine them.

64. Advances in inventory management technique have changed the way the inventory managers look at the inventory. It is increasingly being viewed as the `root of all evil' in an organization. Explain such approach and the advantages therein.

65. It is observed that industrial sickness does not occur overnight but develops gradually over time and there are discernible symptoms that indicate that the trouble lies ahead. Discuss the symptoms that, if present in a company, point towards its impending sickness.

66. A survey done sometime back revealed that managers rarely used financial models in practice. What, according to you, are the shortcomings of financial modeling that have led to this phenomenon? Can you give some suggestions for improvement.

67. SEBI has constituted a panel headed by Shri Y H Malegan for improving corporate governance. Discuss the importance of corporate governance while highlighting the current state of corporate governance in India. What are the pre-requisites for successful corporate governance?

68. Suppose a company simultaneously issues Rs.50 million worth of convertible debentures at a coupon of 10% and Rs.50 million of non-convertible debentures with a coupon rate of 14%. Both securities have the same maturity. Does the fact that the convertible issue has a lower coupon rate suggest that it is lesser in risk than the straight debenture? How does the cost of capital of both the instruments compare?

69. Assume that you are advising the management of a firm that is about to double its assets to serve its rapidly growing market. It must choose between a highly automated production process and a less automated one and it must also choose a capital structure for financing the expansion. Should the asset investment and financing decisions be jointly determined?

70. "Managing risks is becoming riskier. With the markets in perpetual motion, the costs of transmitting funds from savings to investment have become uncertain. As the South-East Asian Meltdown demonstrated, the insulation of the past will not protect bottomlines in future. The interest rate volatility and exchange rate volatility may now be experienced more frequently then ever. In this context explain briefly the natural and synthetic hedges available for a finance manager.

71. What are the different non-growth strategies available to a firm?

72. What do you understand by financial and non-financial objectives of a firm?

73. Discuss the various factors that affect a firm's leverage.

74. It can be said that "business and financial risk acts as a determinants of equity risk". Discuss.

75. What are the drawbacks of the Dividend Discount model?

76. What are the pitfalls associated with the comparison method?

77. How can the ratio comparison method help in valuing a project?

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78. What is adjusted present value approach? What are the relative advantages and disadvantages of the approach?

79. State the importance of unlevered cost of capital for levered firm.

80. Differentiate between red option and financial option.

81. How can real option be applied in project involving "exploring for oil"?

82. What are the drawbacks of using real option analysis.

83. How does capital structure vary with change in market conditions?

84. How does bankruptcy cost affect the firm's capital structure?

85. Agency cost can both encourage the use of debt as well as discourage the use of debt. Discuss.

86. How an executive compensation be designed so as to act as a competitive strategy?

87. Explain the Modigliani and Millar hypothesis under condition of market imperfections.

88. Stock dividends or stock split can act as strong signaling effect in a stock market? Discuss.

89. Explain in detail, the mechanism of dividend payments.

90. What are the basic causes of information asymmetry?

91. Explain the three most commonly used measures of quality of a trading stock.

92. What do you understand by Pecking Order Hypothesis?

93. Explain the different violations that are observed in ideal capital market assumptions.

94. It is often said that the executive compensation is tied to relative performance of an employee. Do you agree to the statement? Comment on the same.

95. Discuss hedging in the parlance of managerial incentives.

96. As per different empirical evidences, what kinds of firms are likely to hedge their risk exposure?

97. What are the different elements of a firm's financial market environment?

98. What are the various kinds of zero coupon bonds that have emerged on recent times?

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Part III: Applied Theory (Answers)

1. The key components of the strategic management model will introduce the major concepts of business strategy.

Company Mission

The mission of a company is the unique purpose that sets the company apart from other companies of its type and identifies the scope of its operations. In other words, the mission describes the company's product, market, and technological areas of thrust, thus reflecting the values and priorities of the strategic decision makers. For instance, some corporate acts of downscaling reflect a management philosophy that favors specialization, thereby changing the direction and scope of the organization.

Company Profile

The profile of a company depicts the quantity and quality of the company's financial, human, and physical resources. The profile also assesses the strengths and weaknesses of the company's management and organizational structure. It also considers the companies past successes and traditional concerns in the context of the company's current capabilities in an attempt to identify the company's future capabilities.

External Environment

The external environment consists of all the conditions and forces that affect an organization's strategic options and define its competitive situation. The external environment consists of three interactive segments. They are the operating, industry and remote environments.

Strategic Analysis and Choice

A strategic analysis enables a firm to identify a range of possible attractive interactive opportunities. These opportunities reflect the possible avenues for investment. If these opportunities are screened through the criterion of the company mission, a set of possible and desired opportunities can be generated. A further screening process results in the selection of options called strategic choices. The entire process is meant to provide a combination of long-term objectives, and generic and grand strategies that optimally position the firm in the external environment to achieve the company mission.

Strategic analysis and strategic choice in a single or dominant product business revolves around the identification of strategies that are most effective at building a sustainable competitive advantage. Such an advantage is based on key value chain activities and capabilities, i.e. the core competencies of a firm. Multi business organizations focus their attention toward the best combination of businesses to maximize their shareholder value.

Long-Term Objectives

Long-term objectives refer to those results that an organization seeks to achieve over a number of years. Such objectives typically involve the following areas: profitability, return on investment, competitive position, technological leadership, productivity, employee relations, public responsibility, and employee development.

Generic and Grand Strategies

Many businesses explicitly and implicitly adopt one or more generic strategies that characterize their competitive orientation in the marketplace. The three fundamental options are low cost, differentiation, or focus strategies. Many established organizations seek to create ways to achieve both low cost and differentiation competitive advantages as part of their overall generic strategy. They combine these capabilities with a comprehensive, general plan of major actions through which the firm intends to achieve its long-term objectives in a dynamic environment.

Grand strategy is otherwise termed as a statement of means that indicates the method for achieving the objectives. Grand strategy is a unique package of long-term strategies. There are 14 identified basic approaches of grand strategies: concentration, market development,

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product development, innovation, horizontal integration, vertical integration, joint venture, strategic alliances, consortia, concentric diversification, conglomerate diversification, turnaround, divestiture, and liquidation.

Annual Objectives

The objectives that the firm seeks to achieve in one year are known as annual objectives. Annual or short-term objectives also relate to the same areas of business as the long-term objectives. Short-term objectives are more specific than long-term objectives. The short-term objectives are set based on the long-term objectives. For instance, if the long-term objective of the firm is to cut costs by 20% in the next 4 years, then the annual objectives might be to reduce costs by 5.425% every year. The short-term or annual objectives have to be achieved for the firm to reach its long-term targets.

Functional Strategies

The grand strategy provides the framework for the entire business of the firm. In fact, the grand strategy is split into strategies for each business division or function. The strategies are known as functional strategies. These are specific to the needs of each functional area and prescribe an integrated action plan for every function. There will be one functional strategy for every functional area, which connects it to the grand strategy.

Operating strategies provide the means for achieving annual objectives. The company budget is coordinated with the needs of operating strategies to ensure specificity, practicality, and accountability in the plans.

Policies

These are directives given to managers and their subordinates to guide their thoughts, decisions, and actions while implementing the organization's strategy. They provide guidelines to make operating processes consistent with the firm's strategic objectives and are therefore often referred to as standard operating procedures. By standardizing routine decision-making and limiting the discretionary powers of managers and subordinates in implementing operations strategies, they increase managerial effectiveness.

A few examples of company policies are as follows:

- The head office should authorize every purchase activity.
- The annual performance review of every employee should be undertaken on the individual's date of joining.

Institutionalizing the Strategy

The annual objectives, functional strategies, and policies are a valuable technique for communicating what needs to be done to implement the overall strategy. The translation of long-term objectives into short-term goals will make the strategy operational. This must be institutionalized, i.e., it must become part of the day-to-day activities of the company, if it is to be effectively implemented.

Three organizational elements help institutionalize a firm's strategy: (1) structure, (2) leadership, and (3) culture. These three elements have to be integrated to ensure that strategy is successfully institutionalized and implemented.

Control and Evaluation

After a strategy is implemented, it needs to be monitored to determine the extent of success, i.e., the number of objectives achieved. Strategy formulation is mainly subjective and the first test of reality for a strategy takes place only after implementation. The strategic managers should provide early monitoring and controlling methods to ensure that the strategic plan is followed. Early review and evaluation is also helpful for making modifications to the plan. The ultimate test of the strategy is its ability to achieve the ends – annual objectives, long-term objectives, and mission. The firm is successful only to the extent that the strategy achieves the designated objectives.

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2. Corporate social responsibility is the sense of obligation on the part of companies to build certain social criteria into their strategic decision-making. It proposes that a private corporation has responsibilities to societies that extend beyond making a profit. For example, a decision to close some plants and discount some product lines affects not only the firm's workforce, but also the customers (who have no other source of the discounted product) and the communities where the plants are located. Managers of business organizations have four responsibilities:

- **Economic:** This responsibility deals with producing goods and services of value to society so that the firm may repay its creditors and shareholders.
- **Legal:** Governments define legal responsibilities as laws that management is expected to obey. For example, environmental pollution norms have to be adhered to by all factories under the purview of the Pollution Control Board (PCB). To this effect, the PCB issues compliance certificates to these factories and periodically inspects them to check the facilities.
- **Ethical:** The ethical responsibilities of a firm's management are to follow the generally held beliefs about behavior in a society. The society in and around an organization can get very upset if the organization's management fails to act according to generally prevailing ethical issues.
- **Discretionary:** Discretionary responsibilities refer to the purely voluntary obligations that a corporation assumes. Examples are philanthropic contributions and training the hard-core unemployed. The difference between ethical and discretionary responsibility is that many people expect an organization to fulfill its ethical responsibility whereas only a few people expect it to fulfill discretionary responsibility. Social responsibility includes ethical and discretionary responsibility, but not economic and legal responsibility. When ethical responsibilities are satisfied, a firm can focus on discretionary responsibilities. Discretionary responsibilities are voluntary actions that society does not consider as important as ethical responsibilities.
- If an organization fails to acknowledge its social responsibility, the government imposes it in the form of legal responsibilities. As a result, the organization may have greater difficulty in earning a profit that it would have had if it had voluntarily assumed some social responsibility.
- A firm can behave responsibly in the interests of society in a number of ways. Social responsibility is not a one-way process; even organizations can benefit considerably from it. If corporations are to be socially responsible, then one important question is: To whom are they responsible? The groups to whom the organization is responsible are referred to as corporate stakeholders. They affect, or are affected by, for better or for worse, the business activities of corporations. The stakeholders group comprises of the following:
  - **Shareholders:** The shareholders provide the capital that allows the corporation to survive and grow. Due to this, they expect the management to operate in a way that brings them the largest possible return on their investment. On the other hand, the managers view themselves as responsible for balancing the demands of all stakeholders so that multiple demands do not jeopardize the achievement of company objectives. The different perspectives held by the management and shareholders can sometimes lead to conflict (on matters such as amounts of dividend).
  - **Employees:** Although, managers speak of their organization's employees as "family", actual treatment can vary considerably. For example, one area of concern is the treatment of employees during plant closings. Plant closings should be accompanied by various degrees of managerial social concern for employees. Thus, at the minimum, the organizations need to honor specific agreements made with employees and obey laws relating to employee-employer relationship.

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- **Customers:** Earlier, the motto of many businesses was caveat emptor meaning, "let the buyer beware", but now consumers expect more from organizations. Areas of current social concern regarding consumers are health, safety and quality. These aspects are gaining prominence as the consumer/stakeholder issue is related to social responsibility.
- **Local Community:** An organization's community is its area of local business influence. While communities desire business aid, businesses in turn need various forms of support from communities. Such support includes an adequate transportation system, gas, electricity services, etc. Thus, organizations are expected to cater to the needs of the local community at large.
- **Society:** Social responsibility at the societal level encompasses issues that are regional and national in scope. A number of employers are also providing training in basic skills to help workers meet the requirements of available jobs. The weaker the connection between corporate social expenditures and concrete business-related results, the more proponents of the invisible-hand view of social responsibility are likely to object. Thus, an organization is responsible for a number of environmental concerns such as recycling, waste disposal, protecting the ozone layer, energy efficiency, etc.

- One intriguing question is whether companies that are socially responsible are more successful financially. The answer could be problematic because it is difficult to measure the social responsibility of one firm against that of another. Research suggests that a firm's financial performance may predict rather than result from social responsibility. For example, organizations that are doing well financially are in a better position to undertake socially responsible activities. Sometimes firms engage in social responsibility to bring about more stable relationships with major stakeholders. This helps them reduce the risk of lawsuits and governmental fines that could threaten organizational well being.

3. The critical role of the company's mission is demonstrated by failing firms whose short run actions are, in the absence of a mission, ultimately found to be counterproductive to their long run purpose. Such firms identified the scope of their operations in product and market terms only. A mission statement, however would have described the product, market and technological areas of emphasis for the business, thus forming its over-riding raison d' etre.

The term 'mission' is defined as "the fundamental and enduring purpose of an organization that set it apart from other organizations of a similar nature". The mission statement is an enduring statement of instruction of an organization; it refers to the philosophy of business in order to build the image of the company by activities currently pursued by the organization and its future status. This philosophy establishes the values, beliefs and guidelines for the business plan and business operation. Mission statements come in various forms but the most effective are those that are direct, precise and memorable. Most corporate mission statements are built around three main elements:

History of the Organization: The critical characteristics and events of the past must be considered in formulating and developing a mission statement.

Distinct Competencies of the Organization: The articulation of key goals those are consistent with the values to which managers are committed by the distinct competencies of the organization as it offers an advantage over other organizations.

The Environment of the Organization: The management should identify the opportunities provided and threats or challenges posed by the environment before formulating a mission statement.

The characteristics of a good mission statement are:

- It differentiates the company from its competitors.
- It defines the business that the company wants to be in, not necessarily is in.
- It is inspiring.

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- It is relevant to all the stakeholders in the firm, not just shareholders and managers.
- It attempts to ensure that the organization behaves in the way that it promises it will.
- It seeks to clarify the purpose of the organization – why it exists.

A mission statement usually attempts to answer several of the following questions:

- What is our reason for being? What is our basic purpose?
- What is unique or distinctive about our organization?
- Who are, or should be, our principal customers, clients or key market segments?
- What are, or should be, our principal economic concerns?
- What is likely to be differentiated about our business three to five years in the future?
- What are our principal products in the present and for the future?
- What are the basic beliefs, values, aspirations and philosophical priorities of the organization?

A vision becomes more tangible when it is expressed in the form of a mission statement. Such a statement can verbalize the beliefs and the directions toward which a visionary manager wan.

4. A mission statement contains only a few specific directives, broadly outlined as a statement of attitude, outlook and orientation rather than of details and measurable targets. There is a need for such a statement because it generates a unity of direction. It projects a sense of worth and intent that can be identified and assimilated by the external and the internal environment of the company. A mission statement aims to achieve following objectives:

- To ensure unanimity of purpose within the organization.
- To develop a base, or standard, for allocating organizational resources.
- To facilitate the translation of objectives and goals into a work structure involving the assignment of tasks to responsible elements within the organization.
- To provide a basis for motivating the use of the organization's resources.
- To specify organizational purposes and the translation of these purposes into goals in such a way that cost, time and performance parameters can be assessed and controlled.
- To establish a general tone or organizational climate, for example, to suggest a business – like operation.

A company gains a heightened sense of purpose when its managers address the issues relating to the specification of the ultimate aims of the firm. For example, it is not enough to say that 'ABC company' is in the business of "marketing anything that cleans anything." Rather, the company should articulate its long-term intentions that can serve as a basis for shared expectations, planning and performance evaluation. A mission statement thus affirms the company's commitment to responsible action in symbiosis with the firm's need to sustain survival, growth and profitability.

Formulating A Mission Statement

The process of defining a mission can be better understood by thinking about the condition of a firm at its inception. A typical business organization begins with the aspirations and beliefs of a single entrepreneur. The mission is then based on the following fundamental elements:

– Belief that the product or service can provide benefits at least equal to its price.

– Belief that the technology to be used in production will provide a product/service that is competitive in cost and quality.

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- Belief that the product or service can satisfy a customer need currently not met adequately for specific market segments.
- Belief that the management philosophy of the business will result in a favorable public image.
- Belief that the business will provide financial and psychological rewards for those willing to invest their labor and money in helping the firm succeed.
- Belief that with hard work and the support of others the business can do better than just survive. It can grow and be profitable.
- Belief that the entrepreneur's self-concept of the business can be communicated to and adopted by employees and stockholders.

As the business grows, the company may redefine its mission statement. The revised mission statement generally reflects the same set of elements as the original. It will state the

a. basic type of product or service to be offered;

b. primary markets or customer groups to be served;

c. technology to be used in production or delivery;

d. fundamental concern for survival through growth and profitability;

e. public image sought;

f. managerial philosophy of the firm; and

g. The firm's self-concept.

5. Ethics is defined as "the discipline dealing with what is good and bad or right and wrong, with moral duty and obligation." Business ethics encompasses the morality of business. The purpose of business ethics is not to teach the difference between right and wrong, but to give people the tools for dealing with moral complexity.

There is no worldwide standard of conduct for business people. Cultural norms and values vary between countries, and ethnic groups within a country. For example, what is considered to be a bribe in one country may be considered normal business practice in some other country. Differences in values also lead to differing notions of ethical behavior between business people and key stakeholders. For example, managers believe that profit maximization is the key goal of the firm, whereas concerned interest groups may have other priorities. This difference in values can make it difficult for one group of people to understand another's actions. For example, social progressives may contend that business people working in tobacco, alcoholic beverages and gambling industries are acting unethically by making and advertising products with potentially dangerous side effects such as cancer, addiction, etc. People working in these industries could respond by asking if it is ethical for people who don't smoke, drink or gamble to reject another person's right to do so.

The managers must identify the stakeholders who will be affected by the decision and in what ways in the first step. The managers need to determine whether the proposed decision would violate the fundamental entitlements of any stakeholders. For example, the right to information about health risks in the workplace is a fundamental right of employees. Step 2 involves judging the ethics of the proposed strategic decision. The judgment should be guided by the principles articulated in the mission statements and the moral principles that the company has adopted as a member of society. In step 3, establishing moral intent means that the company must resolve to place moral concerns ahead of other concerns in cases in which either the rights of stakeholders or key moral principles have been violated. At this stage, input from top management is valuable. Without the proactive encouragement of top managers, middle level managers might tend to place the narrow economic interests of the company before the interests of stakeholders. Step 4 requires the company to engage in ethical behavior. Developing a code of ethics can do this. Codes of ethics specify how an organization expects its employees to behave while on the job.

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Thus, strategic leaders should be objective about how society views their company and its products, and wherever possible should avoid actions that can damage its image. If an action that is viewed as unethical by certain stakeholders is unavoidable (such as the closure of a plant), it is important to use public relations to explain fully why the decision was taken. Thus the need for a good corporate image should not be under estimated.

6. Managers should consider the direction and stability of political factors while formulating their company's strategy. Political forces are very powerful in the context of legal laws and government rules and regulations within which the firm must operate. Every company has to face these political constraints in the form of antitrust laws, fair trade decisions, tax programs, minimum usage legislation, pollution and pricing policies, administrative activities and many other actions aimed at protecting the consumers and the local environment. Due to those laws, rules and regulations the company's profits get affected. However, there are other helpful political actions too. These are patent laws, government subsidies and product research grants that support the firm's activities. Thus, political forces have a positive as well as a negative impact on the company's activities. The three additional governmental functions, viz. supplier function, customer function and competitor function may also get influenced by political activity.

The supplier function is influenced by political activity when any private business is dependent on government owned resources and national stockpiles of agricultural products, which affect the firm's strategies.

As regards the customer function, government demand for products and services can create, sustain, enhance or eliminate many market opportunities. For example, the development of synthetic fuel temporarily by the Carter administration created a demand for new skills, technologies and products. The development of laser technologies was the outcome of the star wars defense program.

Similarly, we find that the government usually takes a lot of precautions to protect its consumers and local industries. Thus, government decisions greatly affect the businesses. So, it is the foremost step that every firm should analyze the government's strategies and develops complementary plans that can lead to their expected environmental opportunities.

7. Economic factors clearly indicate the nature and direction of the economy in which a firm operates. Every market is unique and consumption patterns change along with the wealth of the consumers in various market segments. For strategic planning all the economic trends at national and international levels have to be considered. Prime interest rates, inflation rates and trends in the growth of the Gross National Product (GNP), general availability of credit, the level of disposable income and the propensity of people to spend are the economic trends that have to be analyzed.

The potential economic impact of international forces appeared to be severely restricted and was largely discounted until recently. The new international power brokers changed the focus of economic environmental forecasting. The European Economic Community (EEC), the Organization of Petroleum Exporting Countries (OPEC) and coalitions of Lesser-Developed Countries (LDC) are three well-known examples of influential international power brokers.

In 1957, the Treaty of Rome led to the establishment of EEC or the European common market, with Western European countries as it members. The elimination of quotas and industrial products was their objectives. So, to compete more effectively in international markets, the member countries were helped by the Intra-European cooperation.

Countries such as the United States, Canada, Japan, the EEC and other countries negotiated on multilateral trade activities in the year 1979, regarding the establishment of rules for international trade. Almost every aspect of business activity in the United States was affected by these negotiations.

The OPEC is constituted of countries that export enormous amounts of oil to other countries. It is one of the most powerful international economic forces in existence today. When the major world suppliers of oil and gas, who are a part of OPEC, drastically increased prices in the early 1970s, the economies of the US and other countries of the world went into recession. The automobile industry of US was affected by the rules

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imposed by the government to redesign engine sizes and performance standards. It was also affected by increased user costs because people were willing to spend more for a well-featured, advanced, technological automobile. Third World and Fourth World countries recently got a chance to be involved in international commerce due to the threats and opportunities they faced because of globalization or liberalization.

The less developed countries got motivated by the success of OPEC and found that it would be economically beneficial to form organizations to face the established powers, i.e. the multinational enterprises which established their stay in those countries. Since 1974, the producers of primary commodities in the less developed countries strengthened their trade organizations by fixing high prices on their products and achieving larger real income or profits. On the other hand, huge new markets were offered by the developing countries to US firms in foodstuffs and capital machinery. The US business community's economic well-being can be affected by each of these international forces, either for better or for worse. So, companies should perpetually monitor the market and examine the changes that are taking place and formulate a suitable strategy. A strategy based on the international arena is a critical part of the management process.

8. As the volume per period increases, the economies of scale increase in terms of unit costs of a product. Economies of scale deter entry by forcing the entrant to come large scale and risk strong reaction from the existing firms or come in small scale and accept a cost disadvantage, both of them being undesirable options. Economies of scale can be present in each and every function of a business. As Xerox and General Electric sadly discovered, scale economies can be a key barrier to entry in production, research, marketing and servicing in the mainframe computer industry.

Economies of scale may relate to an entire functional area as in the case of the sales force, or they may stem from particular operations or activities that are part of the functional area. For example, in television manufacturing we find that large economies of scale in color tube production are less significant in cabinet making and set assembly. Each component of cost therefore must be examined separately for its particular relationship between unit cost and scale.

The economies can be reaped by the units of multi business firms (where these economies are similar to those of scale economies) if they are able to share operations or functions with other businesses in the company. For example, let us consider the manufacture of small electric motors, which are then used to manufacture industrial fans, hairdryers and cooling systems for electronic equipment. In motor manufacturing, if the economies of scale extend beyond the number of motors needed in any one of the markets, then the multi business, which is diversified in this manner, will reap economies that exceed those available if it manufactured only motors for use in hairdryers. Thus, volume constraints can be removed by diversification around common operations or functions.

These volume constraints are imposed by the size of a given industry. The entrant, who is prospective in nature, is forced to be diversified or face a cost disadvantage. Potentially, sales forces, distribution systems, purchasing and so on are included in the shareable activities or function.

9. A company should be cautious while competing in the international market because the environment insists for effective strategic decisions, which are more complex to be formulated, and are also multidimensional. The international operations cannot be viewed by the manager as a set of independent decisions, that means the manager must consult his colleagues and go for participative decision making because the environment in different countries is not unique. So, it becomes essential for a parent company to take the opinion of the managers of their affiliates in foreign countries. Rather, a manager is confronted with trade off decisions considering multiple products, country environments, resource options, corporate and subsidiary capabilities and strategic options.

The complexity of strategic planning for the multinational firm is the addition of two recent trends, viz. the globalization of industries and the increased activism of stakeholders. Globalization refers to a strategy of approaching worldwide markets with a standardized product. The end consumers preferring a low priced, standardized product and

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multinational corporations using their worldwide operations to compete in local markets commonly contribute to such globalize markets. Stakeholder activism refers to demands placed on the company by each foreign environment, principally foreign governments. The basic framework to analyze and better understand strategic decisions in this complex environment is provided by this section.

Multi-domestic Industries and Global Industries

Michael E. Porter developed a framework to view the basic strategic alternatives of a firm competing internationally. The analysis initially involves understanding of the industry or industries in which the firm competes. International industries can be characterized along a continuum from multidomestic to global.

Multi-domestic Industries

A multi-domestic industry is one in which the competition within the industry is essentially segmented from country to country. Thus, although multinational corporations are involved in the industry, competition that occurs internally in a country is independent of the competition in other countries. Retailing insurance and consumer finance are examples of such industries. The subsidiaries of an MNC should be managed as distinct entities in a multi-domestic industry that is each subsidiary should be rather autonomous by making independent decisions to respond to local market conditions. Thus, an international strategy in a multi-domestic industry actually becomes the sum of the strategies developed by subsidiaries operating in different countries. Multinational firm and the domestic firm competing in a multi-domestic industry can be primarily distinct in their decisions related to what countries the company competes in and to how it conducts business abroad.

The degree to which a market is multi-domestic is determined by the following factors.

a. The need for customized products to meet the tastes or preferences of local customers.

b. A very fragmented industry with many competitors in each national market.

c. The lack of economies of scale in the functional activities of the business.

d. Distribution channels unique in each country.

e. A low technological dependence of each subsidiary on R&D provided by corporation.

10. Value chain analysis is based on the assumption that a business's basic purpose is to create value for its users and its products or services. In this method of analysis, dividing a business into a number of linked activities, each of which may produce value for the customer, assesses strengths and weaknesses. In value chain analysis, managers divide the activities of their firms into sets of separate activities that add value. To do so, the activities of the organization (such as raw material procurement, logistics, operations, sales, marketing, technology development, firm infrastructure, etc.) have to be identified and examined by managers. Managers thus acquire an in-depth understanding of their firm's capabilities, its cost structure, and how these create competitive advantage or disadvantage.

Value chain analysis divides a firm's activities into two major categories, i.e. primary and support activities. Primary activities are those activities that are involved in the physical creation of the product, marketing and after-sales support. Support activities assist the primary activities by providing infrastructure that allows them to take place on an ongoing basis. The value chain includes a profit margin, creating value that exceeds cost so as to generate a return for the effort. Each of the primary and support activities can be further divided for a thorough internal analysis.

Conducting a Value Chain Analysis

In the initial step of a value chain analysis, a company's operations are divided into specific activities or business processes. The next step is to attempt to attach costs to each discrete activity (Activity-based costing). If managers assign costs and assets to each and every activity, managing internal strengths and weaknesses would be much more easier and simpler. Once the company's value chain has been documented and costs determined,

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managers need to identify the activities that are crucial to customer satisfaction and market success. The following considerations are essential at this stage:

- The manager's choice of activities has to be influenced by the company's basic mission.
- The manager must take into consideration the nature of value chains and the relative importance of the activities since they vary by industry.

Value chain analysis also requires a meaningful comparison to use for evaluating the role of an activity as strength or weaknesses.

The framework of the value chain analysis has certain strengths. Firstly, it clearly highlights the importance of customer value. Secondly, it provides a sense of direction to managers by offering a generic checklist of what to analyze when assessing a firm. Lastly, it indicates that everything an organization does can be managed to improve the firm's overall ability to create value. Thus, the value chain framework is useful for organizations in general and managers in particular. However, the framework suffers from certain limitations. It does not provide a sense of how various activities interact or relate to one another.

11. Insight into the financial situation of a company will quickly place its condition in perspective. The critical areas in any profit or non-profit organization can be summed up as follows:

- Scanning and using funds,
- Planning for securing and using funds,
- Controlling expenditure,
- Reporting all transactions and results to appropriate parties.

Facts can be gathered and tentative conclusions can be drawn in the initial scanning of operations. Later, analyzing can provide information and understanding in considerable depth.

The financial statements of a firm offer abundant information about the present position and also reveal the results of operations over time. The details of cash, receivables, inventories and corresponding liabilities are provided by the balance sheet. The job of the internal analyst is to "make the figures talk." Suitable explanations and notes have to be given at the end of every financial statement so that the reader can get an idea of it in an instant. However, a common tendency is to state conclusions rather than facts when analyzing financial statements. The response of the internal analyst to information from the financial statements should be factual and substantially quantitative. For example, an analyst after calculating ratios concludes that the company has too much debt and is heavily leveraged. But the study of the company's return on equity indicates that excellent financial practices are being employed. The balance sheet and income statements then provide factual information within the limitations of accounting principles. Thus, inferences and conclusions are better made after considering other information in addition to the statements.

Financial Analysis

One of the most important tools for assessing the strength of an organization within its industry is financial analysis. A financial analysis measures how a company is doing in comparison with past years and its competitors in the industry. There are four basic groups of financial ratios:

- Liquidity ratio
- Leverage ratio
- Activity ratio
- Profitability ratio.

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Liquidity Ratio

A company's ability to meet its imminent financial obligation is known as liquidity. Liquidity ratios are used as indicators of a firm's ability to meet its short-term obligations. Two widely used liquidity ratios are:

Current ratio = Current assets/Current liabilities

Quick ratio = (Current assets – inventory)/ Current Liabilities

The quick ratio recognizes that inventory is usually less liquid than other current assets. In the case of long production processes, inventory may not provide much liquidity because it cannot be turned into cash.

Leverage Ratio

Leverage ratios identify the source of a firm's capital, i.e. owners or outside creditors. The various types of leverage ratios are:

$$\text{Debt ratio} = \frac{\text{Total liabilities}}{\text{Total assets}}$$

$$\text{Debt on equity} = \frac{\text{Total liabilities}}{\text{Total common equity}}$$

$$\text{Times interest earned} = \frac{\text{Earnings before tax}}{\text{Interest}}$$

$$\text{Fixed charges coverage} = \frac{\text{EBIT} + \text{Interest} + \text{Lease}}{\text{Interest} + \text{Lease}}$$

The debt ratio is the most commonly used ratio.

Activity Ratio

In general, activity ratios measure a firm's efficiency in generating sales and making collections. The various activity ratios are:

$$\text{Inventory turnover} = \frac{\text{Sales}}{\text{Inventory}}$$

$$\text{Average collection period} = \frac{\text{Accounts receivable}}{\text{Sales per day}}$$

$$\text{Total assets turnover} = \frac{\text{Sales}}{\text{Total sales}}$$

$$\text{Fixed asset turnover} = \frac{\text{Sales}}{\text{Net fixed assets}}$$

Other things being equal, a low inventory is more efficient because it indicates that the firm does not have many assets tied up in inventory. Total asset turnover and fixed asset turnover measures the company's ability to generate sales for a given level of assets. A higher ratio indicates a more efficient firm.

Profitability Ratios

Profits are the net result of a large number of policies and decisions chosen by a company's management. Profitability ratios indicate how effectively a firm is being managed. Some important profitability ratios are:

$$\text{Profit margin} = \frac{\text{Net Income}}{\text{Sales}}$$

$$\text{Return on assets} = \frac{\text{Net Income}}{\text{Total Sales}}$$

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$$\text{Return on equity} = \frac{\text{Net Income}}{\text{Total common equity}}$$

For profit margin and return on assets, high ratios are superior to low ratios; but with return on equity, a high value may indicate a higher level of financial leverage than of managerial efficiency. Also, a high degree of financial risk may accompany a high return on equity.

Financial analysis is not a standardized or mechanical process. It is the means for analysis and must always be directed toward the needs of a specific situation. Financial analysis, if approached in a proper manner, can be a productive starting point for assessing financial strengths and weaknesses and other attributes of a firm, based on past performance.

Information in financial statements is historical and often derived from a relatively distant past. The data shows what has happened and what the situation was in the past. Future trends can be drawn but the basic assumption that conditions will remain similar enough to extrapolate data seldom proves accurate. Financial data can provide insight into the future when analyzed properly in a strategic context. Regardless of the type of institution, the finance function must be examined in order to gain some insight into its health. Even non-profit institutions must pay their bills in time to continue operations. Even though profit is not an objective of non-profit organizations, an excess of income over expenses allows them to grow larger and stronger to accomplish their service objectives.

A review of the financial conditions provides information about the organization and the management. It also reveals whether revenues have been increasing profitability. A financial analysis identifies the financial resources of the firm and how well they have been and are being utilized. All of this is important when considering the appropriateness and implementation of past, present and future strategies.

12. An analysis of the marketing function requires the inclusion of the product-market strategy. Marketing brings together the organization and the external environments crucial to its existence. In the marketing function, the various activities undertaken are:

- Market Research
- Market Analysis
- Market Forecasting
- Sales Forecasting
- Advertising
- Direct Selling.

In the marketing function, information is brought to the organization and forwarded to its customers. Thus, marketing is a vital communication link between the organization and the outside world. Internal relationships exist between the marketing group and the research and development, production and planning areas. The product managers, project managers and information coordinators of various kinds strive to accomplish effective communication between marketing and other departments, and thus between the outside world and the internal organization. For other departments to perform well, sometimes, vital information has to provide by the marketing department. For example, sales forecast forms a basis for budget and financial/planning and market research forms a basis for product development. In certain organizations, the marketing function is so essential that they are looked upon as "marketing" companies. For example, Coca-Cola is known the world over for its marketing function. An analysis of the marketing function ultimately leads to strategy changes at the corporate or individual business unit level. Thus, analyzing the marketing function leads to recommendations about both marketing and marketing management in the organization.

13. The human element permeates all segments and units within an organization. Due to this, it should be considered independently. Although attention has been given to the human

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element in each functional area, an overall profile of the organization should view this aspect as an area in itself. The human resource management function includes major activities like:

- Designing and analyzing jobs based on the future needs of the organization.
- Planning for future human resource needs.
- Recruiting, selecting and employing people based on the organization's needs.
- Training the employees to develop the organization's human resources.
- Appraising the performance of the employees and moving them among different levels based on organizational needs.
- Fixing and maintaining compensation package for employees.
- Maintaining conducive human relations.
- Creating and maintaining a high quality of work life in the organization.
- Adopting growth strategies for human resource development.
- Creating and maintaining a harmonious organizational climate.
- Team building.
- Managing the diversified culture among the employees.

Companies adopting stability as a strategy do not bring significant changes in human resource management. In the process of internal analysis, the analyst must judge whether the human element is actually a resource and strength for the organization or a weakness that may impede management efforts to employ other resources successfully.

The development and sustainment of human resources function is a major task. This has to be taken care of not only by top management but also by all the executives in the organization. If management has succeeded here, high morale is likely to follow. Thus, strengths in the human resource side of the organization are crucial during the implementation of strategy.

14. Organizations come into being for some purpose or purposes. The purpose/purposes of an organization's existence should be clarified, articulated and defined by the management. This is done through the establishment of objectives, which pervades the managerial process. An organization not guided by objectives is an organization not being managed properly. There are hardly any organizations with no purpose and no direction. Without objectives, an organization may continue to exist, but it cannot be considered to be under the control of management. The need of objectives can be emphasized from the following.

- **Objectives Provide Direction:** As the beacon of a lighthouse guides ship captains to safety, objectives direct the efforts of managers into certain channels in the pursuit of these objectives. Therefore, clearly defined objectives specify an end result for the organization.
- **Objectives Serve as Standards:** As a temperature of 70 degree Fahrenheit may reflect a homeowner's standard for a comfortable setting, objectives serve as standards for the manager. Without clearly defined objectives, managers possess no tools for evaluating performance. Without objectives there are no means of deciding whether work is satisfactory or acceptable.
- **Objectives Serve as Motivators:** Objectives encourage workers to put forth their best efforts to achieve the end goals. For example, employees who understand the objective or profitability and their role in generating profits may be motivated to work harder or more efficiently under a bonus or other profit sharing program.

Therefore, objectives improve the effectiveness of an organization by producing three major benefits: providing direction, serving as standards for evaluating performance, and motivating members of the organization.

15. Firms pursue concentration strategies to grow while remaining relatively simple. Concentrated growth is the strategy of the firm that directs its resources to the profitable growth of a single product, in a single market, with a single dominant technology. The

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main rational for this approach is that the firm thoroughly develops and exploits its expertise in a delimited competitive arena.

The main advantage of concentrated growth strategy is that it leads to enhanced performance. The major characteristics of a concentrated growth strategy are the ability to assess market needs knowledge of buyer behavior, customer price sensitivity and effectiveness of promotion. These characteristics are a major determinant of competitive market success. Firms pursuing the concentration strategy identify new developments and trends within the industry and respond to them. Specific conditions in the firm's environment are favorable to the concentrated growth strategy. One such condition is that when the firm's target markets are not product saturated. Markets with competitive gaps leave the firm with alternatives for growth rather than taking market share away from competitors. Another favorable condition exists when the firm's inputs are stable in price and quantity and are available in the amounts and at the times needed. Also, a stable market – a market without the seasonal or cyclical swings that would encourage a firm to diversify, favors the pursuit of concentrated growth

Risks and Rewards of Concentrated Growth

Under stable conditions, concentration poses less risk than any other grand strategy. But in a changing environment, concentrating in a single product market makes a firm vulnerable to changes in that segment. Also, it is difficult for an organization to attempt sudden changes if its product is threatened by near-term obsolescence, changes in customer needs, new substitutes or changes in technology. In the case of concentration, over commitment to a specific technology and product market can hinder a firm's ability to enter a new or growing product market that offers more attractive cost-benefit trade-offs. Also, organizations following concentration strategy incur high opportunity costs that result from remaining in a specific product market and ignoring other options that could employ the firm's resources more profitably.

A major misconception about the concentrated growth strategy is that the firm practicing it will settle for little or no growth. A firm adopting this strategy grows by building on its competencies. By this, the firm achieves a competitive edge by concentrating in the product-market segment it knows best. The firm that chooses a concentrated growth strategy directs its resources to the profitable growth of a narrowly defined product and market, focusing on a dominant technology. Therefore, the success of a concentration strategy is founded on the firm's use of superior insights into its technology, product and customer to obtain a sustainable competitive advantage.

16. Backward integration

Backward integration takes place when a firm assumes a function previously provided by a supplier (going backward on an industry's value chain). For example, 7-Up, the soft drink manufacturer used this method to own the lemon tree orchards that produced the lemon extract for the drink that was earlier supplied by many suppliers. The advantages of backward integration strategy are:

- Firms can have a regular and uninterrupted supply of raw materials, components and other inputs.
- Firms can enjoy economies of large-scale operations.
- Quality control of raw materials, components and parts is ensured.
- Firm can increase its power of negotiation with other suppliers in view of access to information on costs, facilities, earning potential, etc.
- There can be a minimization on direct taxes payable on purchases of inputs.

Though this strategy offers many advantages, it is not free from limitations. Certain drawbacks of this strategy are:

- Technological upgradation in one of the firms necessarily forces the management to upgrade the technology of the remaining firms. This process demands heavy financial investment that may not be feasible in short-term.

Adverse economic conditions in the main firm also affect the firm supplying raw materials, etc.

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Forward Integration

When organizational growth encompasses a role previously fulfilled by a customer, the process is known as forward integration (going forward on an industry's value chain). For example, a personal computer maker could own a chain of retail stores from which it sells its machines. Firms adopt the strategy of forward integration due to the advantages it offers, such as:

- Greater acquisition of control over sales prices and level of output.
- Firms can improve their competitive position.
- Firms can develop their own network for consumer feedback.
- Firms can have their own facilities for providing pre-sales and post-sales service.

In spite of the advantages, this strategy suffers from certain disadvantages such as:

- Since the firm produces final products with its own components and sells the final products as well as components, it competes with its own customers.
- Firms may face financial problems as this strategy demands for large-scale operations at retail level.

Although backward integration is usually more profitable than forward integration, it can reduce a corporation's strategic flexibility in the long run since exit from business would be a difficult proposition.

17. Long-term objectives are statements of the results a firm seeks to achieve over a specified period. To achieve long-term prosperity, strategic planners commonly establish long-term objectives in seven areas. They are:

Profitability: The ability of any firm to operate in the long run depends on attaining an acceptable level of profits. The profit objective is generally expressed in earning per share or return on equity.

Public Responsibility: In the long run, firms recognize their responsibilities to their customers and to society at large. Such firms work to establish themselves as responsible corporate citizens.

Productivity: Strategic managers constantly try to improve the productivity of their organization. Sometimes, the productivity objective is stated in terms of desired cost decreases. For example, objectives may be set for reducing defective items or for overtime, and so on.

Competitive Position: One measure of corporate success is relative dominance in the market place. Therefore, organizations formulate long-term objectives for improving their competitive position.

Employee Development: Employees value growth and career opportunities. Thus, strategic planners often include an employee development objective in their long range plans.

Employee Relations: Organizations are bound by union contracts and they actively seek good employee relations. Strategic planners set objectives for safety programs, employee stock option plans for improving employee relations.

Technological Leadership: Another long-term objective that is often set by strategic planners is with regard to technological leadership.

The criteria that are to be used in preparing long-term objectives are:

Flexible: The long-term objectives should be adaptable to unforeseen changes in the firm's environment (internal and external).

Measurable: Long-term objectives should be measurable over time, i.e. they must clearly and concretely state what will be achieved and when it will be achieved.

Motivating: Long-term objectives should be high enough to challenge but not so high to frustrate or so low as to be easily attained. Also, objectives should be tailored to specific groups so that they can be motivating.

Suitable: The long-term objectives must be suited to the broad aims of the firm, which are expressed in its mission statement.

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Understandable: The long-term objectives must be so stated that they are understandable to the recipient as they are to the giver. The strategic managers at all levels must understand what is to be achieved.

Achievable: Lastly, objectives must be possible to achieve. This means that the strategic managers while formulating long-term objectives must take all the limiting factors into consideration.

Therefore, when strategic planners study their opportunities, they try to determine which opportunities are most likely to result in achieving various long range objectives.

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importance to the other attractiveness factors. The business units are scaled from 1 (very unattractive) to 5 (very attractive).

In step two, the key factors needed for success in each business unit are selected. The business strength/competitive position for each business unit is assessed on a scale of 1 (very weak) to 5 (very strong).

Each business unit's current position is plotted on a matrix.

In the last step, the firm's future portfolio is plotted, assuming that present corporate and business strategies remain unchanged. Then, it has to be found if any performance gap exists between the projected and desired portfolios. If any gap exists, it should serve as a stimulus to review the corporation's current mission, objectives, strategies and policies.

Thus, the GE nine cell planning grid helps in placing a business unit in one of the nine cells of the matrix, based on its industry attractiveness and business strength scores. The potential strengths of the grid are:

– It allows for intermediate ranking between high and low and between strong and weak.

– It incorporates a much wider variety of strategically relevant variables than the BCG matrix.

– It stresses the channeling of corporate resources to businesses with the greatest probability of achieving competitive advantage and superior performance.

Though the GE nine cell-planning grid is better than the BCG matrix, it also suffers from some weaknesses. They are:

– It is quite complicated and cumbersome.

It cannot effectively depict the positions of business units in developing industries.

Overall, the GE nine cell-planning grid is an improvement over the BCG matrix. The planning grid considers more variables and does not lead to simplistic conclusions.

Thus, the portfolio approach is useful for examining alternative corporate-level strategies in multi-industry companies. Once portfolio strategies have been identified, business strategies must be determined. The portfolio approach helps in clarifying and determining the broad strategic intent, but this is not enough. The process of strategic analysis and choice is not completed by merely making decisions involving the allocation of corporate resources and the manner in which the business unit has to be managed. Each business unit must also examine and select a specific grand strategy to guide its pursuit of long-term objectives.

19. An annual objective must be linked clearly with the long-term objectives of the business grand strategy. Before linking the difference between these two, the grand strategy should be understood properly. So, to distinguish these two types of objectives, the following four dimensions are essential.

Time Frame: Long-term objectives are the objectives fixed for 5 years or more whereas the annual objectives are fixed for only one year.

Focus: The focus of long-term objectives is into the future position of the firm in its competitive environment, whereas the annual objectives focus on next year where they identify specific accomplishments for the company, functional areas, or other sub-units.

Specificity: Long-term objectives are broadly stated whereas annual objectives are directly linked to the company, a functional area, or other sub-unit and are considered to be very specific.

Measurement: Both long-term and annual objectives are quantifiable. Long-term objectives are measured in broad relative terms; for example, 20 percent market share

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whereas annual objectives are stated in absolute terms, such as a 15 percent increase in sales in the next year.

Annual objectives add breadth and specificity in identifying what must be completed successfully in order to achieve the long-term objectives. For example, if a company has a long-term objective of achieving 20 percent market share after 5 years, then a series of specific annual objectives must be fixed in order to meet the long-term objective. Let us consider that a company has fixed its long-term objective of achieving the market share of 20 percent after five years. But in order to achieve this objective, a series of specific annual objectives must be fixed; identifying what must be accomplished each year to achieve those objectives. If the market share at present were 10 percent, then one likely annual objective would be "to achieve a minimum 2 percent increase in relative market share in the next year".

In order to achieve the long-term objective, specific annual objectives should provide targets for performance of operating areas. "Opening two regional distribution centers in the south in 2000" might be one annual objective. The approval of the marketing and production managers is essential in achieving a 20 percent market share in five years. "Conclude arrangement for Rs.10 million line of credit at 1 percent above prime lending rate in 2000" might be the annual objective of financial managers to support the operations of new distribution centers and the additional purchases necessary to increase output in reaching the long-term objective.

Integrated and Coordinated Objectives

Implementation of the grand strategies requires integrated and coordinated objectives. However, sub-unit manager viz. vice presidents of finance, marketing and production may not consider the factors such as integration and coordination in setting annual objectives. The priorities of the marketing function are totally different from that of finance/accounting or manufacturing. For example, in manufacturing, long production runs and plant warehousing are preferred logically in order to maximize efficiency. On the other hand, marketing which usually aims at customer satisfaction can be efficient by frequent, short production runs and field warehousing. So, the annual objectives should be integrated and coordinated without which the long-term objectives will end in failure due to the natural conflicts arising amidst these departments.

The proper coordination and integration of operating units lead to successful implementation of the strategy. This is encouraged through the development of short-term annual objectives.

20. While most of the operating strategies guide implementation in the immediate future, financial strategies vary because these strategies in this area direct the use of financial resources in support of the business strategy, long-term goals and annual objectives. The financial managers are guided by the financial operating strategies with long time perspectives in long-term capital, investment, use of debt financing, dividend allocation and the firm's leveraging posture. There is more immediate focus for the operating strategies designed to manage working capital and short-term assets. Long-term financial strategies usually guide capital acquisition.

The common issue in the capital acquisition strategy is the desired level of debt versus equity and internal long-term financing of business activities. For example, Delta Airlines has a long standing operating strategy that seeks to minimize the level of debt in proportion to equity and internal funding of capital needs. The company possesses records of steady profitable growth over the last 20 years and represent an operating strategy that is effective for capital acquisition.

Capital allocation is another financial strategy, which is of major importance. There are numerous major investments in facilities, projects, acquisitions and people, where financial strategy plays a major role. These huge investments generally cannot be made immediately because it requires proper planning. For setting the priorities and timing for this investments capital allocation strategy must be implemented. By doing this the conflicting priorities among operating managers competing for capital resources can be managed.

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Retrenchment or stability often requires a financial strategy that focuses on the reallocation of existing capital resources. The pruning of product lines, production facilities or personnel to be reallocated elsewhere in the firm could be necessitated by this strategy. An emotional setting is created by the overlapping careers and aspirations of key operating managers. Even with retrenchment, a clear operating strategy that describes capital allocation priorities is important for effective implementation in a politically charged organizational setting.

Capital allocation strategy should be carefully implemented. Let us say, that the business is growing rapidly, which indicates that the firm is making huge profits, in the sense that the demand for the firm's product is increased and the market requires more supply of products. In this situation, flexibility in making capital expenditure at the operating level may enable timely responses to an evolving market. Capital expenditures, on the other hand, may be carefully controlled if retrenchment is the strategy.

Dividend management is an integral part of internal financing of a firm. Dividends are paid on earnings. Lower dividends to the shareholders lead to higher internal financing and vice versa. This will help the firm in avoiding the need for external sources. However, dividends and stability of earnings often make a positive contribution to the market price of a firm's stock. Therefore, a dividend management, which is properly guided by a strategy, must support the business posture toward equity markets.

Working capital is as critical to the daily operation of a firm as are other strategies. The seasonal and cyclical fluctuations in a firm's size and the pattern of receipts and disbursements influence directly the capital requirements of the firm. The working capital component of financial strategy is built on an accurate projection of cash flow. The cash management guidelines must be provided by it for conserving and rebuilding the cash balances required for daily operation.

21. Corporate resource planning relates to the allocation of resources between various parts of the organization together with corporate investment decisions concerning the acquisition of additional resources. If investment funds are limited, their allocation will be based on the strategic importance of the various spending opportunities. Also, the financial evaluation of the viability of each project has to be considered. If funds are not available, they need to be borrowed to finance the projects. In such a case, the return on investment should exceed the cost of capital. Companies should seek the best possible returns from investments because they may be seen as undesirable but necessary freezing of corporate funds. Sometimes, managers see investments as a reflection of status, especially if they are invested in new plant and technologically advanced equipment. In this case, there would be a sub-optional allocation of corporate resources.

The organization structure forms a basis for the allocation of corporate resources. If the organization is multidivisional, the extent of decentralization will determine the freedom that is given to general managers to allocate resources amongst their functional managers and departments. If the power to change strategies is delegated, authority is required to change resource allocations. For instance, if directors delegate the authority to change a particular strategic move to the General Manager of the company, the General Manager should also be empowered to change the allocation of resources accordingly. This implies moving resources within the General Manager's area of responsibility. Sometimes, additional resources need to be acquired from outside the organization. In such cases, the resources must be allocated to those areas that are most significant in the creation of competitive advantage. If strategic resources are located centrally, but are used by various divisions, then their effectiveness needs to be carefully monitored. The resources should be allocated to the areas in which they can yield the most benefit for the organization.

22. A policy is a general guide that specifies the broad parameters within which organizational members are expected to operate in pursuit of organizational goals. Policies provide general

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boundaries for action, but they do not dictate exactly the actions that should be taken. Policies frequently spell out important constraints. For example, retail stores generally have a policy requiring that returned merchandise should be accompanied by a sales receipt.

Policies guide either thoughts or actions, or both, by indicating what is expected by the managers in certain decision areas. Over time, policies place constraints upon the decision-making freedom that managers have by establishing the way that certain tasks should normally be carried out. The process of strategy formulation is a planned activity, but managers at times wish to pursue objectives that are personally important to them. Therefore, policies should be related to stated strategies but, at the same time, they should not restrict managers to the extent that they are unable to make adaptive changes, when such changes are appropriate or necessary. Policies need to be written down and formulated. Policies may emerge out of certain behavioral patterns. For example, a policy can exist simply because that is how something has always been done. Sometimes, policies can be advisory, leaving the decision-makers with some flexibility. On the other hand, they can be mandatory, whereby managers have no discretion. Mandatory policies tend to stop the efficient and effective thinking of managers and employees. Moreover, mandatory policies are unlikely to motivate managers. Therefore, advisory policies should be preferred because it is essential to allow managers some flexibility in order to adapt to changes in the organization and environment. Thus, policies should guide rather than remove discretion.

The Creation and use of Policies

Policies can be created both consciously and unconsciously. The main stated policies are those that the managers draw up in relation to their areas of discretionary responsibility. The key policies are created by the strategic leader and then filtered down the organization. There should be consistency between the policies created by the general manager and those created by the divisional or functional managers. Sometimes, external stakeholders force certain policies on the company. For example, the government may set a policy of safety at work that would affect an organization's personal policies. In certain circumstances, powerful shareholders or bankers can dictate financial policies.

The major functional areas of the business should be covered by explicit policies. All employees who will be affected by them should know such policies. Explicit policies provide a clear framework in which decisions can be made. They also allow people to understand the behavior patterns that are expected of them in particular circumstances. Lastly, changes in strategies may require changes in policies to be implemented successfully.

Principles of Good Policy

The potential effectiveness of policies in relation to strategy implementation is determined by the following principles.

– **Policies Should Reflect Objectives:** Policies are justified only if they lead to the achievement of a company's objectives. Policies should be reviewed from time to time and assessed whenever strategies are changed in any significant way. Policies that have evolved unconsciously may have a negative impact on the objectives, making them harder to achieve.

– **Policies should be Consistent:** An organization's policies should be consistent and conflicting policies should be avoided. For instance, in most organizations there are clear-cut rules and regulations leading to policies in the area of human resources, i.e. employee designations, employee levels in the hierarchy, compensation slabs, etc.

– **Policies should be Flexible:** Policies exist to provide consistent guidelines to the decision-making process. They advice managers how to behave in particular circumstances. Regular reviews and changes in policy (when necessary) will provide

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the appropriate flexibility in a turbulent environment. Policies become unhelpful if they are seen as mandatory and inflexible when there is a clear need to make changes.

– **Policies should be Communicated, Taught and Understood:** The formulation of policies does not guarantee that they are followed and that the desired strategies are implemented. The policies should be communicated to the employees so that they understand the existence and meaning of policies. Only then will they be more closely tied in with the performance objectives.

– **Policies should be Controlled:** Stated policies can be assessed and controlled during any strategic review. But the evaluation may fail to take the non-stated policies into account.

Procedures

A procedure is a prescribed series of related steps to be taken under certain recurring circumstances. Well-established and formalized procedures are called Standard Operating Procedures (SOPs). In other words, a procedure is a type of plan designed to establish the steps that employees should follow when carrying out certain routine tasks. A well-conceived and straightforward procedure ensures that the necessary action in certain circumstances is clear to everyone. Such procedures can also provide a useful control mechanism. Procedures provide detailed, step-by-step instructions as to what should be done. For example, banks typically have procedures that govern how tellers handle deposits. Therefore, they do not allow much flexibility or deviation.

Budgets

A budget is a financial plan listing the resources or funds assigned to a particular program, project, product or division. Budgets represent the objectives of the organization in monetary terms. They indicate how much should be spent, by which department, when and for what purpose. Budgets involve the allocation of resources to individual managers who are responsible for the completion of particular tasks. Budgets are assigned to individual products and business units. Unless the future prospects and viability of products and business units are evaluated objectively, budgeting may become more financially oriented than strategic.

23.

A. A simplified value chain of the entertainment industry is depicted

	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
	Finding raw materials	Manufacture of components	Assembly of final product	Wholesale distribution	Retail to final user
	Film	Outdoor sets	Film processing	Physical distribution to showing venues	Multiplex cinemas
	Lighting	Studios	Film cutting	Packaging for film channels	Single cinemas
	Cameras	Film making	Film copying	Sales to outlets (cinema groups, single cinemas)	Cable television
	Trolleys		Dubbing	Packaging for aerial TV	Satellite television
	College training of technicians		Subtitling		Aerial television
Typical Profit Level	10%	0-1000%	7-10%	10-12%	12-20%
Typical Risk	Low	High	Low to Medium	Medium	Medium
Key Factors	Glamorous/hopeful	Cyclical/talent dependent	Technical/connections	Contacts/market share	Fashion dependent/market penetration

B. A simplified value chain of the physical distribution industry

	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
	Finding raw materials	Manufacture of components	Assembly of final product	Wholesale distribution	Retail to final user
	Food suppliers	Office buildings	Managing live warehouses	Total warehouse and distribution	Offices
	Non-food suppliers	Intelligent warehouses			
	Trucks	Distribution software	Road logistics management	Single unit operators	Internet distributors

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			systems		
	Trailers	Traffic management systems			
	Ships	Pallets	Haulage	Multiple groups	Mail order houses
	Airplanes	Trained personnel			
	Tractor units		International logistics	Shipping specialists	Industrial distributors
	Railways			Rail specialists	
	Warehouse buildings			Air specialists	Retail shops
TYPICAL PROFIT LEVEL	12%	15%	5%	5%	10-20%
Typical Risk	Medium	Medium	Low	Low	High
Key factors	Someone else's problem	Little credibility without practical experience of stage three	Not a lot of benefit from size	Low barriers to entry	Dependent upon understanding retail customers

C. A simplified value chain of the tourist industry

	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
	Finding raw materials	Manufacture of components	Assembly of final product	Wholesale distribution	Retail to final user
	Planes, ships, coaches, trains, cars, bikes etc.	Airplane schedules		Internet	Holiday organizer
	Hotels	Tourism shops		Retail shops	Holiday group companies
	Takeoff slots	Internet availability		Brochures	Single holiday specialists
	Resorts	Plane/hotel deals		Advertising in newspapers	Customer segment specialists
	Cultural infrastructure	Assembly of holiday packages		Advertising on billboards	Holiday resort specialists
	Service minded population	Customers population segmentation		Database selling	Holiday management
	Willing customers	Brochures		Telephone sales	Internet sales
	Insurance	Holiday insurance		Sales at point of holiday sales	Holiday insurance sales
Typical Profit Level	15%	8%	N/A	7%	12%
Typical Risk	Medium	Medium	N/A	High	High
Key factors	Expensive capital (hotels, planes) forces owners to 'best offer' returns. When economy is poor, these drop below profitable levels.	Innovation is the key to finding new markets		Highly oligopolized but undisciplined and subject to first mover discounts winning	Regular bankruptcies offer temporary relief from excess supply caused by low barriers to entry.

24. The strategic perspective of the behavior of costs of a firm is not fully understood by many of them, which hence fail to exploit opportunities to improve their relative cost position. Firms, in assessing and acting upon cost position, make common errors, some of which include:

Exclusive Focus on the Cost of Manufacturing Activities: The mere mention of "cost" makes most managers instinctively think of manufacturing. However, activities such as marketing, sales, service, technology development, and infrastructure generate a significant, if not overwhelming, share of total cost. These activities, however, often receive very little attention in cost analysis. The entire value chain, when examined, often results in relatively simple steps that can significantly reduce cost. For example, dramatic impacts can be seen on the cost of performing research as a result of recent advances in computers and computer-aided design.

Ignoring Procurement: Many firms consider purchasing as a staff function and devote few management resources to it. Though the firms work hard to reduce labor costs, they pay scant attention to purchased inputs. Purchase price of key raw materials is often the central focus of analysis within the purchasing department. Individuals with little expertise of motivation to reduce cost are often allowed by the firm to purchase many items. As a result, linkage between the purchased inputs and costs of other value activities go unrecognized. Major cost benefits for many firms can ensure from modest changes in purchasing practices of the firm.

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Overlooking Indirect or Small Activities: Large cost activities and/or direct activities like, fabrication and assembly of components are usually the focus of cost reduction programs. Insufficient attention is paid to activities representing a small fraction of total cost, and indirect activities, such as maintenance and regulatory costs, are often altogether ignored.

False Perception of Cost Drivers: Misdiagnosing of their cost drivers is a common mistake committed by firms. For example, a firm having the largest national market share may incorrectly assume it and the lowest costs that national market share drivers cost. However, the firm with large regional share in the regions in which it operates may actually be the source of its cost leadership. Due to a failure to understand the sources of its cost advantage, a firm may attempt to reduce cost by increasing its national share. This may further worsen its cost position by reducing its focus on regional operations. The firm may also concentrate its defensive strategies on national competitors and ignore the more significant threat posed by powerful regional competitors.

Failure To Exploit Linkages: All the linkages affecting cost, firms rarely recognize particularly, linkages with suppliers and linkages among activities such as quality assurance, inspection, and service. The success of many Japanese firms can be attributed to their ability to exploit linkages. For example, Matsushita and Canon, in spite of the fact that their policies contradict traditional manufacturing and purchasing practices, are known for their ability to recognize and exploit linkages. Errors such as, requiring each department to cut costs by the same amount, even though raising costs in some of the departments may lower total costs, result from the failure to recognize linkages.

Contradictory Cost Reduction: Firms often employ contradicting means of reducing cost. For example, a firm, in order to reap benefits of scale economies, might try to gain market share, while at the same time it may go in for model proliferation thus dissipating scale economies. Also, firms may locate close to buyers with a view to reduce freight costs but at the same time emphasize weight reduction in new product development. Sometimes, cost drivers work in opposite directions. This makes it essential for a firm to recognize the tradeoffs.

Unwitting Cross Subsidy: The failure of firms to recognize the existence of segments in which costs behave differently makes them often engage in unwitting cross subsidy. Rarely is it possible to measure the cost difference among products, buyers, channels, or geographic areas by using the conventional accounting systems.

A firm may thus charge excessive prices on some items in the line or to some buyers while subsidizing prices for others. For example, due to its lower aging requirements, the cooperage for white wine is less costly than red wine. Based on average costs, if a winery sets equal prices for white and red wine, the price of red wine will be subsidized by the price of the lower-cost white wine. Competitors that understand costs may often make use of unwitting cross subsidy as an avenue to use costs to undercut a firm's prices and improve their market position. A firm may also, as a result of cross subsidy, be exposed to focussed competitors who compete only in the overpriced or premium segments.

Thinking Incrementally: Rather than finding ways to reconfigure the existing value chain, cost reduction efforts often strive for incremental cost improvements in the value chain. Incremental cost improvements may result in the point of diminishing returns, while reconfiguring the value chain can result in a whole new cost platform.

Undermining Differentiation: Elimination of a firm's sources of uniqueness to the buyer as a result of a cost reduction can undermine its differentiation. This action of a firm should be the result of a conscious choice even though doing so may be strategically desirable. Activities that do not contribute to a firm's differentiation should form the focus of its cost reduction efforts. Further, if a cost leader differentiates in activities wherever differentiation is not costly, it will result in the cost leader improving its performance.

25. Organization change means any substantive modification to some part of the organization. This means that the change can involve any aspect of the organization. For example, these could be changes in work schedules, span of management, key strategies and so on.

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Organizations and management face change on a continuous basis (especially in volatile environments). Some changes are reactions to threats, whereas others are proactive attempts to seize opportunities. Organizations that seek to create and sustain competitive advantage should be ready to change and implement the proposed changes. When strategies change, there are accompanying changes in structures and responsibilities, and people are clearly affected. In such organizations, managers and employees should be supportive rather than resistant or hostile.

Forces For Change

Why do organization's change? The basic answer is that either something relevant to the organization has changed or is going to change. Consequently, the organization has to change. The five major forces for change are as follows:

Technical Obsolescence and Technical Improvements: A need for technical change stems up when new developments are made by competitors. Another reason could be that the strategists might wish to harness new technologies. Internal research and development ideas can generate technical change internally. In high technology industries, this is a significant issue because the product life cycles are short.

Political and Social Events: The socio-cultural dimension, reflecting societal values, determines what kind of products will be accepted in the market. Generally, the political and social events are beyond the control of the firms, but they are forced to respond to such events. For example, government's encouragement for protecting environment has forced Chemical and Pharmaceutical Manufacturers to respond.

The Tendency for Large Organizations and Markets to become Increasingly Global: Globalization has provided opportunities and growth for many organizations. But many firms are forced to change to respond to the competitive conditions.

Increases in the Size, Complexity and Specialization of Organizations: The growth of organizations creates pressure for further changes. Large organizations have started using information technology in their operations, introducing automation and JIT systems. These create a need for greater specialist expertise, training and changes in jobs of managers and employees.

The Greater Strategic Awareness and Skills of Managers and Employees: Able and ambitious employees need opportunities for growth within the organization for job satisfaction. This could be in the form of promotion for changes in the scope of jobs. Such changes require strategic development and growth by the company as well.

26. Change frequently disrupts normality whilst the organization may be facing strong external pressures, it is unrealistic to expect managers and employees not to query or resist the need( )-6(or)10( )-6(r)10((al)6.0017
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Building Awareness of Need to Change

Once senior managers have gained a general idea of the kind of change required, they must build awareness of this need among employees in the firm. Awareness can be built among employees during routine contacts with them. These conversations will stimulate people's thoughts about possible change without raising anxieties too quickly. Thus, sharing information and establishing trust are critical in building support for change.

Foster Debate

Stimulating debate about alternative solutions and a diversity of perspectives are essential. Diversity of ideas raises the chances that both the best and worst aspects of each alternative are brought to light. The debates and various perspectives contribute towards building a commitment to new goals.

Create Consensus

An evidence will accumulate in favor of particular approach by analyzing the results of debates. This evidence will help in creating a consensus about the direction change should take. In this process, opposition is likely and retaining entrenched opponents to a change initiative can result in trouble. In this stage, continuous training and management development can reap big dividends in implementing change. By teaching new skills to employees, the management can eliminate fear, the major source of resistance to transformation.

Assign Responsibility

Once the appropriate response to change has been determined, responsibility for carrying it out must be assigned. In this context, a new effort towards change can be placed within an existing department. Also, the firm can set a new autonomous unit. To ensure that an initiative receives proper attention, it may need to be established as a separate unit headed by someone who has only its welfare in mind.

Allocate Resources

A variety of resources may be needed to carry out a new initiative. Management must ensure that sufficient resources are available for the initiative. Otherwise, the initiative will atrophy for the lack of sustenance. Allocating these resources is the final step of the change process.

27. Implementation is an activity in which structures and systems are changed to accommodate changes in strategy. Implementation of a strategy is considered in depth before final decisions are made. Implementation and formulation operate simultaneously. There are five distinct approaches to strategy implementation and strategic change, which are given below:

- The strategic leader defines the changes of strategy and then hands it over to management for implementation. In this sense, he/she is a planner/thinker rather than a doer.
- The strategic leader again decides major changes of strategy. They then consider the appropriate changes in structure, personnel, reward systems, etc. if the strategy is to be implemented effectively.
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for evaluating these proposals. The accepted and resourced proposals result in an increased status of the manager concerned.

These approaches highlight a number of general themes and ideas. These include:

- Top-Down Strategic Change

  There can be a number of approaches in drawing strategic plans for the organization, but such plans are ultimately centralized decisions. This approach is viable as long as the strategies are implemented effectively. For formulation of top down strategic change, capable managers are needed throughout the organization to deal with operational issues. This approach is attractive to strategic leaders who are inclined more towards the analytical aspects of strategy than they are toward behavioral issues.

- Quinn's Incremental Model

  The management of change in any company generally fails for one reason, i.e. an inadequate understanding on the part of top management. Quinn's model is primarily top-down approach. Quinn (1988) argues that the hardest part of strategic management is implementation of change. The roles of strategic leaders are critical in the process because they are responsible for the proposed changes in strategy. Moreover, the strategic leader is responsible for establishing the structure and processes within the organization.

28. Among all the strategists, CEO is the key person in the organization. Being at the top most position, he integrates functional areas of manager and visualizes the total organization. He foresees external environment and its impact on business. He evaluates the present mission, policies, and strategies against the future changes and reformulates them. Further new policies and strategies are formulated as and when changes in the environment take place. Also, the CEO provides information to the board regarding strategy formulation. Moreover, he advises the board to continue the present strategy or formulate a new strategy. Thus the CEO guides the senior managers in formulating, implementing, evaluating and reformulating strategies.

29. The newly emerging dominant group or "class" succeeding the industrial blue-collar worker was that of the "knowledge workers", which was a challenge rather than an opportunity to the blue-collar workers.

These new jobs require a good deal of formal education, an ability to acquire and to apply theoretical and analytical knowledge, a different approach to work, a different mind-set, and above all, a habit of continuous learning.

Knowledge work is not experience-based as all manual work rather it is learning-based. Formal education, or at least formal training, is necessary in order to have access to knowledge work. Through. The means of formal education that a knowledge worker gains access to work, job and social position.

On the contrary, far more advanced theoretical knowledge may be required for some other kinds of knowledge work, for example, knowledge work in business such as market research, product planning, advertising and promotion, etc.

In order to be productive, knowledge in the knowledge society has to be highly specialized. This implies two new requirements:

– Knowledge workers work in teams.

Access to an organization is essential for knowledge workers. If not employees, they need to be at least affiliated with an organization.

– Knowledge workers need to work as members of an organization. The basic continuity that knowledge workers need to be effective can be provided only by an organization. Only an organization can bring about the conversion of the specialized knowledge of a knowledge worker into performance. Specialized knowledge, by itself, yields no performance.

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Life-long learning or continuous learning during one's working life will increasingly be a requirement for any knowledge workers.

The measurements of productivity for a manual worker such as number of pieces turned out per hour or per dollar wage prove to be irrelevant if applied to the knowledge worker. Productivity in case of a knowledge worker is primarily in terms of quality.

30. The central changes that have taken place during the twentieth century include industrialization, expanded scale of warfare, creation of mass-destructive weapons capable of destroying the planet itself, urbanization, nationalism, population growth, ecological damage, and more. In another hundred years, it is likely that "global" will be added to each of the above mentioned changes. By the early part of the twenty-first century, industrialization will become truly global. Twice before, warfare has gone global in the form of the First and Second World Wars, and may once again follow the pattern. Manufacture and sale of weapons is taking place on a global scale. Urban growth with all its problems and opportunities is a global phenomenon, similar to population growth and ecological damage. Nationalism, with its racial, economic, and religious implications will continue to be a threat to global peace. Communications too are becoming completely global so that within the next few decades, few places would remain that cannot be reached instantaneously from any other place on earth.

New avenues of global commerce that will give rise to business opportunities, markets, demand for goods and services, and expectations as to how businesses will relate to society, emerge from these trends.

31. Prof. Franco Modigliani and Prof. Merton Miller propound that the composition of the capital structure is an irrelevant factor in the market valuation of the firm. They have strongly attacked the traditional position that a firm has an optimal capital structure. In their famous article `The Cost of Capital, Corporation Finance and the Theory of Investment', they have amplified the net operating income approach by adding a behavioral dimension to it. They have been awarded the Nobel Prize (Franco Modigliani in 1985 and Merton Miller in 1990) for their widely acclaimed contribution to theory of finance.

Assumptions

The MM position is based on the following assumptions:

1. The fundamental building block for MM hypothesis is that capital markets are perfect. There is a free flow of information in the market which can be readily accessed by any investor. There are no costs involved in obtaining the information.
2. The securities issued and traded in the market are infinitely divisible.
3. There are no transaction costs like flotation costs, underpricing of primary issues, brokerage, transfer taxes, etc.
4. All the participants in the market are rational, i.e. they strive to maximize their profits or minimize their losses.
5. All investors have homogenous expectations about the future earnings of all the firms in the market.
6. Firms can be classified into `equivalent return' classes. The firms in each has exactly the same profile of business risk. Hence the firms can be taken as perfect substitutes for one another. All the firms within a specific class have a common capitalization rate.
7. There are no corporate taxes. This assumption was later dropped.

The MM Propositions

Proposition I: The market valuation of a firm is independent of its capital structure and is determined by capitalizing its expected return at the rate appropriate to its risk class. In other words, the value of the firm is computed by discounting the future stream of operating income at the capitalization rate for that specific risk class. This implies that the cost of capital for a firm is equal to the capitalization rate of a pure equity stream of its risk class. Thus the cost of capital of a firm is independent of its capital structure.

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Proposition II: The expected yield on common stock (cost of equity) is equal to the sum of the capitalization rate for a pure equity stream of that specific class and the premium based on the financial risk. The risk premium is a function of the leverage applied (debt-equity ratio) and the spread between the capitalization rate (cost of capital) and the cost of debt.

$$k_e = k_o + (k_o - k_d) \times \frac{D}{E}$$

Where,

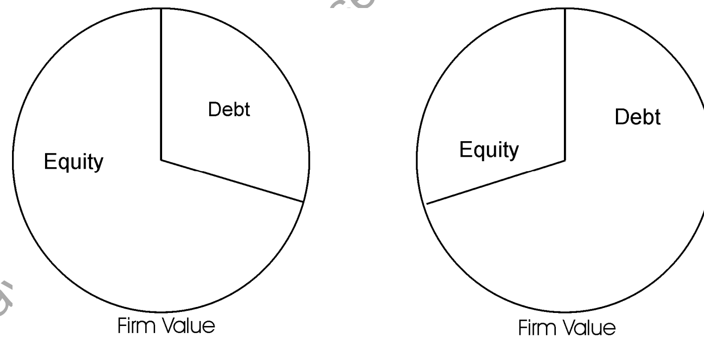
D – Market value of debt

E – Market value of equity

The implication of this proposition is that the cost of equity will be equal to the cost of capital in an all equity firm. As the company starts introducing cheaper debt in its capital structure to reduce the cost of capital, the financial risk of the firm increases. Due to increase in the financial risk, the equity holders demand higher returns which pushes up the cost of equity. Thus the benefits obtained by the use of cheaper debt is exactly offset due to the rise in the cost of equity. Thus the cost of capital remains a constant irrespective of the financing mix.

Proposition III: The investment and financing decisions of a firm are independent of each other. A firm should exploit an investment opportunity, if and only if, the rate of return on the investment is greater than the cost of capital. Thus the cut-off point for investment by the firm should in all cases be the capitalization rate for that class. Regardless of the financing mix, the marginal cost of capital will be equal to the average cost of capital. This is because as per Proposition I, the average cost of capital is equal to the capitalization rate which is a constant for a given firm. As the average cost of capital remains a constant, the marginal cost of capital will always be equal to the average cost of capital irrespective of the mode of financing.

Diagram depicting capital structure irrelevancy on valuation of the firm.



Arbitrage Process: Modigliani and Miller have cited the arbitrage process to support their position that the value of a levered firm cannot be higher than the value of an unlevered firm. Conversely the value of an unlevered firm cannot be higher than the value of a levered firm. The substance of this argument is that investors are able to replicate any combination of capital structure by substituting corporate leverage with `home-made' leverage. Home-made leverage refers to the personal borrowing made by the investor in the same ratio as a levered firm. Hence corporate leverage is not something `unique' which the investors cannot do by themselves. Hence leverage in the capital structure has no significance in a perfect capital market. Hence, firms which are identical in all respects except for their capital structure, must have the same value. In case they have different valuations, arbitrage process will commence. This will continue to occur till both firms command the same valuation. At this point, the market reaches its equilibrium.

32. The introduction of tax element brings about complexity to the capital structure theory. The interest payable on debt is a tax deductible item whereas retained earnings and dividends

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payable on equity enjoy no such fiscal benefit. Hence whenever a firm employs debt in its capital structure, it gets certain tax shield. Thus the amount available for distribution to the equity holders is more in case of levered firm than in an unlevered firm. The present value of tax shield can be computed using the perpetuity formula:

$$\text{Present value of a tax shield} = \frac{t_c \times r \times B}{r} = t_c B$$

Where,

t_c is the tax rate on corporate income;
r is the rate of interest payable on debt;
B is the market value of the debt.

The above model implies that the risk associated with the tax shield is the same as that of the interest stream. Hence the discount rate used is the interest rate on debt.

As the tax shield is available only to a levered company, the value of a levered firm is more than the value of an unlevered firm. Thus the value of a firm can be computed by:

Market value of a firm = Value of the firm if unlevered + Value of the tax shield

However, the utilization of the tax shield by a firm is uncertain. The taxable income of the firm may decline or the firm may incur a loss in the future. In such a scenario, the firm has no use of the available tax shield. The rate of corporate tax may be reduced in future, which would result in lesser tax shield. The firm may be liquidated, in which case the tax shield would have no realizable value unlike the other assets. Alternative tax shelters like leasing, depreciation, investment allowance, etc. may be available to the firm, which would make the tax shield redundant. Thus, the uncertainty associated with it may result in a diminution in the value of the tax shield. The greater the uncertainty, the lower will be the value of the tax shield. Hence, the above model is amended to incorporate the element of uncertainty.

Value of a firm = Value of the firm if unlevered + Value of tax shield – Value lost due to uncertainty of the tax shield

The presence of personal taxes may reduce the value of the tax shield. This is because capital gains are generally taxed at a lower rate than regular income. In an extreme case of the firm retaining the entire earnings, the equity holder has no tax liability. Further tax on capital gains is payable only when the security is sold. Hence the value of the tax shield will be

Present value of the tax shield = 1 – x B

Where,

t_{ps} is the personal tax rate on income from shares.
t_{pd} is the personal tax rate on income from debt.

In the above equation, if the personal tax rate on debt income is the same as that of equity income, then

$$(1 - t_{pd}) = (1 - t_{ps})$$

Both the terms would get canceled out in the equation, and the same can be rewritten as tcB. This is the original model for computing the value of the tax shield.

33. In a perfect capital market, it is assumed that all the assets of a firm can be sold at their economic value without incurring any liquidating expenses. However, in real life situation, the liquidation costs like legal and administrative expenses are significant. Further the assets may have to be sold at a distress price which is below its economic value. Thus the net realizable value of the firm is less than the economic value, which represent a `dead weight loss' to the system. The lenders will assume the *ex post* bankruptcy costs, but they will pass on *ex ante* bankruptcy costs to the firm in the form of higher cost of debt (k_d).

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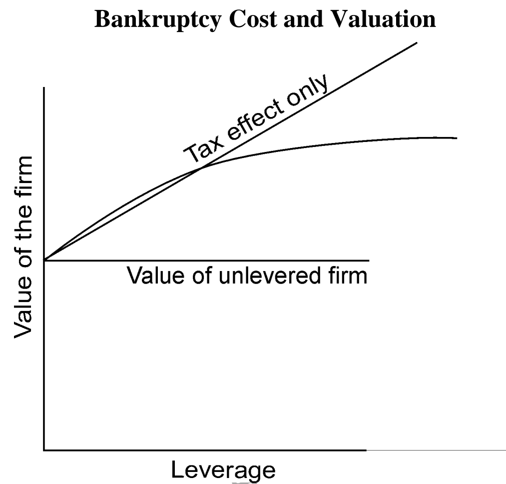
Ultimately the shareholders bear the burden of *ex ante* bankruptcy costs and the consequent lower valuation of the firm.

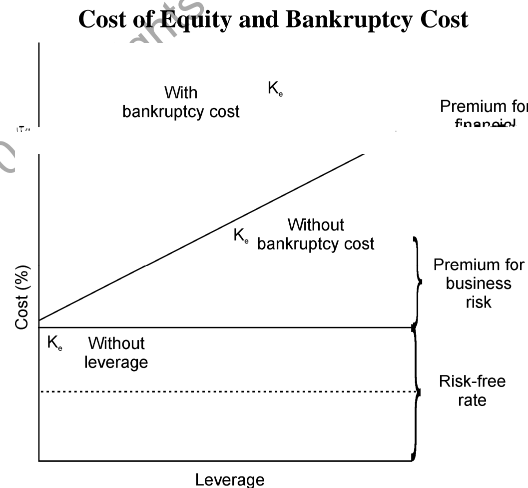
A levered firm has greater possibility of bankruptcy than an unlevered firm. Hence the bankruptcy cost for a levered firm is correspondingly higher. However, the bankruptcy costs are not a linear function of the leverage. When a firm employs low levels of leverage in its capital structure, the risk of bankruptcy is insignificant. Therefore, there is no impact of bankruptcy costs on the valuation of the firm, till a threshold limit is reached. However, after the threshold level of leverage, the threat of bankruptcy becomes real. The probability of bankruptcy dramatically increases with further application of leverage. The bankruptcy costs rises at an increasing rate beyond the threshold level.

The same is graphically represented as under.

Bankruptcy Cost and Valuation



Cost of Equity and Bankruptcy Cost



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34. The capital structure should be designed with the aim of maximizing the market valuation of the firm in the long run. The important determinants in designing of capital structure are:

a. **Type of Asset Financed:** Ideally short-term liabilities should be used to create short-term assets and long-term liabilities for long-term assets. Otherwise a mismatch develops between the time to extinguish the liability and the assets generation of returns. This mismatch may introduce elements of risks like interest rate movements and market receptivity at the time of refinancing.

b. **Nature of the Industry:** A firm generally relies more on long-term debt and equity if its capital intensity is high. All short-term assets need not be financed by short-term debt. In a non-seasonal and non-cyclical business, investments in current assets assume the characteristics of fixed assets and hence need to be financed by long-term liabilities. If the business is seasonal in nature, the funding needs at seasonal peaks may be financed by short-term debt. The risk of financial leverage increases for businesses subject to large cyclical variations. These businesses need capital structures that can buffer the risks associated with such swings.

c. **Degree of Competition:** A business characterized by intense competition and low entry barriers faces greater risk of earnings fluctuations. The risks of fluctuating earnings can be partially hedged by placing more weightage for equity financing. Reductions in the levels of competition and higher entry barriers decrease the volatility of the earnings stream and present an opportunity to safely and profitably increase the financial leverage.

d. **Obsolescence:** The key factors that lead to technological obsolescence should be identified and properly assessed. Obsolescence can occur in products, manufacturing processes, material components and even marketing. Financial maneuverability is at a premium during times of crisis triggered by obsolescence. Excessive leverage can limit the firm's ability to respond to such crisis. If the chances of obsolescence are high, the capital structure should be built conservatively.

e. **Product Life Cycle:** At the venture stage, the risks are high. Therefore equity, being risk capital *per se*, is usually the primary source of finance. The venture cannot assume additional risks associated with financial leverage. During the growth stage, the risk of failure decreases and the emphasis shifts to financing growth. Rapid growth generally signals significant investment needs and requires huge sums of capital to fuel growth. This may entail large doses of debt and periodic induction of additional equity capital. As growth slows, seasonality and cyclicality become more apparent. As the business reaches maturity stage, leverage is likely to decline as cash flows accelerate.

f. **Financial Policy:** Designing an optimum capital structure should be done in response to overall financial policy of the firm. The management may have evolved certain financial policies like maximum debt equity ratio, predetermined dividend pay-out, minimum debt service coverage level, etc. Designing of capital structure will become subservient to such constraints and the solution provided may be suboptimal.

g. **Past and Current Capital Structure:** The proposed capital structure is often determined by past events. Prior financing decisions, acquisitions, investment decisions, etc. create conditions which may be difficult to change in the short run. However, in the medium- to long-term, capital structure can be changed by issuing or retiring debt, issuing equity, equity buy-backs (when permitted), securitization, altering dividend policies, changing asset turnover, etc.

h. **Corporate Control:** Firms which are vulnerable to takeover are averse to further issuance of equity as it can result in the dilution of the ownership stake. Such firms place an excessive reliance on debt and retained earnings. Firms with `strong' management (having controlling stake) are unlikely to have reservations over further issue of equity.

i. **Credit Rating:** The market assigns a great deal of weightage to the credit rating of a firm. Hence obtaining and maintaining a target rating has become imperative for most firms. Rating agencies maintain constant watch to identify any signs of deterioration in the creditworthiness of the company. The market reacts negatively to any downgrading of the rating of a firm. This may result in a denial of access to capital either due to the provision of any law/regulations (companies below a certain rating cannot issue CPs) or by the market forces (investors may not subscribe to debt with low ratings). The possibility of downgrading of rating due to the increase in leverage should be factored in while making capital structure decisions.

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35. The substance of the MM approach is that the dividend payments has no impact either on the valuation of the firm or the wealth of the shareholders. When a firm declares dividends it foregoes retained earnings to the extent of the dividend amount. As the investment needs of a firm are taken as a constant, the firm finances the amount of retained earnings foregone, by issuing new shares. MM asserts that the sum of discounted value of the shares after the financing and the amount of dividends paid is exactly equal to the market value of the share before the payment of dividends. In other words the fall in the stock price offsets the amount of dividends received. There is no change in the overall wealth of the shareholders. The shareholders are therefore, indifferent between dividend payments and retained earnings. Further, while the market price of each share may decline, the number of shares outstanding increases due to the fresh issue of equity. Therefore, the market capitalization of the firm remains constant. Hence dividend policy of a firm is irrelevant.

The current market price of a share is the sum of the present values of the dividend paid and the market price at the end of the investment horizon t_1. The market price can be represented as

$$P_0 = \frac{D_1 + P_1}{1+\rho} \qquad \text{Eq.....1}$$

where,

P_0 is the market price per share at the beginning of Year 0

D_1 is the expected dividend per share for year 1

P_1 is the market price per share at the end of year 1

ρ is the capitalization rate for the firms in that risk class

If m is the number of shares issued at the end of the period at a price of P_1 (the prevailing market price), the above equation can be rewritten as

$$NP_0 = \frac{nD_1 + (n+m)P_1 - mP_1}{1+\rho} \qquad \text{Eq.....2}$$

where n is the number of shares at the beginning of the period.

The above equation signifies that the total valuation of the firm at the beginning of the period (t_0) is the sum of present value of the dividend and the market value of the outstanding shares at t_1 less the total value of the new shares issued.

The total value of the new shares issued is

$$mP_1 = I - (X - nD_1) \qquad \text{Eq.....3}$$

where

I is the value of the total investments

X is the earnings of the firm during the period t.

By substituting the value of mP_1 in the equation 2

$$nP0 = \frac{(n+m)P1 - I + X}{1+\rho} \qquad \text{Eq.....4}$$

It may be noted that the term D_1 does not appear in the above equation. Further all other variables in the equation are independent of D_1. Thus it can be concluded that the dividend decision has no bearing on the valuation of the firm. Hence there is nothing like an optimal dividend policy.

36. The strategic determinants of dividend policy are:

i. **Liquidity:** Traditional theories have postulated that a dividend decision is solely a function of the earnings of the firm. While earnings are important determinant for the dividend decision, the role of liquidity cannot be ignored. Dividend pay out entails cash outflow for the firm. Hence the quantum of dividends proposed to be distributed critically depends on the liquidity position of the firm. In practice, firms

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often face cash crunch in spite of having good earnings. Such firms may not be in a position to declare dividends despite their profitability.

ii. **Investment Opportunities:** Another key determinant to the dividend decision is the requirement of capital by the firm. Normally firms tend to have low pay out if profitable investment opportunities exist and conversely firms tend to resort to high pay-outs if profitable investment opportunities are lacking. Generally, firms operating in industries which are in the nascent and growth phases of the product life cycle are characterized by high dependence on retained earnings. On the other hand, firms operating in industries which are in the maturity and decline stages normally distribute a larger proportion of their earnings as dividends.

iii. **Access to Finance:** A company which has easy access to external sources of finance can afford to be more liberal in its dividend pay out. The dividend policy of such firms is relatively independent of its financing decisions. Firms having little or no access to external financing have rather limited flexibility in their dividend decisions.

iv. **Floatation Costs:** Issue of securities to raise capital in lieu of retained earnings involve floatation costs. These costs include fees payable to the merchant bankers, underwriting commission, brokerage, listing fees, marketing expenses, etc. Moreover smaller the size of the issue, higher will be the floatation costs as a percentage of amount mobilized. Further there are indirect flotation costs in the form of underpricing. Normally issue of shares are made at a discount to the prevailing market price. The cost of external financing has an influence on the dividend policy.

v. **Corporate Control:** Further issue of shares (unless done through rights issue) results in dilution of the stake of the existing shareholders. On the other hand, reliance on retained earnings has no impact on the controlling interest. Hence companies vulnerable to hostile takeovers prefer retained earnings rather than fresh issue of securities. In practice, this strategy can be a double edged sword. The niggardly pay out policy of the company may result in low market valuation of the company vis-á-vis its intrinsic value. Consequently the company becomes a more attractive target and is in the danger of being acquired.

vi. **Investor Preferences:** The preference of the shareholders has a strong influence on the dividend policy of the firm. A firm tends to have a high pay-out ratio if the shareholders have a strong preference towards current dividends. On the other hand, a firm resorts to retained earnings if the shareholders exhibit a clear tilt towards capital gains.

vii. **Restrictive Covenants:** The protective covenants in bond indentures or loan agreements often include restrictions pertaining to distribution of earnings. These conditions are incorporated to preserve the ability of the issuer/borrower to service the debt. These covenants limit the flexibility of the company in determining its dividend policy.

viii. **Taxes:** The incidence of taxation on the firm and the shareholders has a bearing on the dividend policy. India levies a 10% tax on the amount of distributed profits. This tax is a strong fiscal disincentive on dividend distribution. These dividends are totally tax-free in the hands of the shareholders. The capital gains (long-term) are taxed at 20%.

ix. **Dividend Stability:** The earnings of a firm may fluctuate wildly between various time periods. Most firms do not like to have an erratic dividend pay-out in line with their varying earnings. They try to maintain stability in their dividend policy. Stability does not mean that the dividends do not vary over a period of time. It only indicates that the previous dividends have a positive correlation with the current dividends. In the long run, the dividends have to be invariably adjusted to synchronize with the earnings. However, the short-term volatility in earnings need not be fully reflected in dividends.

37. Dividends are increasingly losing their status as the primary vehicle of earnings distribution. Firms are often adopting a strategy of share repurchases as a method to reward the shareholders. The share repurchase plan has benefits to the shareholders. The buy-back

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provides liquidity to the scrip and presents an exit opportunity (often at a premium to the prevailing market price) to the investors who wish to offload their holdings. The shareholders who continue to hold the shares are benefitted by better market valuation of their shares after the repurchase program. There are three principal methods of share repurchase.

Open Market Repurchases: A firm purchases its own shares like any other investor on the stock exchange. Normally the repurchase program is carried on over an extended period of time. The firm gradually accumulates the required block of shares. The price of the shares rises in the market due to the increased demand for the shares. Such repurchase programs have to comply with stringent norms of the regulatory bodies to prevent their abuse for rigging up the market.

Fixed Price Tender Offers: This mode of repurchase involves making an offer to the shareholders to buy their shares at a certain predetermined price. Such an offer is in the nature of a reverse rights issue. The advantage of fixed price tender offer is that it provides equal opportunities to all the shareholders to participate in the repurchase program. The shareholders can either tender the shares at the stated price or turn down the offer and continue to hold them. The tender offer is kept open for a specified period of time. If the shareholders tender more shares than originally specified, the firm has the discretion to purchase the whole or a part of the excess shares.

Dutch Auction Tender Offers: This method involves making a tender offer to the shareholders of the firm to repurchase their shares. The firm does not fix any predetermined price but announces the number of shares it proposes to buy-back. The firm may indicate a price band, consisting of a floor price and a ceiling price, for the tender offer. The tender offer is open to all the shareholders of the firm. The shareholders have the discretion to either participate in the repurchase program or to reject the offer and retain their holdings. They can participate in the tender offer by submission of their offer indicating the number of shares and the price at which they are ready to sell. The information relating to the number of shares tendered at various ask prices is assembled. The firm then determines the lowest possible price at which the required number of shares sought can be repurchased. The offers received at or below this cut-off price are accepted. However, the same price (cut-off price) is paid to all the shareholders whose offers have been accepted.

Dutch auctions are gaining increasing popularity as a mode of stock repurchase. A dutch auction is considered as a financial hybrid combining some features of open market purchases with others of fixed price tender offer. Dutch auctions are less riskier to the management than a fixed price premium offers. The fact that all the shares repurchased receive a uniform price may induce some shareholders to submit their offers at very low ask prices to ensure their acceptance in the auction. This would benefit the firm by reducing the final repurchase price. Further, with an upward sloping supply curve for the stock, the entire segment of the curve below the cut-off price is repurchased. Thus, it eliminates those shareholders who assign relatively lower valuations to the stock.

Signaling through Stock Repurchase

Stock repurchases have strong signaling effect on the market. The market views a repurchase program as a reflection of the management belief that the firm is undervalued. The amount of premium in the repurchase price over the current market price of the share is normally taken as an indication of the magnitude of undervaluation of the firm. The rise in the share prices after the repurchase can be pointed as an evidence of the positive signaling effect. There is also strong empirical evidence that the degree of improvement in the share price has a positive correlation with the magnitude of the premium, the percentage of shares repurchased and the fraction of insider holdings.

There is an inherent disincentive for false signaling through stock repurchase. False signaling occurs when the management announces a premium that significantly exceeds the degree of stock undervaluation. This signaling cost is ultimately borne by the non-tendering shareholders. As the management normally pre-commits to refrain from tendering to enhance the signaling power, false signal through excess premium ultimately reduces their own wealth.

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Dividend pay-outs and stock repurchase entail cash outflows and have similar informational content. The dividend pay-outs provide regular informational reinforcements of the underlying ability of the firm to generate earnings. A stock repurchase is not a regular event and is taken a strong pointer on the degree of undervaluation. Hence stock repurchase is considered to have a greater signaling power than regular dividend pay out.

38. The Modeling Process

The following are the major steps in the process of using a model to arrive at the optimal decision:

- Feasibility study
- Model construction
- Compatibility of the model with the tools used
- Model validation
- Implementation
- Model revision
- Documentation.

Feasibility Study

The foremost step in developing a model is to ascertain the feasibility of a model assisting the decision making process. The various points that are required to be considered are

- Whether the decision under consideration is a one-time process, or is required to be taken as a routine measure.
- The suitability of the area in which the decision is required to be made, to be supported by a model.
- The possibility of all the relevant variables being unambiguously identified.
- The possibility of all the variables being built-in into a single model.
- The expected effectiveness of the model.
- The acceptability of a model replacing human judgment to the management.
- The possibility of obtaining the required data on an ongoing basis.
- The possibility of integrating the model with the normal decision-making process.
- The costs involved with setting up and running the model, and its comparison with the expected benefits.

If it is feasible to construct an efficient and effective model for the decision process under consideration, and if the model can be easily integrated with the process, the firm can proceed to the next step of constructing the model.

Model Construction

The construction of the model depends on a number of factors. Some of these are

- The decision to be made using the model.
- The issues that are relevant for making the decision.
- The way in which these issues and factors affect the decision.
- The external factors that restrict the decision making process.

Depending on these factors, the input requirement for the model is identified and the numerical and theoretical relationships between variables are specified. This is followed by development of the structure of the model.

Model Compatibility

Once the model is in place, it needs to be made compatible to the tools to be used to implement it. For example, if a particular model is to be solved using computers, the model needs to be programmed and converted to a language that the computer understands.

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Model Validation

A number of test runs are conducted on the model to check whether it produces reasonably accurate results. The test runs may use actual past data of the input variables, and the results generated by the model compared to the actual results. Alternatively, the model may be tested by using probability distributions. Test running a model checks the effectiveness of the structure of the model, as well as its predictive ability.

Implementation

The implementation of a model includes integrating it with the normal decision-making process. Further, it needs to be ensured that the results generated by the model are relevant enough for the decision-maker to take them into consideration while making a decision.

Model Revision

No model remains useful for an indefinite period. The relationships between different variables that form a basis for the model may change over a period of time. External factors affecting a model may also change. Use of the model over a period may provide an insight into its drawbacks. It is necessary that such changes are noted and the model periodically revised to accommodate them. Unless a model is continuously updated, it may lose its relevance.

Documentation

Documentation is a way of institutionalization of the knowledge created during the process of developing and installing a model. It involves making detailed, systematic notes at all the stages of the process. The records should be maintained right from the stage when the need for the model was felt, detailing the factors that gave rise to the need. The various ideas considered at different stages need to be documented along with the reasons for their acceptance or rejection. The various problems faced during the development and implementation of the model, together with their solutions should also form a part of the records. Documentation also helps in proper communication between the members of the team working on the development of the model. In addition, it makes the process of revising the model less tedious.

While developing and implementing models, certain issues need to be kept in mind. It is not just necessary to specify the objectives of the model, it is also necessary to build the relative importance of the different objectives into the model. For example, the objective may be to maximize the profits of the firm, while restricting the debt taken by it to a certain percentage of the total assets. The model should specify the objective (maximum profits or limited debt) that would be held supreme, if there were a clash between the two. Another important point to be remembered is that the model should preferably focus on some key aspects, rather than be a collection of all relevant and irrelevant data. A focused model is more likely to generate effective decisions.

39. According to the Marakon model, firm's market value to book value ratio, and hence, its value depends on three factors – its return on equity, its cost of equity, and its growth rate. This conclusion is drawn indirectly from the constant growth dividend discount model.

Let P_0, M be the current market price of the firm's share

D_1 be the dividend per share after one year

k be the cost of equity

g be the growth rate in earnings and dividends

r be the return on equity

B be the current book value per share

b be the dividend pay out ratio.

The constant growth dividend discount model says that

$$P_0 = \frac{D_1}{k - g}$$

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Further,

$D_1 = B \times r \times b$

Substituting the value of D_1 in the dividend discount model, we get

$$P_0 = \frac{B \times r \times b}{k - g}$$

Dividing both sides of the equation by B, we get

$$\frac{p_0}{B} = \frac{r \times b}{k - g}$$

Further, we know that

$$g = r\,(1 - b)$$

or, $r \times b = r - g$

Replacing the value of r x b in the equation, we get

$$\frac{p_0}{B} = \frac{M}{B} = \frac{r - g}{k - g}$$

Thus, a firm's market value to book value ratio can be derived from its return on equity, its cost of equity and its growth rate. It can be observed from the formula that

1. A firm's market value will be higher than its book value only if its return on equity is higher than its cost of equity. This is supported by the other theories of valuation of equity.
2. When the return on equity is higher than the cost of equity, the higher a firm's growth rate, the higher its market value to book value ratio.

Hence, a firm should have a positive spread between the return on equity and the cost of equity, and a high growth rate in order to create value for its shareholders.

Strategic Forces

The financial factors that affect a firm's value are in turn affected by some strategic forces. The two important strategic factors that affect a firm's value are market economics and competitive position. The market economics determines the trend of the growth rate and the spread between the return on equity and cost of equity for the industry as a whole. The firm's competitive position in the industry determines its relative rate of growth and its relative spread.

Market economics refers to the forces that effect the prospects of the industry as a whole. These include

- Level of entry barriers
- Level of exit barriers
- Degree of direct competition
- Degree of indirect competition
- Number of suppliers
- Kinds of regulations
- Customers' influence.

While the degree of direct competition and customers' influence are considered as the core factors affecting an industry's prospects, the other factors are considered only limiting forces.

Competitive position refers to a firm's relative position within the industry. A firm's relative position is affected by its ability to produce differentiated products and its economic cost position. A product can be referred to as a differentiated product when the consumers perceive its quality to be better than the competitive products and are ready to pay a premium for the same. The firm can benefit from a differentiated product in two ways. It may either increase its market share by pricing it competitively, or can command a higher price for its product than its competitors, and forego the higher market share. Thus,

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the ability to produce differentiated products improve a firm's relative position vis--vis its competitors. The other factor that helps a firm enjoy a strategic advantage over its competitors is a low per unit economic cost. Economic costs include operating costs and the cost of capital employed. A low economic cost may result from a number of factors like

- Access to cheaper sources of finance
- Access to cheaper raw material
- State-of-the-art technology resulting in better quality control
- Better management
- Strong dealer network
- Exceptional labor relations.

40. The Alcar model, developed by the Alcar Group Inc., a company into management education and software development, uses the discounted cash flow analysis to identify value adding strategies. According to this model, there are seven 'value drivers' that affect a firm's value. These are

- The rate of growth of sales
- Operating profit margin
- Income tax rate
- Incremental investment in working capital
- Incremental investment in fixed assets
- Value growth duration
- Cost of capital.

Value growth duration refers to the time period for which a strategy is expected to result in a higher than normal growth rate for the firm. The first six factors affect the value of the strategy for the firm by determining the cash flows generated by a strategy. The last term, i.e., the cost of capital affects the value of the strategy by determining the present value of these cash flows.

According to the model, a strategy should be implemented if it generates additional value for a firm. For ascertaining the value generating capability of a strategy, the value of the firm's equity without the strategy is compared to the value of the firm's equity if the strategy is implemented. The strategy is implemented if the latter is higher than the former. The following steps are undertaken for making the comparison.

1. *Calculate the value of the firm's equity without the strategy*: The present value of the expected cash flows of the firm is calculated using the cost of capital. The cash flows should take the firm's normal growth rate and its effect on operating flows and additional investment in fixed assets and working capital into consideration. The cost of capital would be the weighted average cost of the various sources of finance, with their market values as the weights. The value of the equity is arrived at by deducting the market value of the firm's debt from this present value.

2. *Calculate the value of the firm if the strategy is implemented*: The firm's cash flows are calculated over the value growth duration, taking into consideration the growth rate generated by the strategy and the required additional investments in fixed assets and current assets. These cash flows are discounted using the post-strategy cost of capital. The post-strategy cost of capital may be different from the pre-strategy cost of capital due to the financing pattern of the additional funds requirement, or due to a higher cost of raising finance. The PV of the residual value of the strategy is added to the present value of these cash flows to arrive at the value of the firm. The residual value is the value of the steady perpetual cash flows generated by the strategy, as at the end of the value growth duration. The value of the post-strategy

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market value of debt is then deducted from the value of the firm to arrive at the post-strategy value of equity.

The value of the strategy is given by the difference between the post-strategy value of the firm's equity and the pre-strategy value of the firm's equity. A strategy should be accepted if it generates a positive value.

41. The McKinsey model, developed by leading management consultants McKinsey & Company, is a comprehensive approach to value-based management. It focuses on the identification of key value drivers at various levels of the organization, and places emphasis on these value drivers in all the areas, i.e. in setting up of targets, in the various management processes, in performance measurement, etc. According to Copeland, Koller and Murrin, value-based management is "an approach to management whereby the company's overall aspirations, analytical techniques, and management processes are all aligned to help the company maximize its value by focusing management decision-making on the key drivers of value". According to this model, the key steps in maximizing the value of a firm are as follows:

- Identification of value maximization as the supreme goal
- Identification of the value drivers
- Deeveopment of stratvgy
- Setting of targets
- Deciding upon the action plans
- Setting up the performance measurement system
- Implementation.

Value Maximization – The Supreme Goal

A firm may have many conflicting goals like maximization of PAT, maximization of market share, achieving consumer satisfaction, etc., The first step in maximizing the value of a firm is to make it the most important goal for the organization. Maximization of value is generally reflected in maximized discounted cash flows. The other goals that a firm may have are generally consistent with the goal of value maximization, but in case of a conflict, value maximization should prevail over all other objectives.

Identification of the Value Drivers

The important factors that affect the value of a business are referred to as key value drivers. It is necessary to identify these variables for value-based management. The value drivers need to be identified at various levels of an organization, so that the personnel at all levels can ensure that their performance is in accordance with the overall objective. The three main levels at which the key value drivers need to be identified are

- **The generic level:** At this level, the variables that reflect the achievement or non-achievement of the objective of value maximization most directly are identified.
- **The department level:** At this level, the variables that guide the department in the direction of the achievement of the overall objective are identified.
- **The grass roots level:** At the grass roots level, the variables that reflect the performance at the operational level are identified.

Development of Strategy

The next step is to develop strategies at all levels of the organization, which are consistent with the goal of value maximization, and lead to the achievement of the same. The strategies should be aimed at and give directions for the achievement of the desired level of the key value drivers.

Setting of Targets

Development of strategies is followed by setting up of specific short-term and long-term targets. The targets should be specified in terms of the desirable level of key value drivers. The short-term targets should be in tune with the long-term targets. Similarly, the targets

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for the various levels of the organization should be in tune. The targets should be set both for financial as well as non-financial variables.

Deciding upon the Action Plans

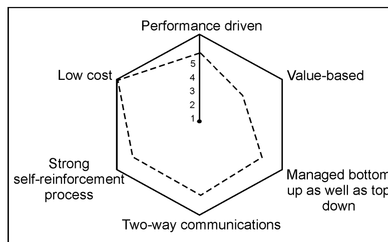
Once the strategy is in place and the targets have been determined, there is a need to specify the particular actions that are required to be undertaken to achieve the targets in a manner that is consistent with the strategy. At this stage, these detailed action plans are laid out.

Setting up the Performance Measurement System

The future performance of personnel is affected by the way their performance is measured, to a large extent. Hence, it is essential to set up a precise and unambiguous performance measurement system. A performance measurement system should be linked to achievement of the targets and should reflect the characteristics of each individual department.

Implementation

The first step in implementing value-based management is to identify the current position of the firm in terms of the six factors shown in the figure below.



The next step is to use the action plans laid out to stretch the firm to the maximum possible extent in terms of each of these factors. The outer limit of the hexagon reflects the maximum limit to which an organization can stretch itself. The aim of value maximization is to make the firm reach these limits.

42. Preparation of a cash budget involves estimation of a number of exogenous variables like the level of sales, the percentage of credit sales to total sales, the percentage of credit sales recoverable during a particular period, the various expenses to be incurred, etc. While the finance manager may arrive at such estimates with a reasonable degree of accuracy, these estimates may not always come true. As these variables are related to the future and are outside the firm's control, predicting them with 100% accuracy is not possible. The cash budget being only as good as the inputs that go into its preparation, it can only give us an estimation of the expected cash balance at the end of the budgeting period. This estimation may turn out to be quite far from the actual cash balance.

These facts make it preferable to take the various possible values of the different variables into consideration while preparing the cash budget. This is done by using the technique of simulation. First, a distinction is made between the parameters and the exogenous variables. Parameters are the variables that are kept constant throughout the simulation exercise. These are generally those variables that affect the cash balance to a lesser extent than some other important variables. Exogenous variables are those that are allowed to vary and the effect of whose variations on the cash balance is estimated using simulation. For example, the percentage of credit sales to total sales may be a parameter, while monthly cash expenses may be taken as an exogenous variable. The second step in the exercise is to arrive at a probability distribution for the various exogenous variables. The probability distribution can be either empirical or subjective.

The third step in the exercise is to undertake simulation runs. Each simulation run would give a certain value for each of the exogenous variables. These values are used to prepare the cash budget. A number of simulation runs are done to arrive at a large number of values for the cash balance at the end of the specified period. These values can then be used to arrive at the expected (mean) value of the cash balance and its expected variations. The larger the number of simulation runs, the more accurate the end result. However, as it was mentioned earlier, a cash budget will be only as good as the inputs. Hence, the result of simulation will only be as good as the probability distributions developed for the exogenous variables. Hence, the actual cash balance may still turn out to be different from that

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predicted using the technique of simulation. Yet, the estimates can be expected to be better than those arrived at without simulation.

43. The function of cash management is generally considered as that of making sure that the firm has adequate cash at all times. There are times when a firm is faced with a cash surplus rather than a cash deficit. Cash management also includes management of cash surpluses in an appropriate manner. The issues in front of the finance manager are

- Whether to hold the cash surplus in the form of cash in anticipation of future needs, or invest it in interest earning short-term securities;
- If the surplus is to be held partly as cash and partly as securities, what should be the proportion;
- How frequently and in what amounts should the securities be liquidated so as to minimize the overall costs.

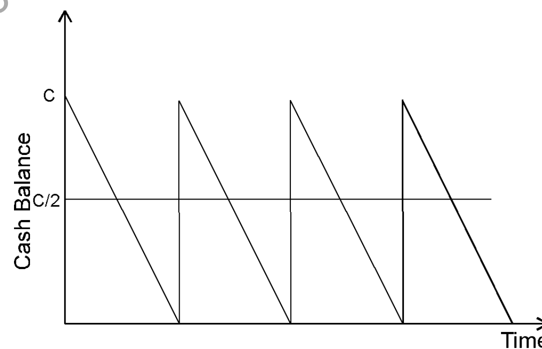
Baumol Model

This model, proposed by William J. Baumol, assumes that all the cash surplus is initially parked in short-term securities. A part of these securities are liquidated at regular intervals to meet the cash requirements. When a part of the securities are liquidated, the proceeds are held as cash in hand till it is completely utilized. Once that happens, the next batch of securities are liquidated. The model makes a few assumptions.

Assumptions

1. There are two costs involved-holding costs and transaction costs. Holding costs are in the form of interest foregone on cash balance held, and transaction costs are costs incurred in converting securities into cash.
2. The cash requirement for the period under consideration is known in advance.
3. Securities for a particular sum are converted into cash at a regular frequency.
4. Cash expenses are incurred evenly over the planning period.

   The third and fourth assumptions can be interpreted to deduce the movements in the cash balance. In the beginning, the cash balance is equal to the amount of securities liquidated per batch. It reduces in a linear manner till it becomes nil, at which stage another batch of securities is converted into cash. On conversion, the balance again goes up to the original amount. The average cash balance, therefore, is half the original balance. The movements in cash balance gets reflected in the following figure:



   In the figure, C denotes the amount of securities liquidated per batch.

5. The conversion cost is a fixed sum, irrespective of the amount of securities converted. As the total number of conversions during the planning period depend on the amount of securities liquidated per batch, the total conversion cost incurred during the period becomes a function of C. A higher C implies a higher holding cost and a lower transaction cost over the planning period. These costs have been depicted in the following figure.

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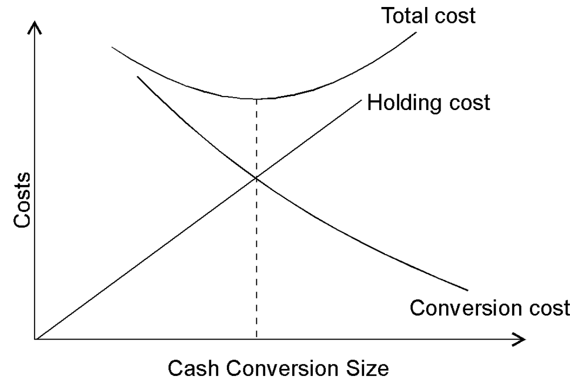

According to the model, the total costs are given by

TC = I (C/2) + b (T/C)

Where,

TC = Total costs (total conversion costs + total holding costs)

I = Interest rate on marketable securities per planning period

C = Amount of securities liquidated per batch

T = Estimated cash requirement over the planning period.

The point where the total costs are minimum can be arrived at by minimizing the above equation. Minimization gives us the following relationship.

$$C = \sqrt{\frac{2bT}{I}}$$

44. The model proposed by Miller and Orr assumes that

1. There are two costs – holding costs and conversion costs. The conversion costs are fixed irrespective of the size of the conversion.
2. Cash inflows and outflows over a period are random, and hence, the movements in cash balance are random, both in size and direction. As the period under consideration is longer, the movements form a normal distribution.

The model does not fix either the amount of conversion of securities, or the timing. Instead, it specifies the levels at which securities need to be converted into cash (or vice versa), and the levels to which the cash balance is required to be brought at the time of such conversion. The model specifies an Upper Control Limit (UL), a Return Point (RP) and a Lower Control Limit (LL). The RP lies somewhere between the UL and the LL. The cash balance is allowed to freely fluctuate between the UL and the LL. Conversion is required when the cash balance reaches either of these limits. When the cash balance reaches the lower control limit, enough securities are required to be liquidated to bring the cash balance to the return point. When the cash balance reaches the upper control limit, enough cash is required to be parked in marketable securities to bring the cash balance down to the return point.

According to this model, the LL is required to be decided by the management on the basis of their view on the minimum acceptable cash balance. The model further propounds that the total costs (i.e. the holding costs and the transaction costs) are minimized when

$$RP = 3\sqrt{\frac{3b\sigma^2}{4I}} + LL$$

and,

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UL = 3 RP – 2 LL

Where,

LL = Lower control limit

RP = Return point

UL = Upper control limit

b = Fixed conversion cost

I = Interest rate per day on marketable securities

σ^2 = Variance of daily changes in the expected cash balance.

45. The following are some of the generic approaches to managing risks:

- Risk avoidance
- Loss control
- Combination
- Separation
- Risk transfer
- Risk retention
- Risk sharing.

Risk Avoidance

An extreme way of managing risk is to avoid it altogether. This can be done by not undertaking the activity that entails risk. For example, a corporate may decide not to invest in a particular industry because the risk involved exceeds its risk bearing capacity. Though this approach is relevant under certain circumstances, it is more of an exception rather than a rule. It is neither prudent, nor possible to use it for managing all kinds of risks. The use of risk avoidance for managing all risks would result in no activity taking place, as all activities involve risk, while the level may vary.

Loss Control

Loss control refers to the attempt to reduce either the possibility of a loss or the quantum of loss. This is done by making adjustments in the day-to-day business activities. For example, a firm having floating rate liabilities may decide to invest in floating rate assets to limit its exposure to interest rate risk. Or a firm may decide to keep a certain percentage of its funds in readily marketable assets. Another example would be a firm invoicing its raw material purchases in the same currency in it which invoices the sales of its finished goods, in order to reduce its exchange risk.

Combination

Combination refers to the technique of combining more than one business activities in order to reduce the overall risk of the firm. It is also referred to as aggregation or diversification. It entails entering into more than one business, with the different businesses having the least possible correlation with each other. The absence of a positive correlation results in at least some of the businesses generating profits at any given time. Thus, it reduces the possibility of the firm facing losses.

Separation

Separation is the technique of reducing risk through separating parts of businesses or assets or liabilities. For example, a firm having two highly risky businesses with a positive correlation may spin-off one of them as a separate entity in order to reduce its exposure to risk. Or, a company may locate its inventory at a number of places instead of storing all of it at one place, in order to reduce the risk of destruction by fire. Another example may be a firm

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sourcing its raw materials from a number of suppliers instead of from a single supplier, so as to avoid the risk of loss arising from the single supplier going out of business.

Risk Transfer

Risk is transferred when the firm originally exposed to a risk transfers it to another party which is willing to bear the risk. This may be done in three ways. The first is to transfer the asset itself. For example, a firm into a number of businesses may sell-off one of them to another party, and thereby transfer the risk involved in it. There is a subtle difference between risk avoidance and risk transfer through transfer of the title of the asset. The former is about not making the investment in the first place, while the latter is about disinvesting an existing investment.

The second way is to transfer the risk without transferring the title of the asset or liability. This may be done by hedging through various derivative instruments like forwards, futures, swaps and options.

The third way is through arranging for a third party to pay for losses if they occur, without transferring the risk itself. This is referred to as risk financing. This may be achieved by buying insurance. A firm may insure itself against certain risks like risk of loss due to fire or earthquake, risk of loss due to theft, etc. Alternatively, it may be done by entering into hold-harmless agreements. A hold–harmless agreement is one where one party agrees to bear another party's loss, should it occur. For example, a manufacturer may enter into a hold-harmless agreement with the vendor, under which it may agree to bear any loss to the vendor arising out of stocking the goods.

Risk Retention

Risk is retained when nothing is done to avoid, reduce, or transfer it. Risk may be retained consciously because the other techniques of managing risk are too costly or because it is not possible to employ other techniques. Risk may even be retained unconsciously when the presence of risk is not recognized. It is very important to distinguish between the risks that a firm is ready to retain and the ones it wants to offload using risk management techniques. This decision is essentially dependent upon the firm's capacity to bear the loss.

Risk Sharing

This technique is a combination of risk retention and risk transfer. Under this technique, a particular risk is managed by retaining a part of it and transferring the rest to a party willing to bear it. For example, a firm and its supplier may enter into an agreement, whereby if the market price of the commodity exceeds a certain price in the future, the seller foregoes a part of the benefit in favor of the firm, and if the future market price is lower than a predetermined price, the firm passes on a part of the benefit to the seller. Another example is a range forward, an instrument used for sharing currency risk. Under this contract, two parties agree to buy/sell a currency at a future date. While the buyer is assured a maximum price, the seller is assured a minimum price. The actual rate for executing the transaction is based on the spot rate on the date of maturity and these two prices. The buyer takes the loss if the spot rate falls below the minimum price. The seller takes the loss if the spot rate rises above the maximum price. If the spot rate lies between these two rates, the transaction is executed at the spot rate.

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46. Risk management needs to be looked at as an organizational approach, as management of risks independently cannot have the desired effect over the long-term. This is especially necessary as risks result from various activities in the firm, and the personnel responsible for the activities do not always understand the risk attached to them. The risk management function involves a logical sequence of steps. These steps are

a. **Determining objectives:** Determination of objectives is the first step in the risk management function. The objective may be to protect profits, or to develop competitive advantage. The objective of risk management needs to be decided upon by the management, so that the risk manager may fulfill his responsibilities in accordance with the set objectives.

b. **Identifying risks:** Every organization faces different risks, based on its business, the economic, social and political factors, the features of the industry it operates in –

like the degree of competition, the strengths and weaknesses of its competitors, availability of raw material, factors internal to the company like the competence and outlook of the management, state of industry relations, dependence on foreign markets for inputs, sales, or finances, capabilities of its staff, and other innumerable factors. Each corporate needs to identify the possible sources of risks and the kinds of risks faced by it. For this, the risk manager needs to develop a fundamental understanding of all the firm's activities and the external factors that contribute to risk. The risk manager especially needs to identify the sources of risks that are not so obvious.

c. **Risk evaluation:** Once the risks are identified, they need to be evaluated for ascertaining their significance. The significance of a particular risk depends upon the size of the loss that it may result in, and the probability of the occurrence of such loss. On the basis of these factors, the various risks faced by the corporate need to be classified as critical risks, important risks and not-so-important risks.

d. **Development of policy:** Based on the risk tolerance level of the firm, the risk management policy needs to be developed. The time-frame of the policy should be comparatively long, so that the policy is relatively stable. A policy generally takes the form of a declaration as to how much risk should be covered, or in other words, how much risk the firm is ready to bear.

e. **Development of strategy:** Based on the policy, the firm then needs to develop the strategy to be followed for managing risk. The tenure of a strategy is shorter than a policy, as it needs to factor-in various variables that keep changing. A strategy is essentially an action plan, which specifies the nature of risk to be managed and the timing. It also specifies the tools, techniques and instruments that can be used to manage these risks. A strategy also deals with tax and legal problems. It may specify whether it would be more beneficial for a subsidiary to manage its own risk, or to shift it to the parent company. It may also specify as to how it will be most beneficial to shift the losses to a branch located at a particular location.

   While the strategy is to be designed within the guidelines laid down by the top management, and in a manner that best satisfies the objectives of risk management, the actual leeway available to the manager for making the decision changes from company to company. In some corporates, the guidelines may only specify the broad framework to be followed while making the risk management decision, giving him a lot of scope for deciding about the specific technique and instrument to be used for managing a specific risk. On the other hand, some corporates lay down rigid and detailed guidelines that need to be followed while making risk management decisions, leaving the manager very little scope for exercising his judgment. Finally, the devices used for risk management will depend on the management's willingness to take risks, to shift production centers, to change the product mix, to use derivative products, etc.

f. **Implementation:** Once the policy and strategy are in place, they are to be implemented for actually managing the risks. This is the operational part of risk management. It includes finding the best deal in case of risk transfer, providing for contingencies in case of risk retention, designing and implementing risk control programs, etc. It also includes taking care of the details in the operational part, like the back office work, ensuring that the controls are complied with etc.

g. **Review:** The function of risk management needs to be reviewed periodically, depending on the costs involved. The factors that affect the risk management decisions keep changing, thus necessitating the need to monitor the effectiveness of the decisions taken previously. Sometimes, the decisions taken earlier may not prove to be correct, or the changing circumstances may make some other option more effective. A periodic review ensures that the risk management function remains flexible, and the tools, techniques and instruments used to manage risk change according to the changing circumstances.

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The process of risk management has to be flexible because a company's risk profile keeps changing. Hence, it needs to be remembered that the emphasis of the risk [management process is not on identification of any specific risk, but on developing a method of assessment of risk and of arriving at the best possible way of dealing with them, as and when they arise.

47. Applying overhead costs to each product or service based on the extent to which that product or service causes overhead cost to be incurred is the primary objective of accounting for overhead costs. In many production processes, overhead is applied to products using a single predetermined overhead rate based on a single activity measure. With Activity-Based Costing (ABC), multiple activities are identified in the production process that are associated with costs. The events within these activities that cause work (costs) are called **cost drivers**. The cost drivers are used to apply overhead to products and services when using ABC.

The following five steps are used to apply costs to products under an ABC system.

1. Choose appropriate activities
2. Trace costs to activities
3. Determine cost drivers for each activity
4. Estimate the application rate for each cost driver
5. Apply costs to products.

These steps are discussed below:

Choose Appropriate Activities

The first step of ABC is to choose the activities that result in incurring of overhead costs. These activities do not necessarily coincide with existing departments but rather represent a group of transactions that support the production process. Typical activities used in ABC are designing, ordering, scheduling, moving materials, controlling inventory, and controlling quality.

Each of these activities is composed of transactions that result in costs. More than one cost pool can be established for each activity. A cost pool is an account to record the costs of an activity with a specific cost driver.

Trace Costs to Activities

Once the activities have been chosen, costs must be traced to the cost pools for different activities. To facilitate this tracing, cost drivers are chosen to act as vehicles for distributing costs. These cost drivers are often called **resource drivers**. A predetermined rate is estimated for each resource driver. Consumption of the resource driver in combination with the predetermined rate determines the distribution of the resource costs to the activities.

Determine Cost Drivers for Activities

Cost drivers for activities are sometimes called **activity drivers**. Activity drivers represent the event that causes costs within an activity. For example, activity drivers for the purchasing activity include negotiations with vendors, ordering materials, scheduling their arrival, and perhaps inspection. Each of these activity drivers represents costly procedures that are performed in the purchasing activity. An activity driver is chosen for each cost pool. If two cost pools use the same cost driver, then the cost pools could be combined for product-costing purposes.

Cooper has developed several criteria for choosing activity drivers. First, the data on the cost driver must be easy to obtain. Second, the consumption of the activity implied by the activity driver should be highly correlated with the actual consumption of the activity. The third criterion to consider is the behavioral effects induced by the choice of the activity driver. Activity drivers determine the application of costs, which in turn can affect individual performance measures.

The judicious use of more activity drivers increase the accuracy of product costs.

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Ostrenga concludes that there is a preferred sequence for accurate product costs. Direct costs are the most accurate in applying costs to products. The application of overhead costs through cost drivers is the next most accurate process. Any remaining overhead costs must be allocated in a somewhat arbitrary manner, which is less accurate.

Estimate Application Rates for each Activity Driver

An application rate must be estimated for each activity driver. A predetermined rate is estimated by dividing the cost pool by the estimated level of activity of the activity driver. Alternatively, an actual rate is determined by dividing the actual costs of the cost pool by the actual level of activity of the activity driver. Standard costs, could also be used to calculate a predetermined rate.

Applying Costs to Products

The application of costs to products is calculated by multiplying the application rate times the usage of the activity driver in manufacturing a product or providing a service.

48. Target costing has recently received considerable attention. Computer Aided Manufacturing- International defines target cost as "a market-based cost that is calculated using a sales price necessary to capture a predetermined market share." In competitive industries a unit sale price would be established independent of the initial product cost. If the target cost is below the initial forecast of product cost, the company drives the unit cost down over a designed period to compete.

Target cost = Sales price (for the target market share) – Desired profit

Target costs are based on external analysis of markets and competitors.

While introducing a new product, a company might test the market to determine the price it can charge in order to be competitive with products of similar function and quality already in the market. A target cost is the maximum manufactured cost for a product. It is arrived at by subtracting its expected market price from the required margin on sales.

Target costing is a market-driven design methodology. It estimates the cost for a product and then designs the product to meet that cost. It is used to encourage the various departments involved in design and production to find less expensive ways of achieving similar or better product features and quality.

It is a cost management tool which reduces a product's costs over its entire life cycle. Target costing includes actions management must take to: establish reasonable target costs, develop methods for achieving those targets, and develop means by which to test the cost-effectiveness of different cost-cutting scenarios.

There are several phases in the methodology.

Conception (Planning) Phase

Based upon its strategic business plans, a company must first identify the type of product it wishes to manufacture.

Under target costing, a product's design begins at the opposite end. It first establishes a price at which the product can be competitive and then assigns a team to develop cost scenarios and search for ways to design and manufacture the product to meet those cost constraints. Several steps must be taken in order to establish a reasonable target cost.

1. Market research should be done to determine several factors. First, the products of competitors' should be analyzed with regard to price, quality, service and support, delivery, and technology. After a preliminary test of competitor's product, it is necessary to establish the features consumers value in this type of product, and the important features that are lacking.

2. After preliminary testing, a company should be able to pinpoint a market niche it believes is undersupplied, and in which it believes it might have some competitive advantage. Only then can a company set a target cost close to competitors' products of similar functions and value. The target cost is bound to change in the development and design stages. However, the new target costs should only be allowed to decrease, unless the company can provide added features that add value to the product.

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Development Phase

The company must find ways to attain the target cost. This involves a number of steps.

1. First, an in-depth study of the most competitive product on the market must be conducted. This study will show materials used and features provided, and it will give an indication of the manufacturing process needed to complete the product.

   Once a better understanding of the design has been achieved, the organization can target the costs against this `best' design. But its competition will probably be engaged in similar analysis and will further improve its product toward this `best' design. It is necessary when performing comparative cost analysis, and trying to establish the competitor's cost structure, that adequate attention be paid to the competitive advantages of the competitor, such as technology, location, and vertical integration.

2. After identifying the cost structure of the competitor, the company should develop estimates for the internal cost structure of its own products.

3. After preliminary analysis of the cost structures of both the competition and itself, the company should further define these cost structures in terms of cost drivers. Focusing on cost drivers can help reduce waste, improve quality, minimize non-value-added activities, and identify ineffective product design. The use of multiple drivers leads both to a better understanding of the inputs and resources required to produce products, and a better cost analysis through more detailed cost information.

Production Phase

In these stages, target costing becomes a tool for reducing costs of existing products. It is highly unlikely that the design, manufacturing, and engineering groups will develop the optimal, cost-efficient process at the beginning of production. The search for better, less expensive products should continue in the framework of continuous improvement.

49. The significant characteristics of product life cycle concept are as follows:

i. The products have finite lives and pass through the cycle of development, introduction, growth, maturity, decline and deletion at varying speeds.

ii. Product cost, revenue and profit patterns tend to follow predictable courses through the product life cycle. Profits first appear during the growth phase and after stabilizing during the maturity phase, decline thereafter to the point of deletion.

iii. Profit per unit varies as products move through their life cycles.

iv. Each phase of the product life cycle poses different threats and opportunities that give rise to different strategic actions.

v. Products require different functional emphasis in each phase – such as an R&D emphasis in the development phase and a cost control emphasis in the decline.

Activities in Product Life Cycle

Typically the life cycle of a manufactured product will consist of the following activities:

- Market research
- Specification
- Design
- Prototype manufacture
- Development of the product
- Tooling
- Manufacturing
- Selling
- Distribution
- Product support through after sales-service
- Decommissioning or Replacement.

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Phases in Product Life Cycle

There are five distinct phases in the life cycle of a product as shown below.

Introduction phase – The Research and Engineering skills lead to product development and when the product is put on the market and its awareness and acceptance are minimal promotional costs will be high, sales revenue low and profits probably negative. The skill that is exhibited in testing and launching the product will rank high in this phase as critical factor in securing success and initial market acceptance. Sales of new products usually rise slowly at first.

Despite little competition profits are negative or low. This is owning to high unit costs resulting from low output rates, and heavy promotional investments incurred to stimulate growth. The introductory stage may last from a few months to a year for consumer goods and generally longer for industrial products.

Growth phase – In the growth phase product penetration into the market and sales will increase because of the cumulative effects of introductory promotion, distribution. Since costs will be lower than in the earlier phase, the product will start to make a profit contribution. Following the consumer acceptance in the launch phase it now becomes vital to secure wholesaler/retailer support. But to sustain growth, consumer satisfaction must be ensured at this stage. If the product is successful, growth usually accelerates at some point, often catching the innovator by surprise.

Profit margins peak during this stage as `experience curve' effects lower unit costs and promotion costs are spread over a larger volume.

Maturity phase – This stage begins after sales cease to rise exponentially. The causes of the declining percentage growth rate is the market saturation. Eventually most potential customers have tried the product and sales settle at a rate governed by population growth and the replacement rate of satisfied buyers. In addition there are no new distribution channels to fill. This is usually the longest stage in the cycle, and most existing products are in this stage. The period over which sales are maintained depends upon the firm's ability to stretch the cycle by means of market segmentation and finding new uses for it.

Profits decline in this stage because of the following reasons.

- The increasing number of competitive products.
- The innovators find market leadership under growing pressure.
- Potential cost economies are used up.
- Prices begin to soften as smaller competitors struggle to obtain market share in an increasingly saturated market.

Sales growth continues but at a diminishing rate because of the diminishing number of potential customers who remain last of the unsuccessful competing brands will probably withdraw from the market. For this reason sales are likely to continue to rise while the customers for the withdrawn brands are mopped up by the survivors. In this phase there will be stable prices and profits and the emergence of competitors. There is no improvement in the product but changes in selling effort are common. Profit margin slips despite rising sales.

Saturation phase – As the market becomes saturated, pressure is exerted for a new product and sales along with profit begins to fall. Intensified marketing effort may prolong the period of maturity, but only by increasing costs disproportionately.

Decline phase – Eventually most products and brands enter a period of declining sales. This may be caused by the following factors:

- Technical advances leading to product substitution.
- Fashion and changing tastes.
- The average length of the product life cycle is tending to shorten as a result of the economic, technological and social change.

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50. The central purpose of management control systems is to encourage or motivate managers to achieve corporate objectives. A control system must spur managers towards corporate goals by influencing their behavior and directing it towards organizational goals. This requires goal congruence which focuses on the harmonization of the objectives of the divisional/unit managers and that of the organization as a whole. In other words, a good decision for the managers should be good for the company also. Invariably the control system set up for units/divisions does not always fall in line with the organizational goals. To the extent, a control system does not promote goal congruence, it becomes dysfunctional and does not motivate managers to obtain and use resources efficiently and effectively and contribute adequately to the accomplishment of the corporate goals. Motivation has two aspects: direction and strength. Top management desires sub-unit management not only to aim towards corporate goals but also strive for their achievement.

Factors Influencing the Design of Management Control System

In short, the nature and content of management control systems differs from organization to organization depending upon several factors. These factors are:

a. **Size and spread of enterprise:** The size and spread of a large public sector bank is bound to be different compared with that of a small private bank with regional focus. This would certainly determine the content and nature of the control system to be adopted by them.

b. **Organizational philosophy regarding delegation and decentralization:** Management philosophy for State Bank of India is bound to be different from that of the State Trading Corporation. While Steel Authority of India is a holding company, Hindustan Copper Corporation is not a holding company. The organizational structure and extent of decentralization and delegation is governed by statutes in the case of many public sector enterprises and by conventions in other enterprises. In banking industry, it differs from one bank to another depending on its size of operations. Further within the same bank, degree of decentralization and delegation changes from one point of time to another to meet the changed environmental challenges and opportunities.

c. **Nature of operations and their divisibility into separate divisions:** For instance in oil industry, units cannot be formed on the basis of products while in many large trading companies, divisions can be created on product basis. Also in paper industry, different stages involved in pulp making cannot be subdivided into divisions for the purpose of a management control though pulp-making as a whole can be regarded as a division.

d. **Types of responsibility centers:** *D*ifferent control systems are needed for different types of responsibility centers or subsystems within an organization. Should the performance of a responsibility center be measured in terms of cost or profits or return on investment depends on the type of responsibility center it is. Consider the case of a control system for different branches in a bank. When there are obvious transactional differences between branches – some branches being deposit-heavy or advance-heavy, some others being with or without safe-deposit facilities or foreign exchange transactions – it is not possible to have profit as the sole criterion for performance evaluation of all the branches. Hence, different control systems with different criteria of performance should be used for different subsystems or sub-units.

e. **People and their perceptions:** Perceptions of the people in the organization about the likely effects of the control system on their work-life, job satisfaction, job security, promotion and general well-being could be different from organization to organization, depending on the kind of perceptions and aspirations of its executives. These considerations will significantly influence the nature and content of the control system needed in the organization and must be reckoned in designing it.

Hence, control system for each organization is unique in itself and has to be tailor-made to suit its needs and objectives.

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51. The suitability of performance measures depends on specific objectives of the responsibility centers or divisions, and the purpose of their evaluation. Thus, clarity of objectives to be attained by each of the organizational segments and their linkage with the organizational objectives is imperative for selection of proper measures. Indeed measuring activities over which division/department concerned is having a control is the life stream of management control system. According to Richard D Vancil, "Figuring out the best way to define and measure the financial performance is the Corporate Controllers' most challenging and analytically demanding task". (Vancil, Richard D)

The choice of measures of performance also depends on the purpose of evaluation which could either be an assessment (judgment) of the performance of the sub-unit or for making decisions for improvement of performance in the future. When the purpose is restricted to judging the performance, the evaluation exercise serves only for a limited purpose of ascertaining whether the actual performance is up to the mark or satisfactory or poor. It does not throw light on how to improve further which indeed should be the underlying philosophy of the management control systems. Hence the primary purpose of evaluation should be to improve the performance of the organizational segments in the future and the choice of measures should be made accordingly. Further, evaluation of performance can take the form of self-monitoring by the performing manager of monitoring and review by the co-ordinating manager. Thus the choice of measures would also depend on the point of view to be considered – the performing manager or that of the co-ordinating manager.

Criteria for Selecting Measures of Performance

a. The parameters used for performance evaluation must be clear. If the criteria have not been defined, the Divisional Managers are not able to decide on which items they should concentrate their efforts and resources. To the extent there is ambiguity about the performance yardsticks, the chances of their being perceived as unfair are more. They must be perceived as fair by the division/departmental heads and other people working in the departments/divisions.

b. The measures of performance must measure the efforts that are or can be put in by the responsibility center heads. It is necessary that the inputs and outputs that are within the control of the manager in charge of the responsibility center, alone are considered for performance evaluation.

c. The targets set for achievement should be attainable with reasonable effort. If they are too high, they will not motivate the persons concerned and will seriously hamper the effectiveness of the management control system. Also, the targets fixed must be established through participation and understanding by the performing manager and the co-ordinating manager. This will promote acceptance of the system goals as personal goals by the managers of the responsibility centers and help them to internalize the goals that are set. (Becker and Green).

d. The selected measures of performance should enable a realistic assessment of the effectiveness and efficiency of each of the organizational segments in relation to their specific goals. Effectiveness can be evaluated by measuring attainment in terms of criteria which measure the final benefits of ultimate output. Efficiency, on the other hand, can be assessed by measuring achievements in terms of yardstick which measures output (or intermediate output) related to the consumption of resources. Efficiency is thus used in the typical engineering sense of being the relationship of output to inputs. Whereas, effectiveness denotes the contribution of the achievement of the ultimate goals of the responsibility center – division or department.

e. If the performance of the division does not lend itself to a quantitative measurement which is true for say, legal department, the watch and ward department, the fire protection unit etc. efficiency and effectiveness cannot be assessed. In such a situation we select parameters which help us to make a judgment of the level of activity of the responsibility center. Duration of time spent in patrolling and the number of kilometers done by watch and ward vehicles, number of fire fighting cases attended by the fire fighting unit may be cited as examples of parameters which enable assessment of the level of activity.

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f. The yardsticks selected for performance measurement must enable an evaluation of the short-term and long-term performance. The use of multiple measures promotes goal congruence and minimizes sub-optimization tendencies. Emphasis on a single goal, say profits, might lead to its maximization in the short-term at the cost of long-term interests of the organization. Multiple goals comprise of profitability, market share and productivity, personnel development, employee attitudes, contribution to social responsibility, etc. While the goal of profitability is measured in terms of a single year's performance the thrust of other goals is on off-setting the temptation to maximize short-term profits at the cost of long-term interests of the organization. (Horngern, Charles T). In the absence of a system of multiple goals, one goal may be maximized while others get neglected. However, too many yardsticks should not be used as the performing executives would not get a clear idea about which criteria they should try to concentrate. Hence four to five criteria would suffice.

g. The selected measures should enable an evaluation of quantitative as well as qualitative aspects of performance.

h. Critical performance areas should be spelt out for each of the responsibility centers and the yardsticks selected should measure the contribution towards their achievement.

52. Zero Base is a process which requires a manager to justify his entire budget request in detail starting from the scratch. In other words, he determines the minimum /basic requirements to perform the functions of his department. Any costs above this requirement are identified as increments that must be justified before they are funded. This approach requires that all activities be first identified as decision units. For each decision unit, then, a separate decision package be constructed and evaluated by a systematic analysis and ranked in order of importance before its adoption. Sometimes more than one decision package is prepared for a decision unit.

Steps Involved

The steps involved in incorporating Zero Base Review in the budgeting exercise are as follows:

1. Spelling out by top management of discrete activities or decision units.
2. Construction of decision packages with a specification of corporate objectives and operational objectives and standards and alternative performance methods to achieve those objectives.
3. Priority ranking of endorsed projects by the lower management level followed by an hierarchical review by higher levels of management with continual consolidated re-ranking.
4. Allocation of organizational resources to decision units based on the consolidated ranking of decision packages accepted and projection of availability of funds.
5. Monitoring performance of projects on the basis of criteria established in the approved decision packages.

The two critical steps of this process: development of decision packages and ranking of alternatives, are discussed in detail below.

Decision Package

Operationally the Zero Base Review program centers around the creating and evaluation of decision packages. A decision package addresses questions central to the proper selection and review of alternative programs. A separate decision package is required for each major activity to be initiated or continued. Sometimes several decision packages may be prepared for a decision unit or an activity by the manager in charge of it. The sum of all these packages equals the budget request. Each decision package is normally composed of:

1. A statement of purpose and goals for the activity under consideration (product development objectives, manpower development plans, marketing, publicity targets for marketing department).

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2. An evaluation and projection of the consequences of not performing the activity and decision on minimum level of activity.
3. Identification of mutually exclusive alternative means of accomplishing the minimum activity levels.
4. Spelling of definite measures to judge performance.
5. An explicit statement of the costs and benefits of each proposed alternative method.

Ranking Process

After the decision packages have been constructed, ranking of the various decision packages or various alternatives included in a given decision package is to be made at different levels of management starting from the decision unit level and continuing up to the divisional levels.

Allocation of Organizational Resources to Decision Units

The final selection of the decision packages or the alternatives included in the decision package depends on the consolidated ranks and the availability of financial and other resources. In the event of resource requirements of the decision packages selected exceeding the resources available a further selection i.e. acceptance and rejection of packages will have to be carried out. The legally obligatory or the crucial decision packages for attainment of the corporate objectives will have to be given a priority. The remaining decision packages should be arranged in the descending order of the cumulative ranks. Keeping in mind the remaining resources available the decision package with relatively high ranks will get included in the budget of the organization, while others will get excluded.

53. For a budget to be used as an effective instrument of control the following requirements are needed.

Firstly, it must present the details of planned performance separately for each organizational segment – division, department and section, besides the consolidated position for the organization as a whole.

Secondly, the budgetary process should start with the spelling of corporate objectives. The corporate objectives for the ensuing year must be defined keeping in mind the long-term objectives included in the long range plan of the organization and the likely changes in the political, social, economic, technological and market environment during the budget period. Thus, the budget for the forthcoming year should provide a long-term perspective. In short, the budget for the coming year should enable the organization to move a step forward towards the achievement of the long-term objectives.

Thirdly, in connection with the budget formulation and implementation, the Finance Manager must simply play the role of a facilitator. He should view the budgetary exercises as an opportunity to enable the operating/line managers to plan and implement the activities of their subunits for the coming year on desirable lines. Thus, the Finance Manager should not prepare the budget himself, instead he should help the line managers to formulate the budgets for their divisions, departments and sections.

Fourthly, the central purpose of the budgetary control should be to motivate managers to obtain and use resources of the organization, efficiently and effectively and contribute to the accomplishment of the corporate objectives. Obviously, the purpose of the budgetary control should not be limited to expenditure control or an exercise aimed at an estimation of performances and the resources required. The extent to which the budgetary control systems fail to adequately motivate the managers, the achievement of corporate objectives will be restrained.

Fifthly, the budget should always have a reasonable degree of challenge in it, i.e. it should aim at performance levels which cannot be achieved without making an extra efforts.

Sixthly, while reviewing the actual performance in relation to the planned levels at periodic intervals, we should appreciate managers on areas of performance conducive to the

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achievement of the corporate goals and should not simply criticize them for failure to achieve the planned levels of performance. In other words, a sound budgetary control system must be supplemented by a good system of appreciation and discouragement. Thus, suitable rewards and sanctions must be part and parcel of the budgetary control systems. However, unless the situation makes it absolutely necessary, harsh or negative forms of discouragement should be avoided.

Seventhly, while conducting the performance monitoring and review of different sections, departments and divisions, improvement of performance in the future should be given greater emphasis than the post mortem of the performance of the past period. The performance monitoring and review exercise should not be reduced to a mere fault finding exercise.

Lastly, the budget settlement process as well as monitoring and review process should be carried out through understanding and participation of both of performing unit manager and the co-ordinating manager. Therefore, the budget should be used more as a developmental tool rather than as a control device.

54. Generally performance budgeting is understood as a system of presentation of public expenditure in terms of functions, programs and activities/projects, etc. reflecting primarily the governmental output and its costs. Burkhead defines a performance budget as one which presents the purposes and objects for which funds are requested, the costs of the programs proposed for achieving these objectives and quantitative data measuring the accomplishments and work under each program. According to Hoover Commission, it is a reflection of what the Government is doing, how much and at what cost. It focuses attention on the ends to be served by the Government rather than on the money to be spent. In the formulation of a performance budget the most important task is the precise definition of the work to be done and a careful estimate of the work to be done and what it will cost.

Performance budgeting must be distinguished from appropriation budgeting which focuses on the determination of the inputs required by various Government departments and prescribes the maximum limit to the amount of spending. The main focus during monitoring and review is also on the levels of expenditures and the inputs consumed. In contrast to this, in performance budgeting the primary focus is on the outputs or results to be achieved. Thus the emphasis in performance budgeting is on accomplishments rather than on the means of accomplishment, on the precise definition of work to be done or service to be performed rather than on details regarding money spent on several items.

A performance budget presents the purpose and objectives for which funds are requested, the costs of various programs and activities proposed for achieving the objectives and quantitative data measuring work performed or services rendered or results accomplished under each program and activity. In short, performance budget is a comprehensive operational document, conceived, presented and implemented in terms of functions, programs, projects or activities, with their financial and physical aspects closely inter-woven.

Purpose of Performance Budgeting System

According to Administrative Reforms Commission of Government of India, PBS is intended to serve the following purposes.

1. Correlate the physical and financial aspects of every function, program and activity.
2. Improve budget formulation, revenue generation and decision making at all levels of operations.
3. Facilitate better appreciation and review.
4. Enable a more effective performance audit; and
5. Measure progress towards accomplishment of long-term as well as short-term goals.

Steps involved in launching PBS

1. Classification of organization structure in terms of functions, programs and activities

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(or projects) to show precisely objectives, the work done and the organizational responsibilities by each of them.

UN Manual defines these terms in the following words.

Function is a broad grouping of operations that are directed towards accomplishing a major purpose of government. Thus it is a major division of the Government or an organization activity.

Program implies broad categories within a function that identifies end products of major organizations. Complex programs are divided into sub-programs. The purpose of a program is to contribute to the achievement of the objectives of the function to which it belongs.

Activity is a division of a program into homogenous types of works or schemes. An activity contributes towards attainment of the end results of the program to which it belongs. Further, an activity is usually identified with relatively lower levels of management.

For understanding these terms a few examples are necessary. Health is a function, control of communicable diseases is a program, malaria eradication is an activity or project. Similarly agricultural development is a function, development of commercial crops is a program, cotton development is an activity. In banking, lending is a function, priority sector lending is a program, and lending against pumping sets, seeds and fertilizers is an activity.

2. Activity schedules are designed to highlight the major purposes to be served, the identification of programs directed towards these ends, indication of projects or activities under each program, as well as the measurement of work with data on past, current and anticipated work load, e.g. number of children to be educated, number of hospitals to be provided, number of trees to be planted, number of new lending accounts to be opened, number of villages to be electrified, etc.
3. Establishment of proper measures of work or services rendered under each program and activity and developing appropriate norms or standards for appraisal of performance to assess efficiency and effectiveness is the third step. Of course, all outputs cannot be measured, e.g. team spirit, employee morale, police or fire protection.
4. Accounting and Record Keeping along functional lines to facilitate calculation of variances between budgeted and actual costs.
5. Selecting suitable work load factors, e.g. productivity and performance ratios that justify financial requirements of each program.

55. Management reporting serves multiple purposes:

- Firstly, identification of what is going wrong, for decision on corrective actions to be taken before serious damage or loss occurs;
- Secondly, ascertaining what has actually gone wrong, for guiding managers to reduce the likely losses, for diagnozing the causes and suggesting actions to prevent their recurrence; and
- Finally, determining the accountability for whatever has gone wrong.

The Requisite of a Good Management Reporting System

1. Reports should be linked with the corporate objective; long-term as well as short-term.
2. The number of reports to be compiled and submitted to each level should be minimized by integrating the needs of various users as far as possible.
3. Top management needs less detailed reports or summary or exception reports. Relatively detailed reports are needed at lower levels of organizational responsibility.
4. User reaction to the reports must be obtained at suitable intervals. Thus, the behavioral aspects of reporting cannot be ignored.

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5. Figures by themselves do not serve much purpose, comparative figures for the previous periods or standards must be provided. Thus, the basis of comparison is also to be considered while designing the reports. Different basis of comparison are needed for different reports. In addition to absolute figures, relative figures (ratios, percentages) should be provided, especially in organizations which vary in size and have products with difference in profitability.
6. The reports must be oriented towards the operations rather than towards accounting.
7. The reporting system must throw up information according to responsibility. This will enable the co-ordinating managements to study the performance of various divisions and departments from the points of view of their contribution to the overall objectives of the organization.
8. A review of the management reporting system, in operation, should be made every two or three years to ascertain whether the purposes for which it was designed, are still being served by it. In the event of the answer being in the negative, a revision of the design of various reports would be called for.
9. The management reporting systems must incorporate the following concepts:
   a. Concept of management sponsorship
   b Concept of responsibility centers
   c. Controllability and non-controllability
   d. Contribution approach
   e. Participation at the first line supervisory level
   f. Goals or plans must be reasonable
   g. Management by exception
   h. Concept with reasonable degree of accuracy
   i. Constant review of plans and schedules.

56. The steps involved in reorganization of M/s Lalit Pharmaceutical Ltd. are

- Techno-economic viability study
- Formulation and execution of the reorganization plan
- Monitoring the activities of the firm.

Techno-economic Viability Study

A reorganization plan is worked out on the basis of a techno-economic viability study of the firm. This study sets out to identify the strengths and weaknesses of the firm, the causes of failure, the viability of future operations and the course of action to be taken to bring about a turnaround. The techno-economic viability study is undertaken by the operating agencies assigned to the firm. These operating agencies are generally financial institutions and banks such as IDBI, IFCI, ICICI, IRBI, SBI, PNB etc.

The techno-economic viability study covers all the functional areas of a firm: management, finance, production and marketing.

Management: The effectiveness and ability of the management is one of the most important factors that determines the success or failure of a firm. A detailed study is done in terms of the objectives of the firm, both short-term and long-term, the corporate strategy, the corporate culture, the management-labor relations, the organizational hierarchy, the decision-making process, etc. The study tries to determine the effectiveness of management and its integrity. The areas of mismanagement are also determined.

Finance: Finance is the main functional area of business. It is a measurable indicator of the firm's health and performance. A thorough analysis of the firm's Balance Sheet and Profit/Loss statement is made.

These statements when properly analyzed give the financial stability and liquidity of the firm; profitability and uses of funds. The analysis also identifies the capital structure and the sources of funds. The analysis gives insight into working capital management and

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management of earnings.

Production and Technology: Production and Technology function assumes immense importance in the viability study. The various areas that are looked into are, the firm's equipment and machinery, the maintenance of the equipment, the technology used in production, the production capacity and utilization, the products being offered by the firm, the quality control system, production planning and inventory control.

Marketing: A number of firms have failed because of lack of good marketing management. The various areas of marketing that are studied are, the product mix of the firm, the past sales of the product in terms of quantity and value, the market share of the firm, the demand for the product range, the study of the customer profile, the price of the products, the distribution channels being used, the kind of promotion-mix being used and the most important of all is the marketing team. This study is done in comparison with the competitors.

Formulation and Execution of the Plan

The viability study serves as the basis for formulation of a rehabilitation plan. A thorough study of the various functional areas of the firm reveals the strengths, weaknesses, opportunities and threats of the firm. It gives a comprehensive idea about the status of the firm, the viability of the firm both technically and economically and the additional funds required for rehabilitation.

The formulation plan involves the changes and action to be taken regarding the various functions of the firm. It may decide to make changes in the management, if it is not found competent. Some of the labor may be retrenched/recruited depending on the situation. The amount of financial assistance to be given is determined and arrangements are made to secure the loan. Various steps are taken to improve the production function in terms of new machinery and new technology. The viable level of operations are determined and steps are taken to achieve this production level. The product-mix, the pricing, the quality of the products, distribution channels and the promotion-mix are to be changed to suit the needs of the customers, to achieve the desired sales levels. Once the plan is formulated, the plan is carefully executed. All the necessary changes prescribed by the plan are made. The funds are disbursed in a phased manner as and when required. The necessary concessions and reliefs are provided. A close watch is kept on the activities of the firm and a continuous evaluation is done.

Monitoring

Monitoring is a very important part of a rehabilitation plan. It is done to evaluate the execution of the plan. Regular meetings are held between the firm, the bankers, the financial institutions and other concerned parties to verify and evaluate the process of execution. Monitoring is done to ensure the proper utilization of funds and adherence to the terms of rehabilitation plan. It also ensures the proper working of the firm. Feedback is obtained and remedial measures are taken as and when the situation demands. The impact of rehabilitation becomes evident in a short period. Once the success of the firm becomes evident, the role of agencies and banks is confined to constantly hold meetings to assess and review the process. This continues till the firm is successful. In case the firm is found incapable of making a turnaround despite the plan, then the steps to liquidate the firm are undertaken.

57. Following are the impact of inflation on financial statements:

i. The assets are stated in the balance sheet at historical cost values which are much lower than their current replacement values. Due to the understatement of the values, the business is more vulnerable to takeover bids and the shareholders may not realize a fair value for their shares at the time of such takeovers.

ii. Since the fixed assets are understated, the value of the depreciation charged in the income statement is at a low figure. This would distort the current cost data compiled for operational decisions such as pricing, make or buy, etc.

iii. Another distortion of earning is that which arises when the cost of raw materials and

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components of goods purchased for resale are steadily rising. As the cost concept requires that only the cost of purchase should be charged off to the income statement, the difference between the historical cost and the replacement cost of such items is included in the profits earned. This difference is referred to as holding gains and it overstates the profits available to shareholders, whereas in reality they would be required to replace the inputs at the higher costs and thus cannot be distributed to the shareholders.

iv. Assets such as cash and near-cash assets such as receivables in periods of inflation lose their value in terms of purchasing power. Similarly the real values of liabilities of a fixed monetary value such as creditors and loans outstanding does not get reflected in the statements in periods of inflation.

v. The profits and return on investment under historical cost accounting are overstated as revenue is recorded at increasing price levels and expenses such as depreciation and cost of sales are charged off at the historical cost.

vi. The financial statements also reflect a very high growth in sales value, profits, capital additions, etc. The actual growth rates of these items can be assessed only when adjustments are done for the changes in the money value.

From the above it can be seen that accounts which have not been adjusted for the impact of inflation can mislead both internal and external users in respect of decisions that may be taken on the basis of such accounts.

58. The key steps in the Mckinsey approach to value-based maximization are as follows:

- Ensure the supremacy of value maximization
- Find the value drivers
- Establish appropriate managerial processes
- Implement value-based management properly.

Ensure the Supremacy of Value Maximization

The first step in value-based management is to ensure that senior managers embrace value maximization as the ultimate financial objective. This means that top management should focus on discounted cash flow value (the most direct measure of value creation) and eschew traditional measures like earnings per share, growth in profit, or accounting rate of return as they are often poor proxies for value creation.

Generally companies pursue financial goals as well as non-financial goals. Financial goals (like value maximization or profit maximization) typically guide senior management, whereas non-financial goals like product innovation, customer satisfaction, and quality improvement are meant to motivate the entire organization. They guide and inspire employees. They make sense to employees down the line who are familiar with operation measures like productivity, market share, cycle time, defect rate, or absenteeism and understandably find value creation to be somewhat abstract and remote.

Non-financial goals are often consistent with the financial goal of value maximization. Companies that maximize value also excel in terms of product quality, customer service, innovation, and employee satisfaction. Of course, in some cases there may be a possibility of conflict between a non-financial goal and the goal of value maximization. In such cases the conflict should ordinarily be resolved in favor of the goal of value maximization.

Find the Value Drivers

An essential ingredient of value-based management is a sound understanding of performance variables, referred to as the key value drivers, that influence the value of business. Value drivers need to be identified at different levels. Copeland, et. al, suggest that it is useful to examine value drivers at three levels as mentioned below:

Generic level : At this level, the return on invested capital is analyzed in terms of operating margin and invested capital.

Business unit level : At this level, variable like product-mix, customer-mix, operating

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	leverage, and so on, are relevant.
Grass roots level	: At this level, the focus is on operating value drivers like capacity utilization, revenues generated per visit, cost per delivery, and so on, that are directly influenced by the decisions of front line managers.

Establish Appropriate Managerial Processes

Value-based management calls for gearing the following managerial processes to value maximization: strategy development, target setting, action plans (budgets), and performance measurement/incentive system.

Strategy Development: Value maximization should guide the formulation and evaluation of strategies, both at the corporate level as well as at the business unit level. At the corporate level, strategy development is concerned with two related issues. What businesses should the firm be in? How should resources be allocated across various businesses? Strategy development at the business unit level calls for exploring alternative strategies, valuing them, and selecting the one that is expected to generate the highest value.

Target Setting: Targets reflect what management expects to achieve. The selected value-maximizing strategies should be translated into specific targets, short-term as well as long-term. The basic principles that should guide target setting are as follows: (i) Targets should be based on key value drivers and cover financial as well as non-financial dimensions. (ii) Targets must be tailored to the level of the organization. (iii) Short-term targets and long-term targets must be properly linked.

Action Plans/Budgets: Action plans show the specific steps to be taken in line with the strategy of the business unit to achieve the targets. Short-term budgets of companies, often expressed almost entirely in financial terms, do not provide sufficient guidance for implementation. What is required is an actionable plan that facilitates an organized pursuit of its goals.

Performance Measurement: Managerial actions are greatly influenced by how performance is measured and evaluated. Hence performance measurement and the incentive system should be linked to the company's strategy or business unit's strategy. According to Copeland et al. This calls for: (i) tailoring performance measurement to reflect the characteristics of the business unit, (ii) linking performance measurement to set targets, (iii) combining financial and operating measures that reflect the key value drivers of the unit, and (iv) developing performance measures that provide early warning.

Implement Value-based Management Properly

Value-based management is a long and complex process as it calls for a change in the mind-set of decision makers. The spider diagram shown in the figure below is a useful tool to provide a perspective on the process of change. It helps in understanding where the company is, in terms of the following questions:

- Is the company performance oriented?
- Are the decisions of the company value-based?
- Does the company employ a bottom up as well as top down process?
- Is there a meaningful two-way communication in the company?
- Does the company have fairly strong self-reinforcing process?
- Does the company have a low-cost value-based management system?

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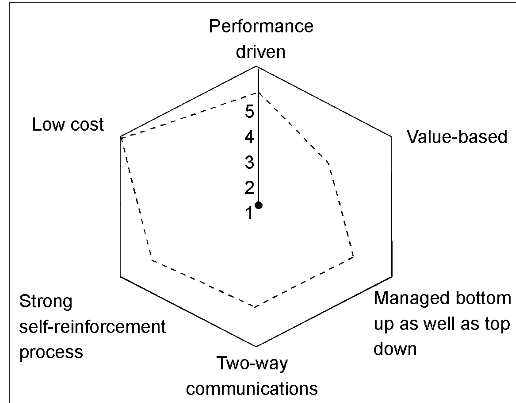


The above characteristics reflect the hard as well as the soft aspects of value-based management. As *Copeland et. al* put it:

"The total is to plot where your organization is on each of these parameters and then stretch to reach the outer limits of the hexagon. Few companies today have achieved this ultimate goal, but many are striving to do so."

59. Merton Miller Argument

The issue of optimal debt policy was answered in a novel, though controversial, manner by Merton Miller in his 1976 Presidential Address to the American Finance Association. He argued that the original MM proposition, which says that financial leverage does not matter in a tax-free world, is valid in a world where both corporate and personal taxes exist.

To understand Miller's argument, let us begin with the model of firm valuation when corporate and personal taxes exist:

$V_1 = V_u + B[1 - (1 - t_c)(1 - t_{ps}) / (1 - t_{pd})]$

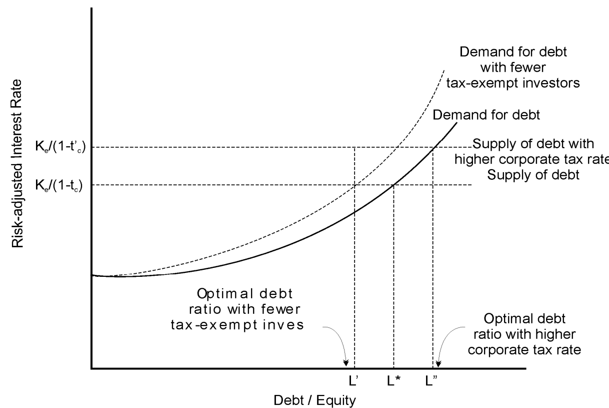
if $(1 - t_{pd}) = (1 - t_c)(1 - t_{ps})$, the above equation becomes.

$V_l = V_u$

This is the Modigliani and Miller proposition in a tax-free world. If $t_{pd} = t_{ps}$ the equation becomes:

$V_l = V_u + t_c B$

This is the Modigliani and Miller proposition taking into account only the corporate taxes. Miller posts that the former case is the correct case. Broadly, the key premises and links in his argument are as follows:



- The personal tax rate on equity income, t_{ps}, is nil. The personal tax rate on debt income, t_{pd}, varies across investors. The corporate tax rate, t_c, is constant across companies.

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- Companies will change their capital structures in such a manner that, at the margin, the after–tax value of a rupee of debt income is the same as the after-tax value of a rupee of equity income.
- If the starting point is an all-equity capital structure, as long as some investors are tax-exempt (tpd = 0), companies can by borrowing a rupee of debt enhance their value by t_c – this is clear from the above equation.
- Once companies exhaust their tax-exempt clientele, they have to sell debt to investors who pay taxes. To induce investors to switch from equity (whose income is tax-exempt) to debt (whose income is taxed), companies have to raise the interest rate. If the risk-adjusted expected rate of return on equity is k_e, the risk-adjusted expected rate of return on debt should be at least $k_e/(1 - t_{pd})$ in order to compensate investors for personal taxes on debt.
- In the aggregate, companies will issue debt till the tax rate for the marginal bondholder, t_{pd}, is the same as the corporate tax rate, t_c. Beyond this point, there is no tax advantage to companies from issuing debt. Thus, the equilibrium supply of corporate debt is that aggregate amount at which the tax bracket of the marginal debtholder just equals the corporate tax rate.
- If the corporate tax rate exceeds the marginal personal tax rate on debt income, companies will use only debt capital; otherwise the companies will not use any debt capital. Hence, the supply curve for debt capital remains horizontal at a given risk-adjusted interest rate [ke/(1 – tc)]. The adjacent figure shows two such supply curves.
- The demand curve for debt capital slopes upwards because investors would buy more debt as companies offer a higher pre-tax expected rate of return. The slope of this curve will depend on funds available to investors in various tax brackets. The adjacent figure shows two such demand curves.
- The point at which the supply and demand curves of debt intersect represents the optimal economy-wide debt-equity ratio. L* represents that point in the figure. If the tax burden on debt income rises, the optimal debt-equity ratio will decline to ; on the other hand, if the corporate tax rate rises in relation to personal tax rate, the optimal debt equity ratio will increase to L". The important point is that no single firm can derive any benefit from varying its financial leverage – only the optimal debt-equity ratio for the economy changes.

60. Inflation and Innovations in the Financial Markets

Inflation reduces the purchasing power of money. If the rate of inflation is, say, 10 percent per annum, the purchasing power of money declines by 10 percent per annum. In such a situation, an income increase of 10 percent per annum is required to protect one's real income. Likewise, if the rate of inflation is 10 percent per annum, the rate of return on investment must be at least 10 percent per year to avoid erosion in real wealth. To earn a positive real rate of return in a situation like this, the nominal rate of return must be greater than the inflation rate, namely 10 percent.

In order to cope with inflation, employees seek wage increases related to consumer price index and business firms include escalation clauses in supply contracts. The following have been the important inflation-induced innovations/ developments in financial markets.

- Flexible interest rates.
- Lenders' participation in equity.
- Financial futures.

Flexible Interest Rates

Traditionally, lenders have offered fixed-interest loans to borrowers. Under this arrangement, when unanticipated inflation occurs and interest rates increase in response to it, lenders suffer and borrowers gain. In the early 1980s when unanticipated rise in inflation

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caused increases in interest rates in the US (and several other countries) many lending organizations suffered severely. A natural response to this experience was to move in the direction of variable-interest loans from fixed-interest loans. This is amply reflected in the following developments.

- Flexible interest rate home mortgages with interest rates based on some index of cost of funds.
- Adjustable interest rates found in many kinds of debt contracts (other than home mortgages).
- Variable interest rate consumer installment loans provided by commercial banks.
- Variable interest rate corporate bonds.
- Variable interest rate time deposits for Individual Retirement Accounts (IRAs) in the US.

Lenders' Participation in Equity

As compensation for bearing inflation risk, lenders may seek participation in equity. This essentially implies that lenders partake in increases (or decreases) in the value of assets financed by them. The most common type of such participation is the shared appreciation mortgage (SAM) found in real estate financing. In a typical SAM the interest rate is one-third lower than the prevailing standard mortgage loan. In return for this sacrifice, the lender gets one-third of the appreciation in the real estate when it is sold – in some arrangements, the lender can collect its share of appreciation after a certain period, even though the property may not be sold.

Financial Futures

An agreement between two parties to exchange an asset for cash at a predetermined future date for a price that is specified today is referred to as a futures contract. For example, if you agree on 1st January to buy 100 bales of cotton on 1st July at a price of Rs.500 per bale from a cotton dealer, you have entered into a futures contract with the cotton dealer. As per this contract, on 1st July you will have to pay Rs.50,000 and the cotton dealer will have to supply 500 bales.

To facilitate such contracts futures markets have been established for various commodities like gold, wheat, coffee, oil, cotton, silver, copper and many others. In these markets, standardized futures contracts can be bought and sold – such a contract is for a fixed quantity of a given commodity the delivery of which is limited to one day in each month.

While commodity futures have been in existence for many years, financial futures have come into being only recently. A financial futures contract represents a future contract for financial assets like currencies, treasury bills, bonds, commercial papers, etc. Financial futures may be used to speculate on changes in security prices caused largely by changes in interest rates. For example, a speculative operator who expects short-term interest rates to rise would sell a six-month treasury bill futures contract. If interest rates do rise, as per his expectations, treasury bill price would fall and he can square his position by buying a futures contract. As a result of these transactions he will gain.

Business firms and financial institutions use financial futures to hedge against interest rate fluctuations (which are largely caused by changing inflationary conditions). In hedge, there is an underlying transaction which is sought to be protected.

Utility of these instruments in a deflationary situation

In a deflationary situation flexible interest ratios are advantageous to the borrowers, whereas financial futures are advantageous to the producers or owners of the underlying assets in a deflationary situation.

61. To understand corporate governance in industrially developed countries, we will look at two significantly different models, the Anglo-American model and the German-Japanese model.

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Anglo-American Model: The distinctive features of the Anglo-American model of corporate governance are as follows:

i. The ownership of companies is more or less equally divided between individual shareholders and institutional shareholders. Though the combined holding of institutional shareholders is often more than 50 percent, rarely does a single institutional investor has more than 10 percent stake in a company. (This may be because of various restrictions applicable to institutional investment.)

ii. Companies are typically run by professional managers (often referred to as bosses) who have negligible ownership stakes. There is a fairly clear separation of ownership and management. Managers enjoy substantial freedom in running the companies and the typical chief executive officer considers himself as John Wayne, wielding complete control.

iii. Though, in theory the management is supposed to be chosen by the directors, in practice it is often the other way. Hence, directors are rarely independent of management.

iv. Most institutional investors are reluctant activists. They view themselves as portfolio investors interested in investing in a broadly diversified portfolio of liquid securities. The high churning ratio of these investors suggests that they have a short-term orientation. If they are not satisfied with a company's performance, they simply sell its securities in the market. The myopic outlook of institutional investors builds pressure on management to report food earnings performance in the short run.

v. While most institutional investors seem to have neither the inclination nor the ability to monitor companies effectively, a small, and perhaps growing, number of institutional investors are playing a more active role in corporate governance. They seem to fall primarily into two categories: (i) Institutional investors, who believe that they can earn superior returns only by investing in a small number of companies and actively monitoring them; (ii) Institutional investors who pursue an `index strategy' that requires them to remain committed to stocks included in the index that they are trying to mimic.

vi. The disclosure norms are comprehensive, the rules against insider trading tight, and the penalties for price manipulation stiff. These measures provide adequate protection to the small investor and promote general market liquidity. Incidentally, they also discourage large investors from taking an active role in corporate governance.

vii. There is a fairly active market for corporate control that provides a credible threat of takeover to consistent under performers.

In a nutshell, Jonathan Charkham characterizes the Anglo-American model as the `high-tension' model because of the important role of the chief executive officer, active capital markets, short-termism, and credible takeover threats.

German-Japanese Model: The German and the Japanese models of corporate governance, despite some differences among them, share certain important commonalities to justify being bracketed together. Their distinctive features are described below.

i. Bank and financial institutions have substantial stakes in the equity capital of companies. In addition, cross holdings (referred to as keiretsu in Japan) among groups of firms is common in Japan.

ii. Institutional investors in Germany and Japan view themselves as long-term investors. They play a fairly active role in management. In general the long-term commitment of institutions and the close monitoring provided by them seem to have helped companies immensely.

iii. In Germany and Japan, the disclosure norms are not very stringent, checks on insider trading are not very comprehensive and effective, and the emphasis on liquidity is not high. All this tends to impair the efficiency of the capital market.

iv. There is hardly any market for corporate control in Germany and Japan. Friendly takeovers, let alone hostile ones, are very rare.

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In summary, Jonathan Charkham refers to the German-Japanese system as the `networked' system because of the access to vast information through banks, long-termism of investors, infrequent mergers and acquisitions, and limited role of the capital market.

62. In some instances foreign companies having joint venture with Indian companies snapped ties with their Indian partners while setting up 100% subsidiaries. This is against the interest of those Indian partners of the foreign companies. The simple reason being, such Indian companies cannot sustain the competition from their foreign counterpart. This prompted the Government to issue the regulation that all foreign companies that have a joint venture with an Indian company, have to get a `No Objection Certificate' from their respective Indian partners before setting up a 100% subsidiary in India. This will ensure that the interest of such Indian partners are adversely affected.

Since joint ventures have a poor track record, a lot of effort should be put in planning and implementing joint ventures. The following guidelines must be borne is mind in this context.

Determine if a joint venture is the best approach: In order to realize a company's vision several options are available: internal expansion, acquisition, arm's length relationship, and joint venture. The best approach depends on the resources and risk involved and the kind of control the firm wishes to exercise.

Choose the right partner: If the joint venture appears to be the preferred approach, select the right partner. The choice of a partner must be based on a clear definition of one's priority needs and what is most critical to meet them. There has to be a proper `fit' between the partners.

Set realistic objectives: For the alliance Partners often make the mistake of setting unrealistic objectives for their alliance. It is by establishing achievable targets that the partners can build a strong foundation for a satisfactory business relationship.

Check if the strategic plan is grounded in economic reality No amount of caring and sharing among the partners can overcome an inadequate strategy. If the strategic plan for the alliance is not grounded in economic reality the partners are bound to experience false starts and economic failure.

Ensure balanced pay offs for the partners: Each of the partners responsible for making the alliance succeed must benefit from it. There are greater chances of the alliance falling through if one party gains more from the other. This would lead to a situation where the losing party may look for alternatives and eventually pull out of the alliance.

63. The dividend policy is likely to be affected by the owner's considerations of (a) the tax status of the shareholders, (b) their opportunities of investment, and (c) the dilution of ownership. It is well-nigh impossible to establish a policy that will maximize each owner's wealth. The firm must aim at a dividend policy which has a beneficial effect on the wealth of the majority of the shareholders.

Taxes

The dividend policy of a firm may be dictated by the income tax status of its shareholders. If a firm has a large percentage of owners who are in high tax brackets, its dividend policy should seek to have higher retentions. Such a policy will provide its owners with income in the form of capital gains as against dividends. Since capital gains are taxed at a lower rate than dividends, they are worth more, after taxes, to the individuals in a high tax bracket. On the other hand, if a firm has a majority of low income shareholders who are in a lower tax bracket, they would probably favor a higher pay-out of earnings because of the need for current income and the greater certainty associated with receiving the dividend now, instead of the less certain prospects of capital gains latter. With effect from June, 1997, dividend from domestic companies is totally exempt from tax in India. The company itself has to pay a 10 percent tax on dividends declared/announced/paid, in addition to the normal tax on income.

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Opportunities

The firm should not retain funds if the rate of return earned by it would be less than one which could have been earned by the investors themselves from external investments of funds. Such a policy would obviously be detrimental to the interests of shareholders. It is difficult to ascertain the alternative investment opportunities of each of its shareholders and, therefore, the alternative investment opportunity rate. However, the firm should evaluate the rate of return obtainable from external investments in firms belonging to the same risk class. If evaluation shows that the owners have better opportunities outside, the firm should opt for a higher dividend pay-out (D/P) ratio. On the other hand, if the firm's investment opportunities yield a higher rate than that obtained from similar external investment, a low D/P is suggested. Therefore, in formulating dividend policy, the evaluation of the external investment opportunities of owners is very significant.

Dilution of Ownership

The financial manager should recognize that a high D/P ratio may result in the dilution of both control and earnings for the existing equity holders. Dilution in earnings results because low retentions may necessitate the issue of new equity shares in the future, causing an increase in the number of equity shares outstanding and ultimately lowering earnings per share and their price in the market. By retaining a high percentage of its earnings, the firm can minimize the possibility of dilution of earnings.

Thus, in framing the dividend policy of a firm, consideration must be given to the requirements of equity holders.

Although the ultimate dividend policy depends on numerous factors, the avoidance of shareholders' discontent is important. If the shareholders become dissatisfied with the existing dividend policy, they may sell their shares, increasing the possibility that control of the firm will be seized by some outside group. The `takeover' of a firm by outsiders is more likely when owners are dissatisfied with its dividend policy. It is the `financial manager's responsibility to keep in touch with the owner's general attitude towards dividends.

64. Just-in-Time System

Unlike conventional systems where inventory is treated as asset, JIT system views inventory as the "root of all evil". In traditional organizations high amount of inventory is held to cover up the problem areas related to quality, vendor delivery, machine breakdowns, etc. The JIT approach is the opposite, the inventory level is lowered to expose the real organizational problems and attempts are made to solve the problems at the root cause.

In JIT the master schedule (or final assembly schedule) is planned for 1 to 3 months into the future to allow work centers and vendors to plan their respective work schedules. Within the current month the master schedule is leveled on a daily basis. In other words, the same quantity of each product is produced each day for the entire 3 months. Furthermore, small lots (preferably lot size equals 1) are scheduled in the master schedule to provide a uniform load on the plant and vendors during each day. The advantage of this kind of master scheduling is that it provides nearly constant demands on all downstream work centers and vendors.

JIT uses a simple but powerful parts withdrawal system (called Kanban) to pull parts from one work center to the next. Parts are kept in small containers, and only a specific number of these containers are provided. When all the containers are filled, the machines are shut off, and no more parts are produced until the subsequent (using) work center provides another empty container. Thus, work-in-process inventory is limited to available containers, and parts are only produced as needed. The final assembly schedule pulls parts from one work center to the next just in time to support production needs. If a process stops because of machine breakdown or quality problems, all preceding processes will automatically stop when their parts containers become full.

The objective of JIT is to produce parts in a lot size of 1. In many cases, this is not economically feasible because of the cost of set-up compared with inventory carrying cost. The JIT solution to this problem is to reduce the set-up time as much as possible, ideally to zero. The set-up time is not taken as given, but rather considered a cause of excess inventory. Low set-up times result in small, economical lot sizes and shorter production lead times. Reducing the set-up time for machines is a key to the JIT systems. With shorter lead times and less material in process, the production system is also much more flexible to changes in the master schedule. This also means that organization is in a better position to respond to changes taking place in the market.

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With an emphasis on quick changeovers and smaller lots, the multifunction worker is required. Cross-training is needed to ensure that a worker can switch from one machine to the next and that workers can perform their own set-up and maintenance. This requires a broader range of skills than traditional manufacturing. JIT requires not only broader skills, but much greater teamwork and coordination since inventory is not available to cover up problems in the system.

The layout of the plant is much different with JIT since inventory is held on the shop floor and not put in a storeroom between processes. Inventory is kept out in the open, so it is readily available to the next process. Since inventory is typically kept low – only a few hours of supply – plants can be kept much smaller because space was needed when compared with conventional plants.

Quality is absolutely essential for a JIT system. Quality problems grind the production process to a halt. Since there is no inventory to cover up for mistakes, perfect quality is required by a JIT system. JIT, however, facilitates very good quality since defects are quickly discovered by the next process. Quality problems rapidly gain plantwide attention as the production line stops when problems occur. A JIT system is designed to expose errors and get them corrected rather than covering them up with inventory.

Finally, vendor relations are radically changed by a JIT system. Vendors are asked to make frequent deliveries (as many as four times per day) directly to the production line. Vendors received Kanban containers, just as in-plant work centers do, since vendors are viewed as an extension of the plant. Changes in shipping procedures and close proximity of vendors are often required to integrate vendors effectively with JIT procedures. Vendors are also required to deliver perfect quality. An evolution is required in the way that we usually think of vendors; we need to think of them as partners rather than as adversaries.

As can be seen, JIT affects practically every aspect of plant operations. While the effects are far-reaching, so are the potential benefits. Inventory turns of 50 or 100 times per year, superior quality, and substantial cost advantages (15 to 25 percent less) have been reported.

65. Industrial sickness can be defined as the failure of a unit to generate internal surplus on a continuing basis and is dependent for its survival on frequent infusion of external funds. A firm which is becoming sick shows the following symptoms which indicate that financial trouble lies ahead of it:

- Delay or default in payment to suppliers
- Irregularity in the bank account
- Delay or default in payment to banks and financial institutions
- Non-submission of information to banks and financial institutions
- Frequent request to banks and financial institutions for additional credit
- Decline in capacity utilization
- Poor maintenance of plant and machinery
- Low turnover of assets
- Accumulation of inventories
- Inability to take trade discount
- Excessive turnover of personnel
- Extension of accounting period
- Resort to `creative accounting' which seeks to present a better financial picture than what really is
- Decline in the price of equity shares and debentures.

66. The financial models used in practice seem to suffer from the following shortcomings:

Bottom-up Approach: Typically simulation models follow a bottom-up approach wherein the inputs of lower and higher level management are treated together.

Inadequate Representation of Financial Policies: In financial simulation models, management policies are generally represented in a very simplistic and inadequate manner.

Inefficient Screening of Financial Plans: In the absence of a well-defined objective, a simulation model is not an efficient device for screening various financial plans. Unless top management participates in this process with a sharp focus on key financial decisions, such a procedure may be inefficient.

The following suggestions are made to improve financial modeling in practice.

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i. Follow a "top down" approach in building the model. This will ensure that the model will concern itself with the key financial decisions of the firm.

ii. Avoid cluttering the model with excessive detail. If the model is relatively simple, with a sharp focus on key financial decisions it will have greater appeal to management.

iii. Use an optimizing framework, using a methodology like linear programming. Such a model will develop, as its output, the key financial decisions.

iv. Explore through a series of computer runs the implications of various managerial policy requirements on the optimal set of financial decisions. It must be appreciated that the programming framework has the power to answer the same questions as budget compilers – and even more.

v. Inject greater financial theory in otherwise accounting-dominated models. Since the model is primarily a device for financial decision making, it should display a greater degree of sophistication in reflecting financial issues.

67. Corporate governance broadly refers to the relationship between owners, directors and managers. A great deal of concern has been expressed all over the world about the shortcomings in the system of corporate governance. Managers are the agents of shareholders. There is often a lack of congruence in the objectives of the shareholders (principals) and managers (agents).

This leads to agency costs which represent a loss in the value of the firm. Managers may be regarded as the agents of shareholders, employed to run the firm is owned and managed by the same person, there is no room for conflict. As the stake of managers in the ownership of the firm diminishes, the scope for agency costs increases. In a typical joint stock company, where managers usually have a very little stake in ownership. They are likely to act in ways that may not be compatible with the interest of the shareholders. The corporate governance in India may be divided into two parts. The first part is the corporate governance in the private sector and the second part is the corporate governance in the public sector.

The corporate governance system in the private sector may be Characterized as the "entrenched system'' given the firm hold of the companies managed by them and the disinclination and/or inability of others to challenge them. The distinctive features of corporate governance in the he private sector are as follows:

1. There are three broad categories of shareholders: promoters (of foreign parent companies in the case of multinationals,) financial institutions (including mutual funds) and individual investors.

2. For electing the directors, the "majority rule voting'' system is typically followed. The "proportionate rule voting'' system (also referred to as the cumulative voting system) is rarely used.

3. Company boards generally comprise of three types of directors: promoter directors (or functional directors in the case of professionally managed companies), professional directors and institutional directors. Given the manner in which the professional directors are invited by the promoters and the weak incentives that the institutionally nominated directors have candor and forthrightness are sacrificed at the altar of courtesy and politeness. These tendencies are further strengthened by the dynamics of small groups wherein the promoter directors pay specific attention to cultivate others.

4. In general, institutional investors have been supportive of the promoters. They interfere only when a crisis develops or when there is a clear evidence of mala fide behavior on the part of the management or when there is a directive to them from the government. Institutional nominees on the company boards hardly have any incentive to monitor the behavior and performance of the management seriously.

5. Individual shareholders have by and large, been benign tolerant and ignorant. Scattered and ill organized, individual shareholders are not in a position to play a meaningful role in electing directors. Further, the majority rule voting system

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prevents even a well organized substantial minority to have any say in the selection of board of directors.

6. The family managed companies seem to display greater entrepreneurial vigor, act more proactively and exercise stricter control. However, the virtually unchallenged control of the family provides a lot scope for self dealing and facilitates personal enrichment at the expense of the company. The degree to which these aberations may occur depends on the level of integrity of the controlling family.

7. Professionally managed companies, in general, react somewhat slowly to the new opportunities and challenges put together emphasis on systems, favor the interest of incumbent management over that of the shareholders and set relatively easy performance standards.

The corporate governance system in the public sector may be characterized as the "transient system'' with the key players. i.e., politicians, bureaucrats and managers taking a myopic view of things. The salient features of corporate governance in the public sector are as follows:

1. The equity shares are owned wholly or substantially (51% or more) by the government.
2. The boards of the public sector undertakings, appointed for all practical purposes by the controlling administrative ministry, comprise of three categories of directors:
   i. Functional directors, who are full time employees of the concerned public sector undertaking.
   ii. Government directors who are bureaucrats from the controlling administrative ministry and
   iii. Outside directors.
3. There is, in general a good deal of political and bureaucratic influence over the management of public sector undertakings. As a result the autonomy of the management is often substantially eroded.
4. Public sector undertakings are constraint by various regulations and administrative guidelines. Efficiency and performance are often sacrificed at the altar of propriety.
5. Chief executives of public sector undertakings have short tenures, often one to five years. Such a short tenure coupled with limited freedom, leads to a myopic outlook.
6. In general performance standards are soft, compensation low incentives for performance poor and ``real'' accountability weak.

The overriding objective of corporate governance is to maximize the market value of shareholders' wealth. To facilitate the realization of this objective, the system of corporate governance must satisfy the following six interrelated conditions:

1. **Freedom:** The management enjoys the required freedom to perform. It is not constraint by infructuous external interventions.
2. **Accountability:** Freedom without accountability makes no sense. The management should be properly accountable to the owners. Also suitable incentives must be provided for superior performance.
3. **Monitoring:** Shareholders exercise proper vigil over the plans and performance of the company.
4. **Equity:** No group of shareholders is able to enjoy undue advantage at the expense of others.
5. **Alignment of interest:** The interest of the management is closely aligned with that of owners. This mitigates the ``agency costs''.
6. **Contestability:** If the managers underperform there should be a real possibility of dislodging them.

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68. The issue of convertible debentures at a coupon of 10% and an issue of non-convertible debentures at a coupon of 15% are two different types of issues. The risk-return profile as well as the cost of capital under both the issues will be different.

The issue of non-convertible debentures will have risk-return profile which will be similar to that of a bond. From the investor's point of view the risks associated with such an issue are the default risk and purchasing power risk or the risk of inflation. He will have to compare the yield and maturity of this instrument with the yield and maturity of various fixed income securities available in the market to arrive at his investment decision. The investor is protected from the risk associated with equity based investment in such investment and therefore, NCD issue can be considered a relatively low risk investment. The coupon on such issue is generally kept higher because the advantages of conversion are not available to the investors in non-convertible issue.

Coming to the issue of convertible debenture and the risk associated with it, the lower coupon rate does not indicate that it is less risky in comparison to NCD issue. The reason for keeping the coupon lower than NCD may be attributable to the attractiveness of the equity of the company issuing such an instrument. The advantage to investors in such an instrument is the conversion feature associated with it. Investors in convertible issues are assured of a certain number of equity shares at a future date and that too at a predetermined price. The advantage to the company in issuing such an issue is that it is able to reduce its cost of capital for a particular period and thereafter it is able to enhance its debt raising capacity due to the enhanced equity capital after conversion.

69. The problem cited here relates to the decision of asset creation and the means of financing. It is felt that both the types of decision impact on the overall earnings as well as risk exposure of the company. Highly automated processes require larger commitment in terms of assets but reduce the operating costs of the company provided the optimum utilization of such assets. The operating leverage of the automated plants is generally very high and the capacity utilization of such plants becomes crucial to the profitability of the company.

It is imperative that such decisions should be taken jointly with the decision of financing. It is because the method of financing decides the company's financial risk. This financial risk when combined with operating risk decides the overall risk exposure of the company's operations. For example, suppose a company goes in for a highly automated production set up, creates large asset base (as it will be required for such a set up) and finances such assets with debt, then the overall risk exposure or the total leverage of the company will be very high. Suppose the company is not able to market its products in desired volumes then its profitability will be severely affected due to high fixed costs of operations as well as high debt burden.

It is therefore necessary that both the decisions, i.e. asset creation and financing should be jointly taken so as to keep the total leverage or the overall risk exposure of the company within the tolerable limits.

70. A natural hedge is the hedge which occurs automatically by way of the exposures in various currencies during the normal operations of the company. An exposure in one currency may offset the risk due to the exposure in another currency when the movement in one currency is negatively correlated with another one. A company has to deliberately undertake a transaction which offsets the risk of the company's exposure in a particular currency. There are various ways in which a synthetic hedge may be developed to suit almost any kind of foreign exchange exposure of the company. Some of the examples by which a synthetic hedge can be developed are

a. Options

b. Futures

c. Swaps

d. Forwards.

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71. The different non growth strategies that are available to a firm are as follows:

Non-growth Strategies

A non-growth strategy refers to that strategy where there is no growth in earnings. This does not necessarily mean no turnover. A company might pursue a non-growth strategy if it saw its non-economic objectives as more important than its economic objectives.

The primary reasons for adopting a non-growth strategy may include,

- Pressure from public opinion;
- Maintain an acceptable quality of life;
- Lack of enough additional staff with sufficient expertize and loyalty;
- Enable the owner-manager to retain personal control over operations; and
- Diseconomies of scale of the particular production set-up.

In certain cases, there could even be negative growth, by paying out dividends larger than current earnings, so that shareholders are effectively receiving a refund of their capital investment, and there is a net fall in assets employed. A negative growth strategy can be adopted in pursuit of an objective to increase the percentage return to the shareholders – if the company pulls out of the least profitable areas of its operations first, it will increase its overall return on investment, although the total investment will be less. The negative growth strategy consists of an orderly, planned withdrawal from less profitable areas, and while the shareholder's dividend may eventually decline, his return can rise since the capital invested also falls. If the company simply runs down, his return will also fall.

Corrective Strategies

A non-growth strategy certainly does not mean that the company can afford to be complacent. A considerable amount of management time should be devoted to consider the actions needed to correct its overall strategic structure to achieve the optimum. This involves seeking a balance between its overall strategic structures to achieve the optimum. This involves seeking a balance between different areas of operations and also seeking the optimum organization structure for efficient operation.

Thus although there is no overall growth (or negative growth occurs) the company will shift its product market position, employ its resources in different fields and continue to search for new opportunities. In particular, the company will aim to correct any weaknesses which it has discovered during its appraisal. For this reason the term corrective strategy is also used. A non-growth strategy is bound to be a corrective strategy, but a corrective strategy can also be used in conjunction with, or as one component of, a growth strategy.

Risk-reducing Contingency Strategies

A company faces risk because of its lack of knowledge of the future. The extent of the risk it faces can be revealed by the use of performance-risk gap analysis, where forecasts of the outcome in n years' time takes into account not only the likely return but also the risk involved. While on the subject of risk, it should be remembered that although it is desirable to reduce risk, risk is inevitably involved in any business. In fact there are different ways of looking at risk.

- Risk which is inevitable in the nature of the business; this risk should be minimized as above.
- Risk which an organization can afford to take. In general, high return involves higher risk and a company which is in a strong position might be prepared to take a higher risk in the hope of achieving a high return.
- Risk which an organization cannot afford to take. A company cannot afford to commit penny (and perhaps an overdraft as well) to a risky project. In the event of failure it would be left in an extremely vulnerable position and could even face winding up.
- Risk which an organization cannot afford not to take. Sometimes a company is forced to take a risk because it knows that its competitors are going to act and if it does not follow it could be seriously left behind.

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72. The financial and the non financial objectives of a company can be explained as follows:

Financial Objectives of a Company

It is needless to say that one of the most important objectives of a company is maximizing the wealth of its shareholders. It is to be kept in mind that a company is financed by its ordinary shareholders, preference shareholders, loan stock holders and other long-term and short-term creditors. The entire fund that is surplus, belongs to the legal owners of the company, and its ordinary shareholders. Any retained profits are the undistributed wealth of these equity shareholders. The non-financial objectives do not ignore financial objectives altogether, but they point towards the fact that the simple theory of company finance which postulates that the primary objective of a firm is to maximize the wealth of ordinary shareholders, is too simplistic. In essence, the financial objectives may have to be compromised in order to satisfy non-financial objective.

Value Enhancement in the Business Parlance

When the prices of the shares of a company that are traded on a stock market rises, the wealth of the shareholders tends to get increased. The price of a company's share goes up when the company is expected to make attractive profits, which it plans to pay as dividends to its shareholders or re-invest in the business to achieve future profit growth and dividend growth. However, it is also to be kept in mind that in order to increase the price of the share, the company should achieve its profits without taking business risks and financial risks which might worry its shareholders.

Non-financial Objectives of a Firm

Having discussed the financial objectives of the firm at length, let us now look into some of the non-financial objectives. The non-financial objectives of a firm can be as follows:

a. General welfare of the employees, which includes providing the employees with good wage, salaries, comfortable and safe working conditions, good training and career developments and good pensions.

b. Welfare of the management which includes providing them with the better salaries and perquisites though it will be at the cost of the company's expenditure.

c. Welfare of the society as a whole. For example, the oil companies confront with the problem of protecting the environment and preserving the earth's dwindling energy resources.

d. Fulfillment of responsibilities towards customers and suppliers.

e. Leadership in research and development.

73. The different factors that affect the firm's leverage are as follows:

Financial Planning

Financial planning mainly takes into account two major aspects, one being the predictions regarding the timings and the future capital expenditures on the projects and the future earnings that the company will produce. And the other issue being how the firm will finance its capital expenditures, debt payments, dividends and stock repurchases over the period of time. The main purpose of the financial planning analyses is to reveal the expected future needs of the firm as far as the external debt or equity funds is concerned. Thus in a nutshell it can be said that the primary purpose of the financial planning process is to strike a balance between the amount as well as the timing of the future outflows of the firm with that of the net cash flows that may accrue from the operations and the proceeds of the debt or equity issues. Say as an example, the leverage of a firm may depend on whether the firm has recently gone for raising debt funds for its capital investments because it faced lack of sufficient internal cash.

Leverage, Investments and the Growth of a Fund

There have been several studies that have shown a negative relationship between the leverage of a firm and its growth. One of the studies that have been conducted puts forth two competing relationships. In one instance it mentions about the negative relationship between the growth of the firm and its financial leverage. On the other hand, it seems strange that a firm that is expected to be highly profitable would face problems in securing debt financing when the firm's current capital expenditures exceed its available internal funds.

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74. It is sometimes said that "business and financial risk acts as a determinants of equity risk", let us discuss the same in the context of a firm's risks, performance, and contingencies.

Business Risk

The riskiness of the firm's operating earnings, that is, its business risks become well defined, once the management decides on its business strategy and operational structure. One of the important ingredients of a firm's business strategy that determines its business risk is the industry in which the firm chooses to operate. There are two aspects of a firm's operational structure that can influence its business risk. One, that a larger firm is generally more geographically diversified, say in terms of its customer's base, alternative suppliers, employees, plants, etc. The second advantage being, that the firm enjoys a semi monopoly status within its industry by the virtue of economies of scale though this status will not protect the firm from a decline in aggregate demand for the industry products. As far as the capital intensity is concerned, a traditional debate exists stating that a firm's business risk is positively related to its capital intensity, or in other words, its operating leverage. The argument states that, any capital intensive firm is filled with a considerable fixed cost and as a result its operating earnings are more prone to changes in its revenues. At the same time, the relationship between the capital intensity and business risk may be difficult to prove empirically, because any typical capital-intensive firm is larger and so enjoys the business risk-reducing effects of the large sized firms. Thus, the question still remains unanswered as to which effects influence in determining a firm's business risk. Let us now use empirical evidence on this issue.

Business Risk, Financial Risk, Leverage and Equity Risk

It is to be mentioned here that the risk associated with the firm's equity is dependent not only on the firm's business risk, but also on the firm's financial leverage. This is due to the fact that the financial leverage works to focus more on the firm's business risk on a smaller equity base. The term "financial risk" is used in reference to either a firm's risk of bankruptcy or to the effects of leverage on earnings and stock price volatility. Say, for any given set of risky assets and operations, the firm's financial risk increases with its financial leverage. The business risk and financial leverage work in accordance to determine the risk of a firm's equity, so, the management is concerned with the interest of the firm's equity holders, and the importance of their interest lies in the riskiness of the firm's business risk. Further, one can suppose that the firms that have higher business risk will tend to have lowest leverages. Let us now take the case, where the firm's management initially decides on its optimal business strategy and its operational structure, that best explains its business risk and then it considers its leverage. If the firm's management wishes to limit the firm's equity risk to some level of tolerance, then it has to employ less financial leverage when its business risk is higher. Let us now discuss this in detail.

75. The drawbacks of the dividend discount models are:

Drawbacks of the Dividend Discount Model

The DCM calls for the use of the book return on equity in place of the return on new investments, but in practice this is much more difficult to calculate. Now if there is a difference in the returns of the new assets and the old assets, the ROE should be the return on the new asset investments. In this case if the project has a positive value of NPV, then the more suitable book return on the equity may exceed the firm's cost of capital. Further the DCM is based on certain assumptions. Keeping in mind that these assumptions hold good, this approach may provide with a better understanding and estimate of the expected rate of return of the firm's stock price than that can be estimated with the CAPM or the APT. Some of these assumptions are:

- The expected earnings growth is unbiased.
- The growth forecast takes into account of the available information that the investors possess.
- The rates at which the firm's earnings and the dividends grow are the same.

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76. The pitfalls associated with the comparison method are:

There are several pitfalls in using the comparison approach for portfolio valuation. Some of them are cited below.

Difference in Project Beta and Firm Beta

Generally firms use their own cost of capital as a discount rate for evaluating specific investment projects. But in most cases such an approach may be inappropriate. New projects may have a higher project risk than the firm's more mature projects. This may be the case when the project is in its early years and incurs a lot of R&D expenditure. On the other hand, a project may be less risky than the firm's existing projects which may be due to a lower cost of capital for the project than that experienced by the firm. But as a matter of fact, a firm's market value is determined by both its existing projects and on the expectations of how a firm can develop new profitable projects.

Growth Opportunities are Usually the Source of High Betas

As stated earlier a firm's value is seen from the angle of how it can go on in developing newer projects. This is more commonly referred to as growth opportunities or growth options. Growth options have an implicit leverage that leads to an increase in the beta, thus they contain a fair amount of systematic risk in them. So it can be said that the individual projects can differ in their risks from the firm as a whole because they lack the growth options that are inherent in the firm's stock prices.

Multiperiod Risk Adjusted Discount Rates

In this approach the equity beta from the comparison firm is calculated using the historical data. Then the expected return is computed with the help of risk expected return formula using either the CAPM or the APT. The post-tax cost of capital is then calculated. Finally, the cost of capital is used as a single discount rate for each period.

77. The ratio comparison method can be helpful in valuing a project. It can be implemented in the following way.

A popular way of valuing firms, projects, or assets is to compare them with other traded firms, projects, or assets. The Ratio Comparison Approach provides a way by which such valuation can be accomplished. This is generally predominant in cases of real asset valuations. Though the standard discounted cash flow method is often used to value real estate, but it is not a very proper approach. Most commercial real estate is valued relative to comparable real estate that has been recently sold. Say a building should sell for Rs.10 lakh if it has twice the annual cash flow as compared to a building that has been recently sold for Rs.5 lakh. Here the underlying assumption that is made is that cash flows of the two buildings will grow at the same rate. This method sounds reasonable only if all future cash flows of the building under consideration are going to be twice as large as those of the building with which the building is compared. But when this assumption do not hold good, other variables besides current cash flows might serve as better representatives for generating the tracking investment.

These approaches to valuation are predominantly based on the assumption that a new investment should sell for at approximately the same ratio of price to some salient economic variable as an existing investment with an observable ratio; this is the main reason of why this approach is called the ratio comparison approach. The ratio comparison approach uses the ratio of price to earnings, P/NI, where NI stands for net income (that is, earnings).

78. **Adjusted Present Value Approach**

Adjusted present value method considers evaluating a project as if it is undertaken by an all equity company. The tax shield on debt and the issue costs are not accounted for. The method calls for the estimation of the base case NPV followed by the calculation of the present value of the issue costs and the tax shields. These, when added to the base case NPV, yield adjusted present value (APV), which reflects the net effect on the shareholder's wealth adopting the project. Thus the APV can be written as:

(Project value if entirely equity financed) + (Present value of the tax shield on loan) + (Present value of other side effects)

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The adjusted present value method begins by calculating the value of the firm with all equity financing. Then the value of the debt tax shield (or other side effects), is calculated separately and added together. Mathematically, it can be represented as:

APV = NPVU + NPVF

The NPV of the unlevered firm (NPVU) is calculated by discounting the unlevered cash flows (UCF) by r_0,

Where (r_0) denotes the cost of capital if the firm is unlevered. Thus:

NPVU = UCFt/(1 + r_0)t

The NPV of the financing side effects (NPVF) is calculated by discounting the debt tax shields by the cost of debt:

NPVF = Interest Expense t x TC/(1 + r_B) t

Where,

(r_B) denotes Interest Rate

TC denotes corporate tax rate

Costs of financial distress, debt financing subsidies, and issuance costs can all be incorporated into the financing side effects.

Problems encountered in the APV Approach

a. The estimation of the adjusted present value calls for the determination of the ungeared industry beta which in turn is based on the authenticity of the Miller and Modigliani theory. But in reality the theory may not always be true if there is the existence of market imperfections such as bankruptcy costs.

b. Estimation of the discount rates used in the evaluation of the side effects becomes difficult.

c. In certain cases, the complex investment decisions involve extremely lengthy calculations.

Advantages of the APV approach

In order to mention about the advantages of the APV approach, let us compare it with the WACC and the net of tax operating cash flows so as to get the present value of NPV.

a. The adjustment of WACC based on the assumption of perpetual risk free debt poses problems.

b. The very assumption of the M M theory that tax relief on debt interest is risk free which might not always be the case.

c. APV accounts for any change in the capital structure that include the value of any additional tax shield obtained from financing existing assets.

d. The approach is useful for valuing any type of financial advantage.

e. The use of APV helps in the proper adjustments of WACC for various side effects.

79. The importance of unlevered cost of capital for a levered firm can be explained as follows:

In case of valuing all equity financed project when the comparison firm has debt financing, it becomes important to estimate the required rate of return on the comparison firm's equity in the fictitious case of comparison firm that is completely equity financed. Moreover when the project takes on a tax advantage debt, it becomes essential to analyze how the shifting of the comparison firm's debt affects the risk of the comparison firm's equity.

A finance manager who uses either the WACC or the APV method has to take into account of how the debt financing and taxes affect the risks of the various components of the firm's balance sheet. Let us consider the following simplified balance sheet and explain the phenomenon.

Assets	Liabilities and Equity	
Debt tax shield (TX)	Debt	D
Unlevered assets (UA)	Equity	E

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The above table shows that the assets of a firm contain two components, one being the unlevered assets, UA that can be defined as the present value of the unlevered cash flows and the other being the debt tax shield which is the present value of the financing subsidy. Now it is important to note here that the beta of the assets is the portfolio weighted average of the betas of the unlevered assets and the debt tax shields.

80. Real options differ from the financial options in certain aspects. Let us try to make a comparative analysis between both these kinds of securities.

The basic difference that exists between a financial option and a real option lies in its underlying. The underlying that exists in case of the former is a security such as a share of a common stock or a bond, whereas the underlying for the latter is a tangible asset, say for example, a business unit or a project. It is to be noted that both types of options give the right but not the obligation to take an action. Financial options are written on traded securities, whose price is usually observable and one can estimate the variance of its rate of return. In the case of real options, the underlying risky asset is usually not a traded asset, thus one estimates the present value of the underlying without flexibility by using traditional net present value techniques. A further difference exists between the two. Most financial options are not issued by the companies on whose shares they are contingent, but rather by the independent agents who write them and buy those that are not written. As a result of which, the agent that issues a call option has no influence and control of the company and its share price. The real options are different in this aspect because here, the management controls the underlying real assets on which they are written. As an example, a company might have the right to refer a project and it may choose to do so if the present value of the project is low.

Now if the company comes up with an innovative idea that has the potential to enhance the NPV of the project, the value of the right to refer may fall and the company may decide not to defer. As a matter of fact, the act of enhancing the underlying real assets value also increases the value of the option. A point of similarity that exists between a financial option and a real option is that in both cases, the uncertainty of the underlying, i.e. the risk is assumed to be exogenous. The uncertainty concerning the rate of return on a share of a stock, is beyond the control and influence of individuals, who are the actual traders of the stock. In case of real options, the actions of the company that own it may influence the action of its competitors, and consequently the nature of uncertainty that the company faces.

81. Application of real option in oil exploration:

Exploring for Oil

Reliance Petrochemicals has leased a large tract of land somewhere in the Southern India and was evaluating alternate exploration strategies. The Government of India were to provide additional information about the amount of oil in the ground, and the drilling would add information about the amount of oil reserves and could resolve whether the oil could be produced. Should Reliance begin the exploration? Which exploration investment strategy should they use?

Following are the risk elements that Reliance was aware of

– Six to fifteen years time is required to get an unexplored tract into production.
– There is huge involvement of money in the project, that will amount to crores.
– There lies a very small chance, say about 10 percent, for the project to successfully lead to oil production.

Several earlier attempts to carry out similar projects were futile because the estimated development costs were supposed to exceed the production profit or because the oil price fell too low so as to justify more expenditures.

The decision regarding the exploration of oil is made by valuing the tract under each initial exploration strategy, as well as the other contingent follow on strategies. The strategy that is able to deliver the highest valued tract is chosen. The tract value is dependent on three sources of uncertainty.

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– Oil Prices

– Reserve Size

– Chance Of Success (COS)

The current spot price of the oil is observed daily and the volatility of the oil prices is estimated as the volatility that is implied by the option contract on the oil. The initial level and the standard deviation of the companies are based on historical experiences in the region and also the experience with specific geological features. The market priced risk is easily tracked and the private risks are uncorrelated with any traded asset. This ratio can be defined as the (Standard deviation after the exploration)/(Standard deviation before the exploration investment).

This ratio is always less than one, differs by the type of investments, and its value decreases with the stage of investment. The featuring ratios for the companies with drilling equals zero, because drilling fully resolves the companies uncertainty. At the end of the lease, the tract is either developed or abandoned.

82. The drawbacks of using real option analysis are as follows:

Though the use of real options had brought in considerable advantages in creating a project, still there exists some pitfalls in their usage. These pitfalls can broadly be categorized under the following:

– Using the real option analysis when one should not use them

– Framing a wrong model for the purpose of valuation

– Using incorrect data and biased judgements in the model

– Miscalculation in the process of valuation.

Let us now try to discuss each of the drawbacks in brief.

a. **Using real option analysis when one shoud not**

Real option analysis takes into account a number of assumptions. One basic assumption of real option is that the relevant uncertainities are random walks and as a result are unforeseeable. Coupled with this, it also states that the consumer is the price taker, and decision taken by the consumer can change the future course of the random walk. Such assumptions are in fact violated if there exists a small number of leading competitors. In this case the decisions may not be random. Each player's action can influence the price of all the players who will take decisions with full knowledge of what the possible counter moves will be for every other player. The other assumption the option theory makes is that the risks of an option can be hedged away. If hedging is feasible the option will be priced as if it had been hedged, in which case the risk is risk-free. If it is given that hedging is indeed possible it does not matter whether any one option is actually hedged or not.

b. **Using the wrong real option model**

It is easy to wrongly assume that the actual decisions pertaining to the project is "Like" a given real option model while in reality it is "Unlike" so. Thus picking up a wrong model can be disastrous. Say for example, if one has assumed that the interest rates are fixed, should it change the decisions to a large extent if the interest rates were truly variable. If one bases his assumption that the prices of oil and gas are independent of each other, how can it, in any way, influence the decision if they were linked by some economic mechanism.

c. **Miscalculation in the data inputs**

It is important to understand the drivers of the option value in any specific real option model. One needs to check the model for sensitivity to the associated variables, try to understand how the errors in the variables could result in based results. Say for example, the value of the call option is increased in the time to expiry and the volatility of the underlying asset is increased. As far as this is concerned it is important to note

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that one has over estimated the length of the available time, or what could be the smallest possible estimate one could use for volatility?

d. **Getting both the models of the data right, but making mistakes in the solution**

It may sometimes happen, that while using the complete mathematical algorithm, one can easily miss an important variable. While calculating the option value, one may notice that the calculated option values are exploding towards plus or minus infinity, or are oscillating between the two. The results of option valuation are sometimes in conflict with common sense approach. Nevertheless, it is important to make as many logical checks as possible to ensure that these results are commensurate with the economic rationality.

83. The capital structure vary with change in market conditions in the following way:

An imperfect capital market has transaction costs, taxes, possible bankruptcy (which involves bankruptcy costs and causes the interest rate to vary directly with risk), and possible conflicts of interest among stockholders, bondholders, and management (giving rise to agency costs). These factors are enough to destroy Modigliani and Miller's conclusion that capital structure does not matter. To determine its optimal capital structure, a firm must consider taxes, bankruptcy costs, and agency costs.

Let us now use the arbitrage argument discussed in the earlier section in order to show that whenever $V^L = V^U$, a financial transaction that guarantees a certain profit can be made. Such transaction will continue to be available until in equilibrium $V^L = V^U$. In practice, however, these transactions involve costs that reduce the profit from arbitrage. This implies that V^L should not be expected to equal V^U in equilibrium, but does not tell us what factors determine the "best" capital structure.

Another reason why the Modigliani-Miller arbitrage argument does not hold is that the interest rate relevant for borrowing is typically greater than the one for lending. Your local bank pays a lower interest rate on a savings account than it charges on a loan. The two principal reasons why the rates differ between borrowing and lending are as follows:

1. The bank operates as an intermediary; that is, it obtains money from savers and channels it to borrowers. To make a profit on such deals, the bank must charge a higher rate on the loans it makes than the rate it pays on savings accounts. If the borrowing and lending rates were equal and ignoring expenses, the bank's profit would be zero.

2. Any lending institution, including a bank, must consider the possibility that the borrower will go bankrupt. The higher the probability of bankruptcy, the higher the interest rate the bank must charge to compensate for this risk.

If a firm and an individual have different bankruptcy risks, they will be able to borrow at different interest rates; in most cases, a firm can borrow at a lower interest rate than an individual can.

Relevance of Interest Rates to the Capital Structure Issue

As discussed in the earlier section, if $V^L > V^U$, a person could sell a levered firm's shares, buy an unlevered firm's shares, and borrow on personal account to create home-made leverage. However, if a firm can borrow at, say, 8% while an individual can only borrow at 10%, home-made leverage is not a perfect substitute for the firm's leverage. Therefore, V^L can exceed V^U in equilibrium.

Similarly, V^U can exceed V^L. It was earlier argued that an individual could sell unlevered firm's shares, buy levered firm's shares, and lend money or buy bonds that would undo the firm's leverage. However, if the interest rate at which an individual can lend money is lower than the rate at which the levered firm borrows money, the individual may not be able to make an arbitrage profit; this is why it is possible that $V^U > V^L$ in equilibrium.

So, contrary to the assumptions made earlier, the interest rate can be different for borrowing and for lending and can differ among borrowers to reflect different bankruptcy risks.

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Capital structure does matter and is one of the most important issues confronting a firm's CFO. In practice the capital market is far from perfect: transaction costs exist, taxes exist, and the interest rates for borrowing and lending are not identical. A firm can generally borrow at a lower interest rate than an individual, and home-made leverage is not a perfect substitute for the leverage that a firm can obtain. Bankruptcies occur and are costly. In addition, professional managers, not owners, usually manage a firm, and managers' interests may run counter to those of the stockholders. Factors such as these render the capital structure very relevant. We discuss below the major imperfections in the capital market and how they affect the firm's capital structure. We start with corporate tax, which makes it cheaper for a firm to borrow relative to the individual investor. Then we discuss bankruptcy costs and agency costs.

84. Bankruptcy cost can affect the firm's capital structure in the following way:

The various theories of capital structure have not addressed to the existence of bankruptcy costs. In a perfect capital market, it is assumed that all the assets of a firm can be sold at their economic value without incurring any liquidating expenses. However, in real life situation, the liquidation costs like legal and administrative expenses are significant. Further the assets may have to be sold at a distress price which is below its economic value. Thus the net realizable value of the firm is less than the economic value, which represents a 'dead weight loss' to the system. The lenders will assume the *ex post* bankruptcy costs, but they will pass on *ex ante* bankruptcy costs to the firm in the form of higher cost of debt (k_d). Ultimately the shareholders bear the burden of *ex ante* bankruptcy costs and the consequent lower valuation of the firm.

A levered firm has greater possibility of bankruptcy than an unlevered firm. Hence the bankruptcy cost for a levered firm is correspondingly higher. However, the bankruptcy costs are not a linear function of the leverage. When a firm employs low levels of leverage in its capital structure, the risk of bankruptcy is insignificant. Therefore, there is no impact of bankruptcy costs on the valuation of the firm, till a threshold limit is reached. However, after the threshold level of leverage, the threat of bankruptcy becomes real. The probability of bankruptcy dramatically increases with further application of leverage. The bankruptcy costs rise at an increasing rate beyond the threshold level.

85. **Agency costs that encourage the use of debt:**

The separation of ownership and control within publicly-held corporations causes various conflicts of interest between the firm's equity holders and managers. These conflicts can be controlled through the effective application of debt claims in the capital structure. In the following discussion, we show that agency costs may encourage the use of debt.

Consumption of management perks occurs when managers use corporate resources to acquire goods and services for their personal benefit. Examples of such goods and services include excessive travel, plush offices, use of corporate jets, and luxury hotel accommodations.

A 100% owner-manager has an incentive to use perquisites only when they create value for the firm. In contrast, the manager of a large, publicly-held corporation typically owns a small percentage of the common equity and has an incentive to engage in excessive use of perquisites, because the personal utility these perks provide come largely at other equity holders' expense.

Suppose that repurchasing stock with borrowed funds moves the debt/equity ratio to 2.0 and increase the manager's proportion of shares from 10% to 30%. Since every dollar of perquisites consumed now costs the manager three times what it did before the capital structure change, the manager has fewer tendencies to over indulge. Debt helps control perquisite consumption by better aligning the interests of managers and equity holders.

A firm can also use debt to control its over investment problem. Over investment occurs when managers reinvest excess cash flows in projects with negative net present values. Motivations to over invest are driven by "empire building" ambitions or size-based compensation arrangements. During the 1980s financial leverage was often used to force

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unwieldy conglomerates to eliminate over investment by divesting unprofitable lines of business and by cutting costs.

Agency Costs that Discourage the Use of Debt:

The separation of ownership and control in publicly held corporations can also cause conflicts of interest between stockholders and bondholders and among various types of creditors. Some of these conflicts occur in the ordinary course of business; others are present only when the firm is in financial distress. In the following discussion, we explain the nature of these conflicts and show how the firm can augment its total value by selecting the appropriate type and level of debt obligations.

Managers have a number of incentives to pursue growth-oriented strategic options. The larger the organization, the greater the economic and political power of the top management teams, and the greater the ability of the organization to marshal resources necessary to deal effectively with its competitive and social environment. Also, larger organizations are seen as being able to maintain their freedom from the discipline of the capital markets. As a generalization, it can be said that growth does lead to increasing the wealth of shareholders. However, the concern is that too many of the activities associated with increasing the size of organizations are motivated not by a desire for maximizing shareholder wealth, but by opportunities for the self-aggrandizement of management.

The contractual device suggested by agency theory to accomplish the transfer of wealth from the organization to the investors is debt creation. Debt provides a means of bonding manager's promises to pay out future cash flows. It also provides the means for controlling opportunistic behavior by reducing the cash flow available for discretionary spending. Top managers' attention is then clearly focused on those activities necessary to ensure that debt payments are made. Companies failing to make interest and principal payments can be declared insolvent and can be dissolved. This use of debt as a disciplinary tool makes survival in the short-term the central issue for all concerned.

Agency theory also has important implications for the relationship between stockholders and debt-holders. Stockholders are interested in the return over and above that amount which is required to repay debt. Debt-holders are only interested in the debt payment specified in the contract. Stockholders are seen as sometimes being interested in pursuing riskier business activities than debt-holders would prefer. When this occurs debt-holders may charge higher prices for debt capital and institute greater control measures to prevent top managers from investing capital in riskier undertakings.

However, agency theory does not take into consideration competitive environments, nor does it consider the necessity for managers to make choices beyond a stockholder wealth-maximizing perspective. This would seem to be a serious omission for two reasons. First, debt and equity represent different constituencies with their own competing, and often mutually exclusive, goals. Second, as the level of debt increases, the corporate governance structure can change from one of internal control to one of external control. For firms that adopt debt as a control mechanism, lenders become the key constituents in the corporate governance structure. This can have a significant impact on both managerial discretion, and on the ability of an organization to deal effectively with its competitive environment.

86. Designing Executive Compensation as a Competitive Strategy

It is to be remembered that the component of incentives in an executive compensation contract helps in bringing together the interest of the executive with that of the firm's shareholders. In normal cases, the executives' compensation contracts include incentive tools that motivate the management to either increase the firm's earnings or its share price. If the Reitman's (1993) model is taken into account, it is seen that the optimal compensation plan not only includes the profit incentives and grants of stock, but also stock options. These stock options act as a deterrent to the overly aggressive behavior of the management. If not, the aggressive behavior might merge from the firm's competitors by competing in difficult situations. The main reason that can be attributed to the stock options in acting as a barrier towards the aggressive behavior of the management is due to its non-linearity. The value of the stock option is nothing once the stock's price falls below its strike price. Thus it can be judged by intuition that, the option of a particular firm will only be "in the money" if the competitor firm abstains from producing too much. This lets the

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owners of the firm to allow their managers in playing more aggressively if the competitor firm behaves similarly, but to counteract with maximizing its sales if it is faced by overly aggressive behavior.

In other words it can be said that, if the managers in two different firms that are competing with each other are given stock options, there will be at least some chances that both of them will opt for competing less aggressively, instead of violently engaging themselves in mutually destructive research paper. Agarwal and Samwick have found an appropriate answer to the question as to why it is always found that the compensation contracts tend to blind the managers compensation to the firms absolute performance rather than focusing on other performance that is relative to its industry competitors. It seems strange in explaining the fact that the manager of high profit earning industry gets considerable amount of bonus, whereas the manager in an industry that makes lower profits gets lower performance bonuses even when such lower profit making industry outperforms its competitors. The answer that the authors of the paper give is that, the relative performance incentives affect the firm's competitive strategy in a way that lessens the returns to the shareholders. The very fact that there is absence of relative performance based incentives where the compensation decreases with rival firm's performance can be explained from the existence of the strategic interaction within the firms. The very fact that there is a need to soften the product market competition gives rise to an optimal compensation contract that gives rise to a positive effect on both the firm's own as well as its rival performance. At the same time, those firms that are in a more competitive industry puts a much greater weight on its competitive firm's performance roped to its own performance. The paper thoroughly examined the actual executive compensation contract, and found out evidences that were in line with their arguments.

87. MM Hypothesis and Market Imperfections:

The assumption of perfect capital market is abandoned. However, there is no unique set of circumstances that constitute "imperfection". There can be a multitude of possible departures from strict market perfections, either singly or in combinations.

Tax differentials exist in the real world, where substantial advantages are accorded to capital gains as compared to dividends. This can be countered by pointing out that the tax structure on dividends is generally progressive while that on capital gains is a flat rate. Therefore, the investors in lower tax bracket may have no differentials or even negative differentials (when dividend income attracts lower tax rate than capital gains). The investors in higher tax brackets have significant tax differentials. Hence it is difficult to generalize the tax implications of dividend policy on the investors. The advantages and disadvantages of various classes of investors generally tends to get canceled out. It is further argued that if the tax structure is significantly tilted in favor of capital gains vis-á-vis dividends, then companies which have zero to minimal pay-outs should command a premium over companies with high pay-outs. In this context, it is paradoxical that other dividend theories emphasize on liberal pay-outs to increase the firm valuation. From the corporate taxation angle, most countries do not have tax differentials between distributed and undistributed profits. (India is, however, a notable exception due to imposition of 10% tax on distributed profits.)

The transaction costs have an impact on the arbitrage opportunities to generate cash flows which can replicate the dividend streams of any target policy. The existence of brokerage and transfer taxes hinder the arbitrage process. Investors preferring high pay-out incur transaction costs in selling their shares to increase their current cash flow. On the other hand, investors preferring low to zero pay-outs have such costs as a deterrence in buying further shares of the company. Thus transaction costs have equal impact on both sides and have no directional implications on the dividends versus retained earnings debate. However, flotation costs like issue expenses and underpricing results in dilution of the wealth of the existing shareholders.

Hitherto, it was assumed that firms would issue equity to the extent of retained earnings foregone. It was argued that firms can issue debt or a combination of equity and debt to finance the same. The MM position on this criticism was anchored on their leverage irrelevance theory of capital structure. They countered that the real cost of equity and debt

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was the same. Hence the issue of debt did not negate their proposition of dividend irrelevance.

Lastly most dividend theories assume that there is a systemic bias in favor of dividends over capital gains through retained earnings. This assumption can be subsumed by pointing out that investors are in a position to replicate any stream of dividend pay-out by applying "home-made" dividends. MM argued that if the frequency distribution of corporate pay-out ratios happened to correspond exactly with the distribution of investor preferences of pay-out ratios, it would ultimately lead to a situation where each firm tends to attract investors consisting of those preferring its particular pay-out ratio. As every class of investors are assumed to be equally rational, there would be no implications on the valuation of the firm. They further argued that if the distributions do not match and there is a "shortage" of a particular pay-out ratio, even then the investors need not pay any premium for the shares in short supply. They have the option of achieving their investment objectives by buying appropriately weighted combinations of "plentiful" stocks with different pay-outs, which are currently quoting at a discount. This process of arbitrage will eliminate any premium or discount.

88. Stock dividends or stock split can act as strong signaling effect in a stock market.

Researchers have been surprised over the role of stock splits and stock dividends in the valuation of the company. Theoretically, stock splits and stock dividends should have no impact on the wealth of the shareholders. They were puzzled that companies engage in these transactions at all and even more so because stock prices rise when these transactions were announced. The significant positive announcement effects led to the hypothesis that firms signal information about their future earnings or valuation through these decisions. Practitioners have long contended that the purpose of stock splits and stock dividends is to the firms share price into the "optimal trading range". The trading range hypothesis is anchored on the arguments that there exists informational asymmetry between the management and the investors. Hence the stock splits and stock dividends have information content about the future earnings or firm valuation and the market reacts to the same by revising the valuation. They also pointed that the lower share prices (post-split or post-bonus) enhances the liquidity of the scrip in the market.

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89. The mechanism of dividend payments can be elaborated as follows:

Key dates: every quarterly dividend has four key dates associated with it.

The declaration date: the amount of each quarterly dividend is authorized by the firm's board of directors. A separate authorization occurs every quarter even if the firm's policy is to pay the same amount repeatedly. The date on which the board authorizes the dividend is called the declaration date.

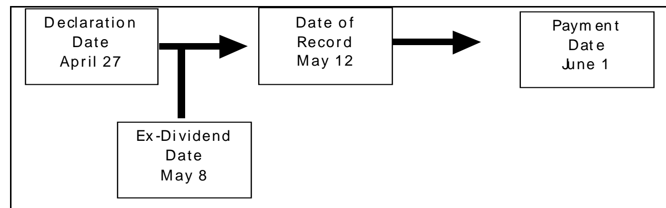
The date of record: stocks are registered securities, meaning that a list is kept indicating the name of the owner of record of very share. When a share is sold, ownership is transferred on the record from the seller to the buyer. When the board authorizes a dividend, it stipulates a date of record. The dividends is payable to owners of record as on the date of record.

The payment date: the board also stipulates the date on which the dividend check is to be mailed. This is the payment date.

The ex-dividend date: when shares are sold, it can take a few days to update the ownership records, so a sale made shortly before the date of record might not be recognized for payment purposes. to allow for a paperwork lag, brokerage firms have agreed to cut off sales for dividend purposes four business days prior to the date of record. The cutoff is called the ex-dividend date.

The following figure is a graphic representation and some sample dates. The ex-dividend date is significant with respect to stock market activity. An investor who purchases the stock prior to the ex-dividend date receives the next dividend; one who purchases on or after that date does not. In the example, the stock trades without the dividend starting on the morning of May 8.

As ex-dividend dates pass, stocks generally drop in price, reflecting the loss of the dividends to new purchasers. Interestingly, the drop tends to be 20% or 30% less than the full amount of the dividend. The difference is believed to be due to the fact that investors value the dividend after taxes rather than before.



The dividend declared on April 27 is payable on June 1 to owners of record as of May 12.

However, to be an owner of record by May 12, an investor must have purchased shares by May 7.

90. The basic cause of information asymmetry are as follows:

The asymmetry between a firm's management and financial markets is created as a result of the conspiracy of product market competition and the separation of ownership and control. In order to explain this, let us assume that the common interest of the shareholders of a publicity traded firm is to maximize the market value of the firm's equity and the shareholders are able to frame a perfect contract with the firm's management so as to ensure that the management will act strictly in their interest. Keeping in mind the competition that exists in the market, the shareholders and management must develop strategic plans and operations that will not only create value but also garner profits as the firm operates in its product and service markets. It is also to be remembered that as an inherent business, strategic plans and operations must not be divulged to the firm's competitors. So is the fact that management cannot divulge the strategic plans of the firm even to its shareholders. The reason being that if they had a policy of doing so, the competitors of the firm can opt for purchasing the firm's shares and thus become its shareholders. In doing so, they may gain access to this strategic information. So one can safely say that the management will be unwilling to provide strategic information to the creditors of the firm, at least to that extent that the debt is publicly traded. For all these reasons, the management of the firm is better equipped with information relating to the operation of the firm, also about the true value of the firm's share, that does not firm's shareholders, creditors and the market as a whole.

91. The three most commonly used measures of quality of a trading stock are:

a. Floats

b. Turnover

c. Bid-ask spread.

Float: The term float for a stock is referred to the number of shares that are actively traded in the exchange. The measure of float is the number of shares outstanding for the total number of shares held by the insiders and those other investors who are in possession of at least 5 percent of the outstanding shares. The importance of float lies in providing the investors potential to purchase the firm's shares, and also in the potential interest of the investing community. Added to this, if the insiders or other investors who are well informed hold a major proportion of a given firm's shares, it may be perceived by the investors that they are facing a considerable information disadvantage in trading the firm's shares.

Turnover: The turnover of a stock is defined as the ratio of the number of shares traded over a specific period of time to the total number of shares outstanding. With all the discussion made so far, it can be safely said that the presence of information asymmetry may result in seriously hampering the trading activities. In addition to this, the turnover of the stock is directly related to the volatility of the stock price of the firm.

Bid-ask spread: The bid-ask spread factor also provides valuable insight to the market's quality for a given share. The bid price for a stock is the price at which the dealer is willing

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to purchase a specific number of firm's shares, and the ask-price is the price at which the dealer is willing to sell a specified number of shares. A dealer makes a market by offering to buy or sell a firm's shares at any time. The difference between the dealer's bid and ask price is termed as spread. The bid-ask spread is generally expressed as a percentage of stock price. The stock's bid-ask spread exerts a great deal of influence on the quality of the market for stocks. The spread is in fact one of the integral components of the overall cost of trading a stock. The other two being, the brokerage commissions and the price impact. The price impact is the behavior of the investor's trading activity to the price of the stock.

Say for example, a purchase of stock raises the price and the selling activities pulls down its values. Another reason for the bid-ask spread to influence the market's quality for a stock is that the bid-ask spread consists of three components. All of these represent the costs that are incurred by the dealer, and later on they are passed on to the trader through the medium of spread. These three costs are

– Adverse Selection Cost
– Inventory Cost
– Order Processing Cost.

In the context of theoretical models, there are two distinct types of investors:

1. Liquidity traders
2. Informed traders.

The former type of trader carries on the buying and selling activities to adjust the composition of their portfolios. The latter type takes advantage of the private information that they possess which others are not aware of and trades their stocks on their basis. But, in reality the dealer cannot differentiate between the two kinds of traders. Thus, the dealer has to set the spread in such a way so that he can at least, offset his losses incurred while trading with the informed traders and with the profits made in trading with the liquidity traders. Things might turn out to be problematic in case the informed traders are more frequent. In such situation, the dealer must set a relatively widespread. In case where a dealer may not be able to set a spread that results in an unexpected profit, the market for the stock may fail.

92. Pecking Order Hypothesis:

Stewart Myers (1984) observes three aspects of corporate financial behavior that is seen to be exhibited by managers.

His observations are

1. Managers give preference to internal finances than external financing.
2. Managers try to maintain a stable dividend even in adverse situations.
3. In cases of external financing, managers always prefer to issue the least risky of all the securities.

The securities can be listed in order of increasing riskiness; it ranges from straight debts to common stocks. The pecking order of corporate financing ranges from internal equity to common stock. In a later article, Myers and Majluf (1984) formulated the above stated findings into a theoretical model and tried to correlate the same with information asymmetry. Their theory states that the market is chronically underinformed about the relative values of various projects that the firms bring to the market, and as a result the market tends to undervalue these projects. This in turn undervalues the securities that are issued to finance them. This results in some sort of pooling equilibrium so that on an average, the uninformed investors tend to break even on the securities they purchase. This in turn puts the managers in such conditions that they find the effective cost of external financing higher than it should be. This is mainly due to the fact that the firm tends to give up a major portion of the firm's NPV to the investors who purchase the issued securities. This surrender in the value to the new investors can be particularly detrimental if the firm issues equity stock, this is so because the difference between the valuation of the firm by its management and the market is fully reflected in the price that the market is willing to pay for the issued security. In extreme cases, the manager may even go in for rejecting a

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profitable project if it is to be financed with external equity, because the surrender costs more than the NPV of the project. Issuing debt may also be a matter of concern. But it is to be remembered that debt enjoys a priority, and so the difference that exists in the valuation is also to a smaller extent. Thus if external financing is to be considered, debt is to be preferred to equity. Well one of the ways to avoid the surrender in values is to avoid the external financing, in other words to go for internal financing. So in order to be in a position that can enable a firm to carry out any project without the aid of external financing, firms tend to maintain "financial slack". This includes the cash and marketable securities in a broader sense, the unused debt capacity.

Well there is also an exception to the above condition. In case, where the management believes that their firm is overvalued mainly due to the possession of inside information. In such a case the management is motivated by the issue of external equity. But the market is fully aware of this adverse selection problem and thus ultimately the stock's price, instead of rising, falls.

93. The following discusses in brief several real-world factors and their potential effects on a firm's financial policies. These factors are cast in terms of violations of one or more of the assumptions that define the ideal capital market.

Violations of assumption 1

Frictionless Markets

The first assumption of the ideal capital market is that capital markets are frictionless; that is, they are devoid of transaction costs and taxes. There are at least five potentially important consequences of violations of this assumption.

First, transaction costs and personal taxes may affect investors' ability to undertake arbitrage, which is critical to the development of the M&M Propositions, the Capital Asset Pricing Model (CAPM), the Binomial Pricing Model, and the Black-Scholes Option Pricing Model (BSOPM),

Second, variation in personal tax rates and transaction costs across both investors and securities may differentially affect the values of corporate securities (e.g., debt versus equity), and ultimately a firm's preference for issuing one type of security versus another.

Third, if the firm's earnings are taxed, and interest payments are deductible while dividends are not (as the US corporate tax code specifies), a firm's preference for debt versus equity financing may be determined in part by the effect of taxes on the market value of the firm.

Fourth, if a firm faces substantial transaction costs in issuing securities, such frictions may inhibit its ability to undertake otherwise profitable investment opportunities, and may also affect its choice of debt versus equity financing. Suppose the cost of issuing either debt or equity is substantial, and the cost of issuing equity is substantially higher than the cot of issuing debt. The firm may find it optimal to issue debt rather than equity, which would lead to high leverage. Alternatively, the firm may find that the lowest-cost financing is internal equity financing (i.e., funding projects via retained earnings). This policy would impart a bias toward equity financing, and therefore low leverage, and may also require the firm to reduce or eliminate dividends to shareholders.

Fifth, costs of financial distress and bankruptcy, which are basically transaction costs associated with the presence of debt in a firm's capital structure, may inhibit the firm's issuance of debt securities.

Violations of Assumption 2

All Market Participants Share Homogeneous Expectations

Assumption 2 states that all market participants have the same information regarding value-relevant information concerning a firm. This assumption disallows several real-world problems that may affect a firm's financial decisions and, more fundamentally, the quality of the market for the firm's securities. Chief among these is information asymmetry between investors and the firm's management. Owing to their position as insiders, a firm's

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management has more information about the value of the firm than investors. As we will see, this circumstance can affect a firm's financial decisions and market value.

Violations of Assumption 3

Atomistic Competition

Assumption 3 states that all investors are atomistic; that is, their wealth, or at least the wealth that they are willing to bring to purchase a given firm's securities is small relative to the total value of given firm's securities. Here, two real-world factors that constitute violations of this assumption are important, first, if an individual investor has either sufficient wealth or sufficient borrowing capacity to purchase or sell a substantial proportion of an individual firm's securities, the investor's trades may affect the market value of these securities. Consequently, the value of the firm's securities, and thus the firm's financial decisions, may reflect the personal preferences and value assessments of such a dominant investor. Second, the firm itself can issue substantial quantities of securities, and may have sufficient cash to engage in substantial repurchases of outstanding securities. Transactions of either type may affect the market value of the firm's securities.

Violations of Assumption 4

The Firm's Capital Investment Program is fixed and Known

Relaxing the assumption that the firm's capital investment program is fixed engenders a number of possible interactions between the firm's investment and financing decisions. For example, suppose a firm initially engages a capital investment program that is financed with both debt and equity. As we will show in this chapter, if the debt is default-risky, the firm's management, acting in the shareholders' interest, has an invention of wealth from the debt holders to the equity shareholders.

Violation of the assumption that all market participants know the details of the firm's capital investment program also presents problems. Theory posits that a firm's management must keep strategic information regarding its operations private (i.e., known confidentially by insiders only). As such, we have the information asymmetry problem noted earlier. Information asymmetry can have a deleterious effect on the quality of the market for a firm's securities. Briefly, one resolution to this problem is for management to signal the firm's value via their willingness to invest a substantial portion of their personal wealth in the firm's shares. By doing so, however, the firm's managers may own a substantial proportion of the firm's shares, and therefore would not be atomistic competitors; so again, we have the ironic situation that an assumption of the ideal capital market must be violated to resolve a particular real-world problem.

Violations of Assumption 5

Once Chosen, the Firm's financing is fixed

Suppose a firm initially finances its assets with specified proportions of debt and equity, and then later issues additional debt, using the proceeds to pay a dividend to shareholders. If the new debt has the same priority as the original debt, the value of the original debt will probably fall, an effect called claim dilution. Moreover, the firm's shareholders have an incentive to take such an action, because shareholders' wealth likely increases by the amount of the original debt holders' loss (i.e., the sum of the dividend and the market value of the remaining equity will be greater than the total value of the equity prior to the issuance of the new debt). The shareholders will have thereby expropriated wealth from the original debt holders.

This is an example of the second of the two principal-agent conflicts that we discuss. In this case, the principals are debt holders and the agents are shareholders. The possibility that management would take expropriator actions against debt holders on shareholders' behalf has potentially serious consequences for the firm's ability to raise funds by issuing debt securities (i.e., debt versus equity financing of a firm may no longer be a matter of indifference).

94. Compensation contracts should be designed in such a way that it helps to eliminate as much extraneous risk as possible. One way to eliminate extraneous risk is with a relative performance contract, which determines executive compensation according to how well the

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executive's firm performs relative to some benchmark such as the performance of the firm's competitors. The relative performance contract would thus have the desired feature of reducing the effect of risk elements that affect all industry participants, which probably are not within the CEO's control, while rewarding the executive only when he or she beats the relevant competition.

By far, the largest fraction of performance based pay comes from stock options. Although these options could, in theory, be indexed to industry stock price movements, in practice they are not, implying that relative performance does not have a major effect on pay. For some firms, however, annual bonuses are tied to relative performance. Murphy (1999) reports that in a 1997 survey of 177 large US firms by the consulting firm Towers Perrin, 21 percent of the 125 industrial companies tie their annual bonuses to their firm's performance relative to their industry peers. The survey indicates that the percentage of financial firms that do this is 57 percent, and the percentage of utilities that base their executive's bonuses on relative performance is 42 percent.

The fact that few industrial firms have embraced relative performance-based pay may reflect the fact that these contracts can adversely affect the competitive environment within an industry. The disadvantage of this type of contract is its undesirable side effect of providing the CEO with an incentive to take actions that reduce its competitor's profits, even if doing so does not help his or her own firm. For example, a firm that utilizes a relative performance contract may compete more aggressively for market share since the costs imposed on competitors from being aggressive improves the CEO's compensation, even if the gain in market share does not improve profits. The consequences are that if all industry participants instituted relative performance contracts of this type, industry competition would be more aggressive and profits would likely be lower for all firms in the industry. Perhaps this is one reason we do not observe explicit relative performance compensation contracts. Thus we can now safely conclude that relative performance contracts, which reward managers for performing better than either the entire market or, alternatively, the firms in their industry, have an advantage and a disadvantage.

The advantage is that the contracts eliminate the effect of some of the risks that are beyond the manager's control.

The disadvantage is that the contracts may cause firms to compete too aggressively, which would reduce industry profits.

95. Managerial Incentives to Hedge

Consider the case of an entrepreneur, like Bill Gates at Microsoft, who starts a successful business and continues to hold a sizable fraction of the firm's shares. Gates is probably more concerned about Microsoft's risk than other shareholders because he is much less diversified than they are. As a result, Gates might want Microsoft to hedge to reduce his personal risks even when doing so has no effect on the firm's expected cash flows. In this case, and in the absence of transaction costs, Gates is indifferent between hedging on his personal account and hedging through the corporation. However, it might be more efficient to have the transaction costs borne by Microsoft, which has a trained staff of risk management experts, rather than by Gates personally.

96. The different empirical evidences

A number of empirical studies have compared the characteristics of firms that use derivatives to firms that do not. Although research on this topic is still evolving, a number of patterns are worth considering.

Larger Firms Are More Likely to Use Derivatives than Smaller Firms

A number of studies have found that larger firms are more likely to use derivatives than smaller firms. The fact that smaller firms are less likely to use derivatives than larger firms is inconsistent with the view that smaller firms generally face higher risks of bankruptcy and thus have more to gain from hedging. However, the fixed costs of setting up a hedging operation and their lower level of sophistication probably explain why smaller firms are less likely to hedge. Indeed, Dolde (1993) found that among firms that have implemented hedging operations, the larger firms tend to hedge less completely than the smaller firms,

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leaving themselves more exposed to interest rate and currency risks. In other words, size is a barrier to setting up a hedging operation, but among firms that do hedge, smaller firms facing greater risks of bankruptcy hedge more completely.

Firms with More Growth Opportunities Are More Likely to Use Derivatives

Nance, Smith, and Smithson (1993) and Geczy, Minton, and Schrand (1997) provided evidence that firms with greater growth opportunities are more likely to use derivatives. In particular, firms with higher R&D expenditures and higher market-to-book ratios are more likely to use derivatives than companies that spend less on R&D, have lower market-to-book ratios, and, therefore, probably have fewer investment opportunities. This evidence is consistent with the idea that firms hedge to ensure that they have enough cash to fund their investment opportunities internally.

A number of other reasons explain why R&D intensive firms with high market-to-book ratios are more likely to use derivatives. Firms with these characteristics generally have higher financial distress costs, suggesting that they should hedge to ensure that they will meet their debt obligations. Furthermore, because R&D expenditures are tax deductible, these firms are likely to have lower taxable earnings, implying that the tax argument discussed earlier in this chapter applies more to firms with high R&D expenditures.

Highly Levered Firms Are More Likely to Use Derivatives

Nance, Smith, and Smithson (1993); Block and Gallagher (1986); and Wall and Pringle (1989) found weak evidence that firms with more leveraged capital structures hedge more. The positive relation between leverage ratios and the tendency to hedge is consistent with the view that firms hedge to avoid financial distress costs. However, the weakness of the evidence probably reflects the tendency of firms with high financial distress costs, which have the most to gain from hedging, to have the lowest leverage ratios. For example, high R&D firms tend to use little debt and also tend to hedge because of their potential costs of financial distress.

Geczy, Minton, and Schrand (1997) found no significant relation between the debt ratios of most firms and their tendency to use derivatives. However, among those firms with high R&D expenditures and high market-to-book ratios, firms with more leverage are more likely to hedge. This implies that firms that suffer the highest costs of financial distress are more likely to hedge when they are highly levered.

97. Financial market environment

The Financial market environment can further be classified into five major elements. They are:

a. regulations regarding the issuance and trading of securities

b. operational efficiencies of the financial markets

c. technological advancements of the financial markets

d. investor preference

e. market for corporate control

Let us now try to understand each of these elements in details.

a. **Regulations Regarding the Issuance and Trading of Securities:** The regulations pertaining to the issuance and the trading of securities in the US are governed by the Securities and Exchange Commission, state governments, and the securities exchanges. These regulations may include the mandatory due diligence, registration activities, and restrictions on the insider trading. Say for instance, for the initial and continued listing of a stock, the exchanges may impose certain restrictions as to the minimum number of share holders, minimum share price, and the minimum volume of trading that is to be carried on. Such regulations may influence the firm in taking decisions relating to the equity or private ownership of the firm, considering which stock exchange to list its shares, the proportion of the shares to be placed in the public market.

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b. **Operational and Informational Efficiencies of The Firm:** This element can be related to both the primary as well as the secondary markets. As far as the primary markets are concerned, the operational efficiency refers to the extent to which a firm can issue securities more quickly, at a fair price and with low floatation costs. It is to be noted that for both the stocks and the bond issues, the underwriters spread are inversely related to the issue size. As far as the secondary markets are concerned, the operational efficiencies relate to the liquidity of the market as the stocks are traded on the exchanges. The extent to which the liquidity of the market is concerned, it can be related to the quickness of the transactions, at a fair price coupled with low transaction costs.

   The information efficiency of a financial market relates to the various aspects of the market efficiency. In other words it relates to the impact of the accuracy and quickness of the market price on the relevant information reflected through them. For the purpose of raising external debt or equity capital, both these forms of efficiency can come of use. But for smaller firms and those firms that experiences high level of information disparity, it becomes difficult to establish and maintain the liquidity and the efficiency of the markets for the securities.

c. **Technological Enhancements in The Financial Markets:** This technological enhancement takes into account the *swiftness of the information flow*. The operational and the informational efficiencies of any securities market the speed at which the accurate, and value relevant information is carried on to both the issuers and the investors. The technological advancements also relate to the degree to which the more complex forms of securities and the transactions are available. Based on the availability of such devices, the firms can develop a better financial architecture and reduce their contracting problems. The banks and the finance companies offer debt capital through private debt contracts. There are also other financial institutions that also engage themselves in purchasing private as well as semi-private debt contracts. Another alternative means of raising debt capital is done through the public issuance of debts and bonds. For trading of these securities the public debt market provides a good avenue. Further discussions relating to the advanced equity securities deals with the targeted stocks and the dual class equity structures.

d. **Investor Preference:** Another important element that aids in shaping the financial architecture of the firm is its preference of the investors. As an example, the desire of the investor to seek out for liquidity may have an impact on the dividend policy of the firm. Added to this is the planned investment horizons of the firms may influence the maturity of the corporate debt issues, and the risk tolerance level of the investors may impinge on the capital investment program of the firm and its leverage decisions.

e. **Market for Corporate Control:** The activist stock-holders of any company seeks for taking part in the proxy contests in an attempt to remove and replace the board members of a firm, as well as to reform the firm's governance. The external market for corporate control affects the firm's organizational architecture in many ways. Say for example, a smaller firm in the industry may frame its development of the financial and the business architecture with the intention of becoming an attractive acquisition target for any larger firm within the industry. It may sometimes happen that the due to the existing threat of a takeover, the firm may take certain actions that may be in the interest of the stockholders rather than in the interest of the company as such. It may also happen, that in order to avoid in any takeover attempt, the firm may resort to increasing its leverage, purchase its own shares, bring a change in its ownership structure, resort to anti-takeover devices and even arrange for buyout deals.

98. The various kinds of zero coupon bonds that emerged in recent times are

i. Original Issue Discount (OID) Bonds

ii. Deferred Coupon Bonds

iii. Payment in Kind Bonds (PIK)

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However, most of these innovations have not seen an overwhelming success in recent years due to various reasons. Say for example, the zero coupon bonds were issued in part so as to take the advantage of a tax loop hole that has since then been eliminated. But at the same time, they can be also useful in special circumstances. One advantage of a zero coupon debt is that for the issuing firm, there is minimum or even no cash flow involvement until the maturity of the instrument takes place. Thus such type of bonds would be useful in situations where the company is not expected to realize substantial pay-offs on its investments made in the projects for a number of years. Added to this there is also the possibility of the amortization of the interest expense over the life of the bond due to the existence of the tax laws. This facilitates the firm to take tax benefits on an annual basis but at the same time helps in deferring the actual cash payments in the distant future. The usefulness of the deferring interest in the form of PIK bond was explained by Opler in 1993. These forms of bonds are generally associated with the leveraged buyout activities. The study says that these leveraged buyout activities are funded by payment in kind bonds, that facilitates the issuer to meet the interest payments by the issuance of additional debt. One advantage of the PIK debt is that it can substantially reduce the financial distress costs. Without the existence of the PIK debt, a firm that faces financial distress has to renegotiate the allocation of rights to the cash flows. With PIK being in place, the firm does an automatic workout by providing the debt-holders greater claims to the cash flows in the form of new debt claims. So one can firmly say that the PIK debt avoids the cost associated with the negotiation of some type of debt for equity swap which is a typical feature of a workout.

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Part IV: Case Studies (Problems)

Case Study 1

Read the case carefully and answer the following questions.

1. Developing appropriate strategies and implementing it in time is one of the major reasons behind the success of DIL. Identify the various strategic decisions and moves taken by DIL over the period.

2. The process of strategic management involves the analysis of certain critical elements. Identify them and explain with reference to the strategic management process followed at DIL.

3. Explain the need and importance of a mission statement. What are the steps to be followed in the formulation of a mission statement? Prepare a mission statement for DIL after analyzing the philosophy and the corporate objectives of the company.

4. Comment on the capital structure of DIL. Identify the strategic determinants to be considered by DIL while designing the capital structure.

Considering the present market scenario, DIL is optimistic of its EBIT figure for the coming year. The probability of EBIT increasing from the current level by 20% is expected to be 0.5 and a decline by 30% to be 0.2. The company assigned a probability of 0.10 for the EBIT to decline by 15% and 0.15 for a decline. The chance of EBIT remaining at the same level is expected to be 0.05. Calculate the expected EBIT of DIL from the probable EBIT levels.

Assume DIL is moving towards setting up a manufacturing facility in an industrial outfit in Andhra Pradesh. The total cost of the facility is expected to be Rs.1,000 mn, including the cost of land and the required machineries. The company is evaluating various options of raising the money, either through debt or equity or a mix of both. The various structure of financing is as follows.

Options	Debt (%)	Equity (%)	Cost of debt (%)
1	100	0	20
2	75	25	18
3	50	50	15
4	25	75	12
5	0	100	–

Identify the values of EBIT indifference points under the various options.

5. The adjusted book value approach to valuation of firms involves valuation of each asset and liability. Describe in detail how firms can be valued according to the adjusted book value approach.

Compute the value of DIL based on the financial statement figures as on 31-03-2001 using discounted cash flow approach. Assume that the capital expenditure is expected to be equally offset by depreciation in future.

The following factors can be considered for conducting the valuation of the firm.

a. The cost of capital to be considered can be the lowest among the options discussed above.

b. Average share price of the company declined by 25% on March 2002, compared to the same period in the previous year.

c. Dividends, EBIT and working capital are expected to grow at a rate of 8 percent. EBIT will maintain this growth rate only till 2006, after which it is expected to grow at a rate of 5 percent per annum.

d. Corporate Tax is assumed at 35 percent.

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e. After analyzing the duration of the loans, it is learnt that 40 percent of the debt has to be repaid in the year 2006.

f. The continuing value beyond 2006 is estimated at Rs.1200 cr.

Dabur was established by Dr. SK Burman in 1884. The company was started as a proprietor firm to manufacture Ayurvedic drugs. A direct mailing system was adopted to send these medicines to several villages in west Bengal. Even though the company started mass production of both chemicals and ayurvedic drugs in its plant near Kolkatta, Dr. Burman's successors decided to focus only on Ayurvedic drugs, as they identified a great future for it. In 1919, an R & D laboratory was set up to conduct research on ayurvedic medicines as per the records in the ancient Indian sculptures. In 1936, Dabur India Pvt. Ltd. was incorporated to take over the business of the proprietary firm.

Dabur was always aiming at growth and to instigate this process, it entered the personal care products through Dabur Amla Hair oil. It also introduced the first branded Chyawanprash in the country. The company entered the oral care market by introducing Dabur Lal Dant Manjan, the tooth powder brand. In 1972, the company moved from Kolkatta, where it started its business and hired a manufacturing facility near Delhi. In the late '70s the firm ventured to manufacture guar gum at a plant in Rajasthan which proved unsuccessful.

Dabur became a public limited company through a reverse merger with Vidogum Ltd in 1986. After becoming public, the firm was re-christened as Dabur India Limited (DIL). It identified the latent opportunity in the global market and started a manufacturing facility at Noida Export Processing Zone to cater global markets. DIL is one among a few to explore the opportunities generated after liberalization and set up overseas offices. Thus in 1991, it set up Dabur Overseas Ltd. in Cayman Island, with a seed capital of $50,000 and used this unit to fund Dabur Egypt Ltd. in Cairo to manufacture personal care and food products. The Egypt plant was aimed at avoiding the 180 percent customs duty it was facing in that country. The overseas expansion efforts were going sound and they opened a marketing office in Dubai in 1992.

DIL's interest in the financial services market contributed to the launch of Dabur Finance Ltd. (DFL) in 1992. It was primarily set up to lease cars to DIL employees and delivery vans and scooters to Dabur dealers. This arm later emerged as a merchant banking major with interest in issue management, inter corporate deposits and foreign exchange leadership. DIL was very aggressive in exploring the markets and it entered into Joint Ventures (JV) to foray into unrelated product lines. It entered into a 49:51 JV with the Spanish confectionery major, Agrolimen group to manufacture and market confectionery brands. This JV was named General De Confeteria India Ltd. Again, in the same year, it formed a 60:40 JV with Israel based Osem to manufacture snack foods, premium biscuits and extruded foods. This JV was named Excelcia foods. DIL had problems in this venture as Nestle SA acquired the Osem group and the latter asked for a majority stake in the venture. Later conflicts arose over the management of the venture but all ended when DIL decided to exit the JV with Nestle SA.

The wide expansion and growth strategies necessitated funds and the management decided to go for an IPO in 1993, when the investors' confidence was on the higher band. The issue raised 541 mn and was oversubscribed 21 times. The fund was used to expand and modernize its production bases and to develop new production facilities. It again raised $14 mn through ECBs in April 1996 to fund its R& D facility.

A research by the company to understand the customer perception surprisingly revealed that most of them identified just the brands and not the Company. The impact was more evident when the company decided to float a GDR and none of the financial institutions showed interest as in their view DIL being family run business lacked a corporate image. DIL appointed the management consultancy firm A.F.Ferguson to advice on this issue. As a result DIL was split into seven profit centers and professionals were included in the decision making body.

In July 1997, DIL acquired the manufacturing unit of the pharma major Pfizer in kalyani, which was funded by $50 mn raised through an ECB. The same year, it launched its project 'STARS' (Strive to Achieve Record Successes). The scope of this project was identified as the entire gamut of strategic, structural and operational changes to enable efficiencies and improve growth rates.

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DIL's entered the skin and hair care market with the launch of samara range of products. The company even went in for a JV with Swedish cosmetics leader, Antonio Puij for reviving the brand but was unsuccessful and was forced to phase out the brand and to terminate the venture. Another venture with Bongrain of France, named Dabon international, marked its foray into processed milk business. Based on the recommendations made by Mckinsey & Co. on the restructuring exercise, DIL sold its stake in the venture formed with Agrolimen group in 1993, for a consideration of Rs.325 mn.

The group's entry into the European market was instigated when it set up an overseas arm in Britain with a $5 mn investment commitment. A venture named Axol Laboratories Plc. was setup to manufacture and market oncological products and start a manufacturing base near London.

When insurance gained prominence during the late '90s, DIL formulated strategies to foray into the life insurance sector. It started its plans earlier by allying with Liberty mutual, and then with the All state International Inc of the US. Both failed as the foreign allies had certain reservations about the strategies. The sailing was not smooth till it entered into an alliance with the British insurance group CGU in 2001, named as the Dabur CGU Life Insurance Company. The firm is planning to launch products, which will include savings, protection and pension. The venture plans to cash in on the Dabur brand reputation particularly in the rural areas and utilize its existing distribution network for selling insurance.

DIL set certain benchmarks to emerge as a major FMCG player in the world. It benchmarked its activities against established players like Nestle, Colgate-Palmolive, P&G etc. When it compared its financial performance with other benchmarked firms, it found that the performance of the firm was less than satisfactory. While the P/E ratios of other firms were more than 40, Dabur's was less than 24. The net working capital of Dabur was a huge Rs.2.2 bn while it was less than half this figure for the others. The operating profit margin of DIL was 12 percent compared to Colgate's 16 percent and P&G's 18 percent. The company's Return on Net Worth was around 24 percent compared to HLL's 52 percent and Colgate's 34 percent.

The appointment of Mckinsey&Co. for the restructuring of the company was a result of this unsatisfactory performance against the benchmarked players. The restructuring process was completed in two phases. The first phase was fully implemented by November, 1997. The key recommendations made by the consultants were (a) to concentrate on a few businesses (b) to improve the supply chain and procurement processes and (c) to reorganize the appraisal and compensation systems. But the major recommendation was to bring down the control of the Burman's in the company and to induct professionals in the management. The other decisions included the divestment of natural gums business, and marginal brands like denta care tooth powder, level cooking oil etc. Branded formulations were spun off as a separate joint venture. The food business was transferred to a wholly owned subsidiary, Dabur foods. The firm also decided to exit from the samara range of skin and hair care products, and also from GCI and Excelcia ventures.

The consultants identified the health care and personal care products as those with maximum growth potential. Moreover, ethnically produced medicines, oncological products and foods were visualized as the potential growing markets. DIL followed the principle of 'do few things, do them well' as suggested by the consultants. To avoid the pitfalls in the compensation system, the firm roped in Nobel & Hewitt, a Delhi based compensation specialist.

The business segments have been reduced to five after the restructuring exercise. These include the health care, personal care, foods, oncology and ayurvedic specialties. The health care products division was divided into herbal tonics, digestives, nature cure and mother & child care. The personal care division was divided into hair care and oral care. The company's food business includes Lemoneez, Real fruit juices, Home made pastes, etc. The oncology and ayurvedic specialties involve ayurvedic and anti-cancer medicines.

DIL has manufacturing plants at 8 locations in the country and 2, overseas. The new facilities set up by the company have the latest automated machines and other modernized equipments. This helped the company to maintain a superior position at the quality and the productivity

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level. The superior position in the quality aspect helped it to attain the coveted ISO 9002 certificate and Dabur was the first herbal products company in the country to be awarded this certification. Again, the company has committed to implement the best industry practices before 2004.

As suggested by Mckinsey & Co. to improve the supply chain, DIL brought various operational and administrative changes. All these measures contributed to an effective supply chain management with a focused sales force and the dealers of the company. Earlier, the supply chain system was not centrally monitored and each activity was looked after by different departments. The supply chain cell established by the company comprises of 5 people from different functional areas and through this process, the company is expected to save Rs.400 mn over the next few years. On the financial reporting side, the company changed product wise planning with pack-wise, branch wise and production wise planning. Annual forecasting was replaced by monthly and a rolling three-month forecasting. Along with this, DIL increased the advertisement budget from Rs.600 mn to Rs.1 bn.

The results were the reduction of working capital needs from Rs.1.4 bn to 1 bn in family products division, inventory levels, processing time, Zero logistics variability due to geographical variance, less shipping time, better payment methods, implementation of efficient procuring methods, etc. On the technological front, DIL has kept abreast with IT developments to streamline and modernize its operations. It has implemented an ERP package developed by Baan in an effort to restructure and to tightly integrate its operations.

On the marketing front, the restructuring efforts resulted in the company's focus on each segment separately. Moreover, it decided to concentrate more on its 'STAR' products. The company managed to form a wide retail distribution network for both its traditional and new products. Dabur is present in a industry where advertising has a say on the decision making of the consumers. Advertisements for its products like Hajmola, Pudin Hara, Chyawanprash, Dabur Amla, Dabur Honey, Dabur Lal Dant Manjan etc. have all been time landmarks in Indian advertising. Both old age and new-age products have been given equal attention in advertising and promotion strategies.

Dabur's products, which concentrate in the veterinary market, were marketed by appointing market representatives in rural areas. These representatives interacted directly with the farmers and conveyed the idea of herbal animal health care. As the availability of storage facilities is less in these areas, the company concentrated on improved packaging efforts to overcome this problem.

Dabur Amla, the leading hair care product of the company is marketed using brand ambassadors, which include the leading film actresses. To ensure greater visibility of this product, the company had hundreds of walls painted with the product's picture and brand name. The rural response was really impressive. They marketed the oil along with free gifts like bindis, bangles etc., The strategy proved to be a crowd puller in Rajasthan, Madhya Pradesh, etc. In order to pack more tightly in cartons, to raise transport volumes and to lessen the breakage, the company changed the round shape of the bottles and made it flat. Dabur Amla's main competitors were the non-branded oil manufacturers, others being Cantharidin, Jabakusum and Keo Karpin in the east, coconut oil in the south, and Bajaj in the north and the west. The Amla oil brand had 800 distributors in early '80s. Even this distribution strength was not sufficient to compete, as the customers were becoming more hair conscious. Thus the company started advertising in movie halls and the commercials were along the same lines as in the '60s. It received the first export order for the brand in 1972, when they exported 100 cases of Dabur Amla to Srilanka. In spite of the hefty advertising budgets expended on the product, the youth were being swept away by the newer products. To tackle this, DIL launched a special non-stick oil in 1988 to fill the gap in its portfolio. Intense competition compelled Dabur to outsource its requirements from manufacturers in UP, MP, Goa, Orissa and AP. The overseas production of the product started in 1990 in UAE and the product was available in the Malaysian markets by 1994. In 1995 it launched Dabur Vatika, a value added product with herbal ingredients and new packaging to compete with the market leader parachute, and this was later extended to the anti-dandruff shampoo segment.

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DIL's foray in the processed drinks market began in 1984 with the launch of Sharabat-e-Azam. The product was not widely accepted by the consumers due to lack of planning and other awful decisions. This prompted it to launch the 'Real' range of fruit juices in June 1996. This was the first fresh juice introduced in a carton with no added preservative, flavor or color. By February 1997, Real was spun off under the then newly constituted Dabur Foods Division. By April same year, a new competitor, Onjus had entered the market with aggressive pricing as its main battle arm priced at Rs.55 a liter, Real's price was high compared to Onjus which quoted Rs.35 a liter. As sales tumbled, stocks piled with the dealers and at one stage, DIL had to recall Rs.5 mn worth of Real juice's deteriorating stocks from retail outlets. DIL was not ready to leave the ground as it reintroduced Real in 1998 with a reduced price, new packaging and an all new marketing and distribution strategies. In 2000, Real had a 50 percent market share of the packaged fruit juice market with Pepsi Co.'s Tropicana at 25 percent and Onjus at 20 percent. In early 1999, Dabur introduced Khus and rose drinks in 250-ml bottles, which were categorized as para-synthetic drinks, mainly consumed for their taste value. Dabur also launched Lemoneez- a lemon based drink concentrate to cater to the higher-end market.

Dabur entered the cooking pastes market with the brand name "Home Made", as a result of its extensive research to give a direction to the Dabur Foods division. The research included women to generate ideas regarding the quality of the material, preservatives and oil to be used and the pricing factor. Home Made proved to be quite successful in urban segments and the company later extended the brand to include coconut milk in tetra packs. By 1998, the brand had attained a turnover of Rs.5 mn. However, growth slowed over the next few years. The category didn't grow as expected but DIL is planning to concentrate its focus on Home Made and is planning to extend the range to pickles, pappads and spices.

Dabur introduced branded honey in the mid 1980s to become the first player in the organized sector to source honey in large volumes from farmers and market it. Even though its research reports revealed that the market is comparatively small, Dabur leveraged the strength of its umbrella brand equity to sell the product. Even here the company faced competition as more and more regional players entered the frame. DIL positioned honey on the purity platform but realized later that its umbrella brand values-health through ayurveda – had reinforced the image of honey as a medicine. Later on, honey was repositioned as a tasty and nutritious health food. The advertisement budget was increased and it also sponsored recipe and food sections in various women's magazines. When the share tumbled, it repositioned again and portrayed it as fun-filled, and vibrant that kids could perceive as being trendy. This time, the strategy succeeded and the sales started picking up.

On the export front, DIL is the leader in Ayurvedic segment. The destinations include over 50 countries, prominent among them being Middle East, East and West Europe, Russia, Central and South America, USA, Canada, etc. However, Dabur faced some problem in Canada with its government. In June 2000, Dabur developed an 'e-strategy' for facilitating export orders. The other efforts included the development of a web site for its exporters through which they could get information on the status of orders placed by overseas buyers and tracks export orders.

One of the main suggestions for the restructuring of DIL was the change in its management structure. The company implemented this by inducting professionals in the top management. In 1998, the Burman family handed over the reins of the company to professionals and Mr. Ninu Khanna joined Dabur as the Chief Executive Officer. All business unit heads and functional heads were to report directly to the CEO. The compensation structure, which was not satisfactory, was changed after the recommendations made by Mckinsey & Co. At last, DIL adopted employee friendly initiatives to increase employee satisfaction. Dabur identified certain key performance areas for each employee. Performance appraisal and compensation packages were now based on these key performance areas. Dabur inducted two additional independent directors as per SEBI recommendations and also formed an Audit committee and compensation committee to bring in better corporate governance practices. Dabur established 'Sundesh'- the sustainable development society to carry out welfare activities aimed at improving the quality of life of the rural people in its area of operation. It gave the society complete financial and managerial support.

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The financial performance of the company was under the limelight of analysts over the period. In 1999-2000, Dabur achieved the Rs.1000 crore-turnover mark. The detailed financial performance can be assessed from the following exhibits.

Balance Sheet for the years 1997-2001

(Rs. in Million)

Years	03/97	03/98	03/99	03/00	03/01
Liabilities					
Net worth	**1948**	**2273**	**2615**	**3200**	**3622**
Equity Capital	285	285	285	285	285
Reserves and surplus	1663	1988	2330	2915	3337
Total Borrowings	**2140**	**2714**	**2949**	**2890**	**1961**
Bank borrowings	746	808	411	432	77
Financial institutions	87	39	34	48	49
Govt./Sales tax deferrals	4	18	30	68	112
Debentures/Bonds	152	150	150	150	150
Fixed deposits	362	235	512	485	602
Foreign borrowings	789	1027	1068	807	621
Commercial paper	0	350	650	900	350
Other borrowings	0	87	93	0	0
Current Liabilities and provisions	**788**	**857**	**833**	**1082**	**1575**
Total Liabilities	**4876**	**5844**	**6397**	**7172**	**7158**
Assets					
Gross fixed assets	2251	2860	3368	3679	3764
Less: Cumulative depreciation	645	800	983	1171	1335
Net fixed assets	**1606**	**2060**	**2385**	**2508**	**2429**
Investments	**341**	**431**	**478**	**472**	**727**
Inventories	968	1181	1276	1443	1393
Sundry debtors	1209	1292	893	1181	1376
Cash and bank balance	65	204	567	691	234
Loans and advances	**663**	**596**	**700**	**807**	**925**
Current assets, Loans and advances	**2905**	**3273**	**3436**	**4122**	**3928**
Miscellaneous expenses	24	80	98	70	74
Total Assets	**4876**	**5844**	**6397**	**7172**	**7158**

Income and Expenditure Statement for the years 1997-2001 (Rs. in million)

Years	03/97	03/98	03/99	03/00	03/01
Income					
Sales	7075	8132	9182	10426	11665
Other income	134	104	105	3419	1887
Change in stocks	(67)	104	169	(122)	73
Non-recurring income	20	13	92	21	(1)
Expenditure					
Raw materials	4208	4589	4799	5269	5385
Wages and salaries	314	436	549	581	717
Energy(Power and fuel)	86	108	124	155	187

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Years	03/97	03/98	03/99	03/00	03/01
Other manufacturing expenses	24	26	27	23	50
Indirect taxes	607	724	905	604	667
Repairs and maintenance	36	35	46	42	53
Selling and distribution	613	955	1489	2921	3397
Amortization	4	19	28	29	43
Miscellaneous expenses	401	553	554	70	74
Non-recurring expenses	1	14	(4)	-	–
PBDIT	**868**	**894**	**1031**	**1276**	**1373**
Interest	320	294	325	251	296
PBDT	**548**	**600**	**706**	**1025**	**1077**
Depreciation	113	162	194	213	225
PBT	**435**	**438**	**512**	**812**	**852**
Tax provision	11	3	15	38	73
PAT	**424**	**435**	**497**	**774**	**779**

The restructuring efforts and the improved financial performance reflected in Dabur's share prices as well. The increasing share prices indicated investor interest in the company. The price movement of the scrip in comparison with the sensex is given below.

Period	Oct '01	Nov '01	Dec '01	Jan '02	Feb '02	Mar '02
Dabur India	68.10	63.60	68.15	64.50	60.05	55.45
S&P CNX Nifty	1091.10	1063.60	1059.05	1075.40	1142.05	1129.55

The share holding pattern of the company as on 31-12-2001 was as follows.

Shareholding Pattern

Types of share holders	Percentage control
1. Promoters	
Indian promoters	78.9%
Foreign Promoters	Nil
2. Non promoters	
Institutional investors	13.1 %
Others	7%
Total	**100%**

The corporate philosophy of DIL is as follows:

"Knowledge is the key to growth in today's world. Whatever the industry, it is the knowledge which provides cutting edge to individual and organizations. For more than a century nature has been a rich source of knowledge for Dabur. Nature has not only given us the ingredients for all our products but has also taught us how to create a harmony within and without the organization. Nature has inspired us in all our acts. Ayurveda – the science of life is based on principles of nature. All Ayurvedic preparations have their ingredients derived from Nature. Dabur has converted the healing properties of natural ingredients and the age old knowledge of Ayurveda into contemporary health care products to alleviate health problems of its consumers.

Dabur is committed to expand the reach of this age old knowledge of Ayurveda and nature through the web. Through web, we aim to overcome the physical boundaries to take Ayurvedic way of life to global frontiers. Dabur India Limited understands its responsibility as a corporate house. We have not only set our sight on increasing turnover and profitability of the company but also on propagating Ayurveda - the Indian system of medicine.

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The Vision statement of DIL is "Dedicated to the Health and Well Being of Every Household." Dabur is a company with a set of established business values, which direct its functioning as well as all its operations. In this, Dabur is guided by the words of its founder Dr. S K Burman, "What is that life worth that cannot give comfort to others." The company offers its consumers, products to suit their needs and give them good value for money. The company is committed to follow the ethical practices in doing business. At Dabur, nature acts as not only the source of raw material but also an inspiration and the company is committed to protect the ecological balance.

Cash flow statements for the years 1998-2001

(Rs. in million)

Period ended	03/98	03/99	03/00	03/01
Pre-tax income from operation	319	341	471	663
Depreciation	162	193	213	224
Expenses (deferred)/written off	(55)	(18)	28	(3)
Other income/prior period adj	127	174	344	185
Tax	(3)	(15)	(38)	(72)
Cash profits	550	676	1,017	997
(Inc)/Dec in trade working capital				
– Inventories	(214)	(94)	(168)	50
– Sundry debtors	(82)	397	(287)	(195)
– Sundry creditors	171	22	154	275
– Others	(25)	(45)	95	217
Net adjustment	(151)	281	(206)	348
Operating activities	399	957	811	1,345
(Inc)/Dec in fixed assets	(615)	(518)	(336)	(144)
(Inc)/Dec in investments	(90)	(46)	6	(255)
(Inc)/Dec in loans & advances	67	(103)	(107)	(118)
Investing activities	(638)	(668)	(436)	(518)
Inc/(Dec) in debt	497	233	(59)	(929)
Inc/(Dec) in equity/premium	0	0	13	0
Change in capital reserves	8	2	128	(77)
Direct add/(red) to reserves spl item	(10)	(3)	(17)	36
Dividends	(118)	(157)	(316)	(314)
Financing activities	377	74	(250)	(1,283)
Cash generated/(utilized)	137	363	123	(456)
Cash at start of the year	66	204	567	691
Cash at end of the year	204	567	691	234

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Case Study 2

Read the case carefully and answer the following questions.

1. APL has set itself certain targets to achieve by the year 2003. Analyze these targets and comment on the probability of the company in achieving these targets.
2. Analyze the Indian paint industry using Michael porter's five forces model.
3. Conduct a SWOT analysis of Asian Paints Limited.
4. Perform a financial ratio analysis of APL. Analyze those ratios which directly reveal the strategic decision making ability of the firm.

5. How relevant is the dividend policy of a firm? Briefly explain the various dividend pay out models. By using any three dividend pay-out models, identify the intrinsic value of the share of APL as on 31-03-2001. (Assume the industry multiplier to be 10, cost of capital to be 12 percent).

Asian Paints started as a partnership firm in the year 1942. The firm was converted into a private limited company called Asian Oil & Paint Co. Pvt. Ltd in 1945. The company forayed into the industry at a time when the paints market was largely dominated by multinational companies. These companies were competing only in the large urban markets and thus Asian Paints decided to concentrate on smaller towns. To increase its customer reach, Asian Paints embarked on an ambitious marketing campaign and made efforts to strengthen its relations with thousands of dealers in small towns all over India. By 1967, the company had established itself as the market leader in India. In 1968, Asian Paints became the first consumer goods company in India to make systematic changes to exploit the advantages of information technology in the planning process. The company turned public in the year 1973 and was renamed as Asian Paints Limited (APL). In 1977, APL started its first overseas venture in Fiji.

APL faced the problem of non-availability of critical raw materials and the wide fluctuations in their prices. In 1987, it floated a joint sector project with Tamil Nadu Industrial Development Corporation under the name of Pentasia Chemicals Ltd. to manufacture two important intermediates. To reduce costs further, in 1990, it also set up a 15,000 tpa plant to manufacture phthalic anhydride. With the commissioning of this plant, APL's entire requirement of pthalic anhydride was available in-house. In March 1990, APL also commissioned a plant at Kasna (Uttar Pradesh) for paints, enamels, varnishes and resins. APL is presently India's largest paint company with a turnover of Rs.1,386.5 crore, net profit of Rs.107.50 crore and a market share of 33 percent as per the figures of 2001. The company is also the leading exporter of paints in the country. Industry experts generally opined that strong brand equity, product innovation, balanced product mix, large distribution network, aggressive marketing and professional management had made APL the unchallenged market leader in the Indian paints industry.

APL remained a focused company with paints and intermediates accounting for 87 percent and 11 percent of its turnover respectively. It was the undisputed leader in the decorative paints segment with a market share of 43 percent. To make its share in the industrial paints segment, APL tied up with Nippon Paints of Japan for electron deposition and powder coatings, and with PPG, USA for automotive finishes. In 1997, APL seemed to face a crisis when its long time CEO, Atul Choksey resigned following serious differences with the company's promoters. The new CEO, Ashwin Dani, however, seemed to have got off to a good start and the company has performed satisfactorily since then. Till 1991, APL was subject to compulsory licensing norms for capacity addition, high tariffs, raw material import control, and unfavorable tax treatment vis-à-vis the unorganized sector. In the mid 1990s, the government relaxed these norms to a large extent, allowing APL to expand its production capacities.

By the mid 1990s, APL had become a dominant player in the decorative paints segment, with a market share of over 40 percent, way ahead of Goodlass Nerolac and Berger paints (market share of 11 percent each). To strengthen its presence in the fast growing and profitable industrial segment, the company spun off its original equipment (OE) business into a 50:50 joint venture with PPG Industries of USA, in 1997. In the 1990s, APL's chemicals business did not seem to be doing well. A sudden glut reduced pthalic anhydride prices sharply. By 1997, APL had a total installed capacity of a little over 1 lakh tons per annum (tpa) to manufacture paints. To serve the growing market demand, APL had also completed the expansion of its manufacturing facilities. APL manufactures nearly 22 percent of its raw material requirement. In 1998, APL suffered losses on account of a fire at its alkyd resins facility, which damaged a couple of thermo pack units worth Rs.25 lakh. In another incident of a similar nature, the company's paint manufacturing unit at Bhandup was extensively damaged. However, it made up for the output losses by rescheduling its production at other plants.

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By 1997, serious differences had emerged among the promoters of APL about the mode of investments to be made in certain projects. Choksey was planning to expand the company in markets like Africa, but the other three promoters objected to this idea. Hours before the death of Champaklal on 31 July 1997, Choksey entered into an agreement with DSP Merrill Lynch to sell nearly 3.5 million shares in APL to two foreign institutional investors, Capital International and Morgan Stanley. The sale was finalized for Rs.357 crore. But within a few days (07 Aug. 97) the Capital International managers raised a controversy regarding the identity of the sellers and reneged on the agreement. Two weeks after Capital International backed out, Atul Choksey signed a deal with merchant bankers Kotak Mahindra Capital Company (KMCC) for the sale of 3.67 million shares, representing 9.1 percent of the company's equity, for a consideration of Rs.347.50 per share. On the same day, KMCC sold the 9.1 percent stake to ICI, a subsidiary of the UK based chemicals group. The transaction involving ICI and KMCC implied that a company registered in UK was seeking to buy into an Indian-listed company. As the government treated the acquisition as Foreign Direct Investment (FDI) and not portfolio investment, the deal automatically came under the RBI approval route and was scrutinized by the Foreign Investment Promotion Board (FIPB). In the meanwhile, the APL's board rejected the application from KMCC to transfer the shares in the name of ICI and refused to give a no objection certificate, contesting the deal as benami and sham. As per the prevalent norms at that time, any proposal to hike foreign equity holding in a company had to be accompanied by a resolution of the Board of Directors of the Indian company. Following this, the FIPB rejected the proposal.

At the same time, the promoters reached out an agreement to ensure that their combined equity in the company did not fall below the existing level of 41 percent. The agreement also stated that only in the case of a refusal by the remaining partners to buyout the shareholding from a partner willing to sell, would an open offer be made to an outside party. To emphasize their commitment to the company and to present a united front to outsiders, the promoters worked out a formal division of executive powers among the family members. After facing rejection by both the FIPB and the APL's board for the transfer of shares, ICI ended up selling off half the shares to UTI. The gamble reportedly cost ICI Rs.47.79 crore. This coupled with several other problems made Choksey to walk out of APL.

Corporate Restructuring

After successfully foiling ICI's takeover, APL amended its management structure in 1997, by inducting a professional, K. Rajagopalachari as the managing director and creating two new posts of vice chairman and deputy managing director. Ashwin Choksi was elevated to the post of chairman, while Ashwin Dani was appointed the vice-chairman and Abhay Vakil became the deputy-managing director. In October 1998, APL unveiled a comprehensive organizational revamping to achieve its new vision to be "among the top five decorative paint companies worldwide" by 2007. The company announced plans to increase its domestic market share from 43 to 60 percent in the next seven years through organic growth (up to 55%) and acquisitions. Moreover, the company had set itself certain targets to be achieved by 2003. This includes a gross turnover of Rs.2,100 crore, turnover of US $ 50 million from international operations, 10 percent of the turnover from new products, double the pre-tax profits and attain a return on capital employed ratio of more than 35 percent.

The restructuring of its operations was based on the recommendations of the management consultants Booze, Allen & Hamilton. APL's main businesses – decorative paints, the international business and the industrial paints & chemical unit – were hived off into three strategic business units (SBUs) as Decorative India, Decorative International, and Asian PPG respectively. To ensure greater focus and accountability for enhanced performance, the SBUs began to be headed by a president or vice president who all reported to the managing director. Common functions like human resources, finance, legal and others were retained with the corporate office. Employee turnover seemed to be a compelling reason for the restructuring exercise. Many top-level managers had left the company for greener pastures. Even though, APL was run professionally with decentralized decision-making, the general perception among APL managers was that growth opportunities were limited. Moreover, there seemed to be no structure to help them move up the hierarchy. Since, all the top management posts were occupied by the promoters and their close relations, there was little scope for the professional managers to occupy the top posts. APL also did not seem to have

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much scope to give a global exposure to these managers. The restructuring exercise which aimed to facilitate faster decision-making and fuel the ambitious global plans of the company, was expected to help in retaining talent, and minimize employee turnover.

Outlining his strategy for the coming years, Ashwin Dani revealed, "To achieve our vision and reach a sales turnover of Rs.3,000 crore, the organization has been structured around our main business. Greater focus, decentralization of decision making, empowerment of employees and customer focus are the key words of our organizational strategy." The APL management also explained that an exercise was on to separate the roles of ownership, governance and management. Accordingly, the board of directors was expected to be recast with the addition of eminent professionals from outside. This was likely to change the composition of the board, traditionally dominated by members of the three promoter families. While stating that there was no reason to believe that the present promoter-directors were not professional, Ashwin Dani said, "Corporate governance professionalism has always been given importance in this company. The company is growing at a rapid pace and hence, we felt the need to induct more professionals." He denied any pressure from the financial institutions to reconstitute the board as a step towards changing the company's image from a family run company to a professionally managed one.

In the 1970s, APL began to view acquisitions in overseas markets as a vehicle to realize its global ambitions. The company set up joint ventures in Nepal, Fiji, Tonga and Solomon Islands. To expand its global base further, it also announced plans to set up joint ventures in Oman and Mauritius. The company had a 51 percent stake in the Mauritius venture. The Oman project was a 50:50 joint venture with a local group for decorative paints, with an equity base of $1.25 million. With this, the company had a total of eight joint ventures around the globe. In the late 1990s, the performance of APL's overseas ventures remained far from satisfactory. Sales and profitability at its Tonga operations came under pressure. The Australian subsidiary was revamped following its lackluster performance. The subsidiary enhanced its equity base by floating additional shares to arrest a slide in the net worth. The Nepal subsidiary was also witnessing a no growth situation.

In spite of the sluggish state of the global paints industry, APL expected future growth to come from its international operations. It had targeted a Compounded Annual Growth Rate (CAGR) of 60 percent for the international business. By 2003, the international operations were expected to constitute 15-20 percent of its turnover. To achieve this, APL seemed to be having plans for more acquisitions in the international markets with a focus on the developing countries in Asia and Africa.

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Advertising and Promotion

APL incurred substantial expenditure on mass media advertising to strengthen its brands. The company's annual expenditure on advertising was around Rs.20 crore. The APL symbol – a lovable and mischievous little boy named Gattu – had emerged as one of the most widely recognized advertising symbols in India. Gattu came to be strongly identified with APL and rapidly became an integral part of its communication strategy, especially in the rural areas. In the 1980s, APL implemented an advertising strategy (print and television) that was crafted to address consumer behavior in paint purchase. APL identified four broad behavior stages – planning, pre-painting fears, decision-making and post-painting joys. The advertisements created by Ogilvy & Mather (O&M) were then released in phases. While the campaign through the early 80s focused on leadership through excellence, by 1985 the advertising theme had changed to celebrate with APL. APL began to focus on happy occasions and developed region specific communication by associating its brands with local festivals. APL's advertisement supporting the announcement of 151 Apcolite emulsion shades, highlighted the fact that this was the brand that really gave the buyer the freedom to choose a color of his or her choice. APL also initiated a generic slogan – For your Walls. In the mid 1990s, APL's advertising strategy was two-pronged. The company promoted the corporate brand APL. It also pushed select sub-brands.

Distribution

APL has a 15,000 strong dealer network in more than 3,500 cities, towns, and villages with a reach even into settlements having a population of 5,000. For marketing purposes, APL had

divided the whole country into seven zones, which were served by 45 branches. These branches were placed at strategic locations in order to provide efficient service to a large dealer network. Besides, every metro, A and B class towns had Color Corners. These special dealers always had a stock of every single shade in the entire range. Since customer choice in terms of products, shades and sizes of packs varied widely, each branch prepared its own sales forecast. Based on the forecast and also on the past data available, the company ensured proper warehousing of stocks to meet the customer demand without delay. Computers were also used widely in distribution and inventory control. APL's goal was to make available the required goods at any place within a day. In the 1950s, when it was believed that the market lay only in urban India, APL had made coordinated efforts to penetrate the rural markets. APL set wide availability as a goal and deployed its salesmen to penetrate the interior parts of the country. It trained them to develop close relationship with these dealers. Unmindful of the short-term costs involved, the company took several measures to build an emotional bond with the dealers.

APL attempted to reduce channel costs in several ways. The huge collection of shades created storage problems for the dealers. The company itself was puzzled as to which dealer would stock shades needed rarely – may be once in a month or two and in small quantities. Soon the company came up with a solution – the tinting machines at the 45 company offices, in which new shades could be generated by tinting a base paint. Some bases could be used for up to even 50 shades. In effect, the entire range could be derived from a handful of bases. APL developed the tinting machines indigenously and installed them at all the 45 strategically located centers. This also enabled the customer to choose from a large number of shades. By the end of 1999, the company had developed plans to raise the number of color tinting machines from 100 to 500. In 1998, APL also introduced the exclusive retail store concept for paints. The only company to have taken the exclusive route, APL set up four exclusive outlets, one each in Mumbai, Calcutta, Amritsar and Dehradun.

Financial Performance

In the 1990s, APL had grown quite rapidly. Gross sales had doubled from Rs.500 crore in 1993–94 to Rs.1,386 crore in 2000-01. During this period, sales in the decorative paints segment grew by 12-14 percent. Being a raw material intensive industry, raw material costs constituted about 48 percent of the total sales in 2000-01. The company had been able to bring down this cost from 66 percent of the total sales in 1993–94, in spite of the rising prices of petroleum. Employee cost were approximately 6 percent of the total sales in 2000-01 compared to 5 percent in 1997–98. PAT (profit after tax) stood at Rs.107.5 crore on a net sales of Rs.1,197 crore for 2000–01 compared to a profit of Rs.26 crore in 1993–94. The average return on net worth was 26.14 percent in 2000–01, an improvement over the 20.41 per cent achieved in 1993–94. The EPS stood at a healthy Rs.16.77 compared to Rs.12.87 in 1993-94.

APL's current ratio had come down gradually from 1.91 in 1997–98 to 1.87 in 2000–01. The debt-equity ratio (DER) had jumped from 0.53 in 1993–94 to 0.73 in 1997–98, but declined to 0.55 in 2000-01. Even though APL's DER was well within the widely accepted norm of 1.5, it was still higher than that of competitors like Goodlass Nerolac (0.49) and ICI (0.45). APL's interest coverage ratio had improved to 9.5 in 2000-01 from 5.02 in 1993–94 in spite of the increased debt. The company's total assets turnover stood at 1.76 in 1997–98 compared to 2.02 for Berger Paints, 1.76 for Goodlass Nerolac and 1.23 for ICI during the same period. On the other hand, APL seemed to have fared better on the return on equity (ROE) ratio at 0.1 in 1993–94 compared to ICI (0.07) and Berger Paints (0.09). Above all, APL enjoyed a P/E multiple of 18 in July 1998 (Goodlass Nerolac (7.25), Berger Paints (6.90), ICI (14.80) and Jenson and Nicholson (2.70)).

APL's paid-up share capital stood at Rs.64.10 crore as on 31st March 2001. The company had been consistently rewarding its shareholders since the 1980s with high dividends and liberal bonus offerings. The dividend payout percentage remained stagnant around the 50 percent levels over the years. Since 1992, the company had made two bonus issues: one in August 1992 in the ratio of 5:3 (i.e. five bonus shares for three shares held) and the other in November 1995 in the ratio of 1:1 (i.e. one bonus share for every share held). An investor

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who bought a share of APL on 10th January, 1992 at a market price of Rs.310 would have seen his investment rise to Rs.935 on 31st March, 1999, an appreciation of over 200 percent. APL's stated intention was to be amongst the top five decorative companies in the world and to surpass a turnover of Rs.3,000 crore by 2007. With growth in the decorative paints segment expected to slowdown, analysts expected APL to concentrate on the Decoratives International division and the industrial paints segment in the coming years.

The industrial paints segment was rapidly opening up in India and was expected to post higher growth. Despite its presence in this segment for the last eight years, APL had not been able to make much progress and the company seemed to be finding it difficult to cross the threshold market share of 14 per cent. Most industry analysts felt that the ability of paint companies to invest in new technologies, and offer a range of specialized paints, would be the key to survival in the future. APL's tie-up with PPG was likely to stand it in good stead. Most of the growth was likely to come from automotive paints. In general, the growth would be driven by increase in demand for automobiles, white goods and other consumer durables.

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Indian Paint Industry

The Indian paint industry, which had an estimated turnover of Rs.43 bn is highly fragmented. The small or unorganized sector, which mainly operated in the lower end of the market, accounted for roughly 40 percent of the total production but less than 25 percent of the industry's turnover. This sector had traditionally received many tax concessions from the government and consequently its products were much cheaper. The rationalization of the duty structure had narrowed down of the price difference between the organized and the unorganized sector in the 1990s. This helped the organized sector to increase its share of the market. A huge latent demand for paints existed due to the low penetration in rural areas. Even with a large consumer base, the per capita consumption of paint in India was only 0.5 kg (In comparison, per capita consumption of paint in other developing countries like Thailand (1.2 kg) and Philliphines (6 kg) was much higher). A study by the Central Electro Chemical Research Institute (CECRI), revealed that steel worth around Rs.100 billion was adversely affected every year by corrosion.

High inventory of raw materials is required due to long lead times, thereby increasing holding costs. The industry used over 300 inputs, mostly petro-based derivatives. Key raw materials were pigments (titanium dioxide), solvents (orthoxylene), binders, additives, and white cement/urea, all of which together accounted for 55 percent of the total cost. Titanium dioxide, the most important raw material was always in short supply, both locally and globally. Since a majority of the raw materials consisted of petrochemical derivatives, the prices of crude oil in the global market had a significant impact on the operations and the profitability of the Indian paint companies. Paints were classified into two categories – decorative paints and industrial paints. Decorative paints were used to paint buildings. Industrial paints included automotive paints, powder coatings, marine paints, etc.

Decorative Paints

The decorative segment dominated the paint industry, accounting for around 70 percent of the Rs.43 bn market. In this fragmented market, characterized by a large number of players both from the organized sector and the unorganized sector, demand was highly seasonal in nature, which is lower during monsoons and higher during the second half of the financial year especially during the festival season. Companies typically utilized capacities during the slack period to build up inventories to meet the demand in the second half. Entry into the decorative segment was relatively easy from the point of view of both capital and technology requirements. There were however, entry barriers in terms of established brands and large dealer network. The lead time required in establishing a brand name and setting up a distribution network acted as a deterrent for any new player entering the market.

Industrial Paints

The industrial paints segment accounted for around 30 percent of the total paints market. This segment was specialized and technology intensive and hence attracted fewer players. In this segment, client servicing assumed greater importance. The demand for industrial paints emanated from the automobile, shipping, white goods, capital goods and heavy industries. However, this segment was sensitive to business cycles. Brand names played a less important

role in this segment. Critical success factors in the segment were technological strength, ability to offer complete coating systems, and after-sales service. As the segment was less price sensitive, many Indian companies had entered into tie-ups with multinational paint companies. The technological tie-ups not only assured them access to state-of-the-art technology, but also helped them to forge global supplier relationships.

Major Players

The organized sector was dominated by five companies, which accounted for nearly 75 percent of its estimated turnover. APL dominated the decorative paint segment with a market share of 43 percent, while Goodlass Nerolac was the leader in the industrial segment with a market share of 41 percent. Overall, APL dominated with a market share of 33 percent, Goodlass Nerolac at 17 percent, Berger paints at 13%, ICI at 11% and the rest of small players contributed the remaining 26%.

Goodlass Nerolac (Nerolac), a constituent of the Tata Group, was the largest player in the industrial paints segment. One of the earliest players to enter the industrial paints business, it had been consolidating its position in the 1990s. The company's product range included a variety of industrial coatings, coil and powder coatings, primers and electron deposition coatings. Nerolac was the sole supplier of paints to almost all the automobile manufacturers. The company had collaborations with Kansai Paints of Japan for automobile paints and with Nihon Toshuku Toryo of Japan for sophisticated industrial coatings. In the decorative paints segment, it had a major presence in distempers and emulsions. In the premium emulsion segment, Nerolac's Allscapes had captured a market share of 10 percent.

ICI mainly manufactures automotive coatings, the fastest growing segment among industrial paints. One of the most aggressive players in the Indian paint industry, ICI was constantly on the lookout for mergers and acquisitions to widen its market base. In order to improve its competitive position, ICI had strengthened its distribution network, created new segments, widened the purview of speciality products, accessed newer technologies through joint ventures and introduced more products in the urban and semi-urban markets. The main products of ICI in the decorative paints segment, where it had a 15 percent market share were Maxlite in the mass segment and Dulux in the premium segment. ICI had launched a menu driven, user-friendly touch color screen on a computer that helped consumers choose up to 6000 shades on house structures resembling their homes.

Berger Paints (Berger) had a sizeable presence, both in the decorative as well as industrial paints segments. The company had a market share of 11 percent in the decorative paints and around 14 percent in the industrial paints segment. Berger was the sole supplier of automobile paints to Mercedes Benz and PAL-Peugeot. Berger had technical tie-ups with Herberts of Germany for automotive paints and Teodur NV of Holland for powder coatings. In technical collaboration with Ital Tinto of Italy, Berger had launched Color Bank, a computerized mixer tinting machine.

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Income and Expenditure Statements (Rs. in mn)

Years	03/98	03/99	03/00	03/01
Gross Sales	9,517	10,559	12,408	13,865
Excise Duty	(1,493)	(1,612)	(1,746)	(1,899)
Net sales	8,024	8,947	10,662	11,966
Other income	105	149	135	185
Total Revenue	**8,129**	**9,096**	**10,797**	**12,151**
Raw materials	4,005	4,456	5,283	5,783
Stock adjustment	(125)	(23)	(203)	(108)
Purchase of finished goods	34	39	100	121
Employee cost	433	492	585	730
Power & fuel	169	181	206	221
Advertising/ promotion/ public	234	309	390	471

Years	03/98	03/99	03/00	03/01
Freight & forwarding	282	329	409	506
Other expenses	1,792	1,925	2,115	2,328
Cost of sales	6,824	7,708	8,885	10,052
PBIDT	**1305**	**1388**	**1912**	**2099**
Interest & finance charges	196	223	203	221
PBDT	**1109**	**1165**	**1709**	**1878**
Depreciation	170	227	278	316
PBT	**939**	**938**	**1,431**	**1,562**
Provision for taxation	330	240	458	495
Extraordinary items/ Prior year adj.	62	97	1	(8)
Adjusted PAT	**547**	**601**	**972**	**1075**
Payout ratios (%)				
Tax (% of PBT)	35.1	25.6	32.0	31.8
Dividend (% of PAT)	49.3	44.6	45.7	49.0

Balance Sheets (Rs. in mn)

Years	**03/98**	**03/99**	**03/00**	**03/01**
Liabilities				
Equity capital	401	401	401	641
Profit & Loss/ General reserve	2,122	2,437	2,866	3,065
Other reserves	82	207	307	405
Net worth	2,605	3,045	3,574	4,111
Secured loans	1,454	1,689	1,234	1,634
Unsecured loans	474	479	511	633
Total Borrowings	**1,928**	**2,168**	**1,745**	**2,267**
Sundry creditors	381	297	525	499
Other liabilities	625	530	885	556
Provisions	937	818	982	1,386
Current liabilities and provisions	**1943**	**1645**	**2392**	**2441**
Total Liabilities	**6476**	**6858**	**7711**	**8819**
Assets				
Fixed assets	**2,314**	**3,011**	**3,293**	**3,764**
Investments	**461**	**498**	**405**	**441**
Inventories	1,660	1,609	1,861	1,989
Sundry debtors	807	799	867	1,215
Cash & bank balance	196	223	190	118
Loans & advances	1,037	718	1,035	1,252
Current assets, Loans & Advances	**3700**	**3349**	**3953**	**4574**
Miscellaneous expenses	**1**	**–**	**60**	**40**
Total Assets	**6476**	**6858**	**7711**	**8819**

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Case Study 3

Read the case carefully and answer the following questions.

1. What are the various steps in the development of a financial model?
2. What are the pitfalls which the treasurer should keep in mind while trying to promote the use of financial models within the company?
3. What are the facilitating conditions for successful use of financial models?
4. The treasurer has decided to use simulation models rather than optimization models to start with. Do you agree with this approach? Explain with reasons.
5. Using the random numbers given, work out 6 closing cash balance figures for months 1 to 6.
6. Using the random numbers given, work out 6 NPV values for the proposed project.

A company's treasurer is trying to streamline the cash budgeting and capital budgeting processes employed by different divisions. Till recently, the company has operated on the basis of thumb rules rather than scientific analytical methods. In 1996, the company went through a bad phase and found it difficult to mobilize and deploy funds in the wake of the liquidity crisis. The company's top management then began to appreciate that with increasing liberalization of the country's financial sector, banks would adopt stringent appraisal criteria before agreeing to provide working capital. Similarly, the financial institutions, while being more customer friendly, would expect to be fully satisfied about the viability of projects before disbursing term loans. With more and more powers being offloaded to the commercial banks and FIs, the onus of risk management was increasingly falling on these institutions. The company's bankers have recently informed the Chairman "We shall be reviewing the working capital limits fixed earlier. All future approvals would be based on projected figures based on scientific calculations". The chairman, feeling that there was little time to waste, has held a detailed discussion with the treasurer, a qualified chartered financial analyst, who has recently joined the company. The treasurer has suggested to the Chairman that the company's cash budgeting and capital budgeting procedures are quite outdated. He has made a strong recommendation that financial models could benefit the company is many ways. It would help in projecting cash flows for different scenarios. With the markets becoming increasingly competitive, it made sense to prepare cash flow statements based on different scenarios rather than a single scenario based on gut feeling. The models would also help to generate timely data which would be made available to the bankers from time to time. The treasurer has also opined that the use of models would facilitate more effective performance control by comparison of actual performance with targets.

The Chairman however is not fully convinced about the utility of financial models. His comments; "Show me in some specific areas how we can use financial models productively. if I am convinced, then, I shall back you with all the manpower and resources you need".

The treasurer has accordingly identified cash budgeting and capital budgeting as two areas where models can be used to the company's advantage.

He has collected the following data from one of the divisions.

A. Profitability distribution of likely sales for the next 6 months

Month		Month 2		Month 3		Month 4		Month 5		Month 6	
Quantity Units	Proba-bility	Quantity Units	Proba-bility	Quantity Units	Proba-bility	Quantity Units	Proba-bility	Quantity Units	Proba-bility	Quantity Units	Proba-bility
100	0.10	200	0.10	300	0.10	400	0.10	500	0.10	600	0.10
200	0.20	300	0.20	400	0.20	500	0.20	600	0.20	700	0.20
300	0.40	400	0.40	500	0.40	600	0.40	700	0.40	800	0.40
400	0.20	500	0.20	600	0.20	700	0.20	800	0.20	900	0.20
500	0.10	600	0.10	700	0.10	800	0.10	900	0.10	1000	0.10

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The treasurer has collected the following additional information.

a. Sales price per unit is Rs.1,000.

b. All sales will be strictly on cash basis.

c. Variable costs will be Rs.600 per unit and settled on cash basis.

d. Monthly fixed cash expenses will be Rs.5,00,000.

e. Opening cash balance is Rs.4,00,000.

Based on this information, the treasurer has decided to use a simulation model which will help in accurate prediction of cash balances at the end of each month. He has collected the following random numbers.

55	95	10	34	62	64
81	99	78	66	75	45
32	96	94	12	24	26
97	38	23	69	11	21
5	31	43	70	50	40

B. Probability distribution of cash flows for new project with outlay of Rs.5 lakh

Year 1		Year 2		Year 3		Year 4		Year 5	
Cash Flow Rs.	Proba-bility	Cash flow Rs.	Proba-bility	Cash flow Rs.	Proba-bility	Cash flow Rs.	Proba-bility	Cash flow Rs.	Proba-bility
100,000	0.3	200,000	0.3	300,000	0.3	400,000	0.3	500,000	0.3
200,000	0.4	300,000	0.4	400,000	0.4	500,000	0.4	600,000	0.4
300,000	0.3	400,000	0.3	500,000	0.3	600,000	0.3	700,000	0.3

Using the random numbers given earlier, the treasurer would like to use a simulation model to make a forecast of the net present value. The cost of capital for the company is 20%.

Case Study 4

Read the case carefully and answer the following questions.

You are the consultant to Kardia Extrusions Ltd., which has provided the following financial information relating to the company for the period March, 1996 to March, 2000 and requested you to answer the following questions for the purpose of preparing a detailed report.

1. Calculate the working capital leverage for a 10% reduction in current assets based on the data for 2000. How would you interpret this figure?

2. Based on the information for 2000, what rate of growth can be sustained with internal equity?

3. The company needs Rs.500 lakh to part finance cost of modernization-cum-expansion scheme at Tarapur as well as to set up a new unit at Silvassa for the manufacture of value added products like ball point tips, refills etc. The company is considering two alternatives.

   i. Issue of equity shares of Rs.10 each at a premium of Rs.10 per share.

   ii. Issue of debentures carrying 16% interest per annum. At what level of EBIT will EPS be the same under two financing options? You may assume that

   - Interest on other debt is Rs.10 lakh
   - Outstanding equity shares are as at the end of March, 2000.

4. Calculate the exchange ratio on the basis of

   i. Earnings per share

   ii. Market price per share

   iii. Book value per share.

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Which measure will you recommend and why?

5. Assume that the equity related cash flows of Kardia Extrusions without the merger will be as follows:

Year	1	2	3	4	5
Cash Flows (Rs. in lakh)	11.50	12.15	13.20	14.65	15.50

Beyond year 5, the cash flow is expected to grow continuously at 5% p.a. If Jaihind is acquired, the equity related cash flows of the merged entity will be as follows:

Year	1	2	3	4	5
Cash flows (Rs. in lakh)	18.75	19.63	22.21	25.30	28.95

The number of outstanding shareholders of Jaihind before the merger is 2.265 lakh. If the management of Kardia Extrusions wants to ensure that the present value of cash flows must increase by 25% as a sequel to the merger, calculate the upper limit on the exchange ratio acceptable to it. Use a discount rate of 18%.

6. What are the strategic dimensions and regulatory considerations should Kardia Extrusions keep in mind while deciding on the merger?

Anil Agarwal has recently taken over as the Managing Director of Kardia Extrusions Ltd. Agarwal was studying the company's financial statistics for the past 5 years. At a time when the company was trying to grow fast, it had become important to estimate the resource requirements for the coming years. Agarwal was in particular concerned with the following issues:

i. Efficient use of current assets.

ii. Growth which could be achieved without disturbing the existing capital structure.

iii. How to reward the existing shareholders.

iv. Optimum way of mobilizing resources for a proposed modernization cum expansion scheme.

Agarwal is also seriously thinking of growth by acquisitions as he feels that this would enable him to capture market share faster. His corporate planning team has identified Jaihind Extrusions, which has a small plant, but a well developed distribution network as a prime takeover target. Agarwal, being an experienced manager, feels that acquisitions have to be managed carefully in order to be successful. He has asked his advisory team to carry out a valuation exercise. In addition, he is interested in knowing about the legal aspects involved. Agarwal also wanted a report on the strategic issues involved. Anil Agarwal requested you to prepare the detailed report.

Salient financial statistics for Kardia Extrusions and Jaihind Extrusions are given in Table 1 and Table 2 respectively.

Table 1

The summarized financial data of Kardia Extrusions Ltd., for 5 years period (March, 96 to March, 2000)

(Figures are Rupees in lakh except where indicated separately)

		March 1996	March 1997	March 1998	March 1999	March 2000
1.	Total assets	252.63	193.30	411.52	574.86	1045.82
2.	Current assets	238.90	175.83	195.46	274.69	381.15
3.	Net fixed assets	13.73	17.47	216.06	300.17	664.67
4.	Total debt	166.04	140.75	119.23	125.66	136.91
5.	Net worth	35.13	35.08	257.10	342.99	608.12
6.	Preference capital	10.00	10.00	5.00	–	–
7.	Equity capital	10.00	10.00	35.00	125.00	250.00

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		March 1996	March 1997	March 1998	March 1999	March 2000
8.	Net sales	329.57	303.46	580.11	677.77	1018.11
9.	Gross profit	23.11	20.81	38.82	51.01	72.25
10.	Interest	14.65	14.27	16.00	10.98	4.78
11.	Depreciation	2.05	1.24	1.71	3.89	6.13
12.	Non-operating surplus/deficit	–	–	–	1.19	11.82
13.	Profit before tax	6.41	5.30	21.11	37.33	73.16
14.	Tax	2.03	1.68	7.60	7.10	12.50
15.	Profit after tax	4.38	3.62	13.51	30.23	60.66
16.	Dividend					
	– Equity	1.50	1.50	6.07	21.15	22.50
	– Preference	1.20	1.20	0.75	0.05	–
17.	EPS (Rs.)	2.09	1.81	3.37	2.41	4.85
18.	DPS (Rs.)	1.50	1.50	1.74	1.69	0.90
19.	Book value/share (Rs.)	35.13	35.08	73.46	27.44	24.32

20. 8,50,000 shares of Rs.10 each were allotted to existing shareholders on 2nd May, 1998 and 50,000 shares of Rs.10 each were allotted for redemption of 5000 12% cumulative redeemable preference shares of Rs.100 each on 2nd May 1998.

21. Face value of equity share is Rs.10.

Table 2

The summarized financial statements of Jaihind Extrusions as on 31.03.2000 are indicated below:

1.	Net sales	404.06
2.	Operating profit	24.39
3.	Interest	20.65
4.	Gross profit	3.74
5.	Depreciation	3.64
6.	PBT	0.10
7.	Tax	–
8.	PAT	0.10
9.	Equity (Face value Rs.10)	22.65
10.	Reserves	43.35
11.	Loan funds	133.15
12.	Fixed assets	45.99
13.	Net working capital	153.16
14.	Total assets	199.15

The average of the 52 week high/low of Kardia and Jaihind are Rs.100 and Rs.50 respectively.

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Case Study 5

Read the case carefully and answer the following questions.

1. What is the difference between business risk and financial risk?
2. How can these risks be measured in a total risk sense?
3. How can these risks be measured in a market risk framework?
4. Although Srujan International Ltd's EBIT is expected to be $32 million, there is a great deal of uncertainty in the estimate, as indicated by the following probability distribution:

Probability	EBIT
0.25	$10,000,000
0.50	32,000,000
0.25	54,000,000

Assume that Srujan International Ltd had only two capitalization alternatives: Either an all-equity capital structure with $120 million of stock or $60 million of 13 percent debt plus $60 million of equity.

a. Conduct a ROE and TIE analysis. That is, construct partial income statements for each financing alternative at each EBIT level. (Hint: Use the upper half of Table 1 as a guide.)

b. Now calculate the Return On Equity (ROE) and Times-Interest-Earned (TIE) ratio for each alternative at each EBIT level.

c. Finally, discuss the risk/return tradeoffs under the two financing alternatives. In your discussion, consider the expected ROE and the standard deviation of ROE under each alternative.

Srujan International Ltd. bottles pure Rocky Mountain spring water and sells it through independent distributors located throughout the continental United States. The company owns and operates regional warehouses in St. Louis, Buffalo, Jacksonville, and Los Angeles. Basically, Srujan International Ltd sells its water to wholesale distributors who have exclusive rights to a given territory. Then, the distributors sell it to supermarkets within their region. Additionally, Srujan International Ltd., is responsible for marketing the product nationally. The company was founded in 1981 by Beth Poe, then a recent graduate of the University of Michigan. Beth grew up in Aspen, Colorado. She knew that consumers were becoming more health conscious, and she recognized a demand for clean, fresh-tasting water. After returning to Colorado upon graduation and convincing her wealthy parents to become silent partners, she obtained the necessary equity capital to build a plant. Srujan International Ltd., grew rapidly from its initial customer base in Colorado, and by 1988 Srujan International Ltd., water was on virtually every supermarket shelf in America. Beth was a dedicated believer in the virtues of equity financing. Although the company had used debt financing in the early years to finance the regional warehouses, Beth always used Srujan International Ltd's cash flows to retire the debt as soon as possible.

Beth believes that the market for her company's product has finally matured. First, numerous bottled-water companies, such as Zephyrhills and Evian, have appeared on the scene. Second, it is extremely difficult to differentiate Srujan International Ltd from other brands of water. Third, the product is currently sold throughout the country, and there are no additional markets to enter. Thus, Beth expects Srujan International Ltd's 1993 Earnings Before Interest and Taxes (EBIT) of $32 million to remain relatively constant into the foreseeable future.

Srujan International Ltd has 10 million shares of common stock outstanding, which is traded in the over-thecounter market. The current stock price is $12.00, so the total value of Srujan International Ltd's equity is $120 million. The book value of the firm's stock is also $120 million, so the stock now sells at its book value. Beth owns 20 percent of the outstanding shares, and others in the management group own an additional 10 percent. The company's financial manager, Emily Martin, has been preaching for years that Srujan International Ltd., should use debt in its capital structure. "After all," says Emily, "everybody else is using at least some debt, and many firms use a great deal of debt financing. I don't want to put the

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firm into the junk bond category — that market has been hammered over the past few years- but I do think that the judicious use of debt can benefit everyone. Also, by being unleveraged, we are just inviting some raider to line up a lot of debt financing and then make a run at our company." Beth's reaction to Emily's prodding was cautious. However, since one of Beth's friends just lost his unleveraged company to a raider, she was willing to give Emily a chance to prove her point.

Emily had worked with Beth for the past six years, and she knew that the only way she could convince Beth that the firm should use debt financing would be to conduct a comprehensive quantitative analysis. To begin, Emily arranged for a joint meeting with her former finance professor and an investment banker who specializes in corporate financing for consumer products companies. After several hours, the trio agreed on these estimates for the relationships between the amount of debt financing and Srujan International Ltd's capital costs:

Amount Borrowed (in Millions of Dollars)	Cost of Debt	Cost of Equity
$ 0 .0	0.0%	16.0%
25.0	10.0	16.5
50.0	11.0	7.5
75.0	13.0	19.0
100.0	16.0	21.0
125.0	20.0	26.0

If Srujan International Ltd recapitalizes, the borrowed funds would be used to repurchase the firm's stock in the over-the-counter market. The firm's federal-plus-state tax bracket is 40 percent. The effective personal tax rate on income from stock is 25 percent and on income from debt is 30 percent.

With these data in hand, Emily must now complete an analysis designed to convince Beth to use some debt financing. Assume that Emily has passed the assignment on to you, her assistant, for answers. She suggests that the presentation to Beth begin by discussing various types of risk, how risk is measured, how risk affects capital structure decisions, and how the analysis would change if Srujan International Ltd's business risk were significantly higher or lower than originally estimated.

As a starting point to finding the optimal capital structure, Emily suggests calculating Srujan International Ltd's stock price, number of shares remaining after recapitalization, EPS, and WACC at each debt level. Beth previously indicated that she did not completely understand the relationships between the amount of debt, EPS, stock price, and WACC.

Beth discussed the firm's situation with various friends of hers who are financial analysts. Each has given Beth advice on what factors to consider in the analysis. Beth highly regards her friends' expertise and forwards their comments to Emily to consider in the analysis. For example, Henry Rathbone, a financial analyst in the bottled-water industry, believes that although Srujan International Ltd's EBIT is expected to be $32 million, there is a great deal of uncertainty in the estimate. He formulated the following probability distribution:

Probability	EBIT
0.25	$10,000,000
0.50	32,000,000
0.25	54,000,000

Henry suggests conducting an ROE and TIE analysis at each EBIT level under two capitalization alternatives: all equity capital structure with $120 million of stock, or $60 million of 13 percent debt plus $60 million of equity.

Jenny Lippincott, another of Beth's friends who is aware of her aversion to debt financing, informs her that the new debt could be added in phases instead of all at once. Thus, assuming that Srujan International Ltd recapitalized with $25 million of debt (hence S = $107,272,727,

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D = \$25,000,000, V = \$132,272,727, P = \$13.23, and n = 8,109,966), Jenny proposes two future alternatives: Srujan International Ltd could increase its debt to \$50 million by issuing \$50 million of new debt and using half to refund the existing issue and half to repurchase stock, or it could issue \$25 million of new debt without refunding the first issue. Emily would like each proposal evaluated to ascertain its impact on stock price.

Beth also sought advice concerning Srujan International Ltd's capital structure from Jean Claude Van Lamb, her college finance professor. Professor Van Lamb scolded Beth for not remembering two capital structure theories taught in class: the Modigliani-Miller with corporate taxes and the Miller model. For simplicity's sake, he suggested using \$120 million as the value of the unlevered firm in both models when calculating Srujan International Ltd's value. Beth wants both models used to determine Srujan International Ltd's value at \$75 million of debt. She is also unsure why the three models (MM, Miller, and the EBIT/capital cost model), all of which are designed to calculate value, yield different results.

Beth is often skeptical of financial theories. Therefore, Emily recommends addressing the weaknesses of the analysis as well as other approaches that could be used to determine an appropriate target capital structure for Srujan International Ltd. Emily has a strong finance background, and Beth is an excellent businesswoman with good instincts. Be sure to be prepared for follow-up questions.

Case Study 6

Read the case carefully and answer the following questions.

1. For each of the years listed in Table 2, what is Ramoji Ltd. annual earnings per share growth rate, its P/E ratio, and its market/book ratio? Compare your answers with the industry averages shown in Table 2. What can be inferred about Ramoji Ltd. dividend policy from these data?
2. Do you think it is better for firms in general, and for Ramoji Ltd. in particular, to have an announced dividend policy?
3. In general, how is a firm's growth rate in earnings affected by its dividend policy? What does this imply about Ramoji Ltd. historical rate of return on investment vis-à-vis that of the average lumber company? (Hint: Consider the retention growth model, g = br, where g = growth rate in EPS, b = retention ratio, and r = return on equity.)
4. Evaluate the family's argument that higher-priced stocks are more attractive to investors because the percentage transactions costs on such issues are lower. Is this a valid argument? Do you think Ramoji Ltd. current per-share price is "optimal" in the sense that the value of the shares to investors is maximized?
5. In general, and in this case, what impact should a firm's use of financial leverage have on its dividend policy?

During the depression of the 1930s, Ben Jenkins, a wealthy, expansion-oriented lumberman whose family had been in the lumber business in the southeastern United States for several generations, began to acquire small, depressed sawmills and wholesale lumber companies. These businesses prospered during World War II. After the war, Jenkins anticipated that the demand for lumber would surge, so he aggressively sought new timberlands to supply his sawmills. In 1954, all of Jenkins's companies were consolidated, along with some other independent lumber and milling companies, into a single corporation, the Ramoji Ltd.

By the end of 2000, Ramoji Ltd was a major force in the lumber industry, though not one of the giants. Still, it possessed more timber and timberlands in relation to its use of timber than any other lumber company. Worldwide demand for lumber was strong in spite of a soft world economy, and its timber supply should have put Ramoji Ltd. in a good position. With its assured supply of pulpwood, the company could run its mills at a steady rate and, thus, at a low per-unit production cost. However, the company does not have sufficient manufacturing capacity to fully utilize its timber supplies; so it has been forced to sell raw timber to other lumber companies to generate cash flow, losing potential profits in the process.

Ramoji Ltd. has enjoyed rapid growth in both sales and assets. This rapid growth has, however, caused some financial problems as indicated in Table 1. The condensed balance sheets shown in the table reveal that Ramoji Ltd. Ramoji's financial leverage has increased

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substantially in the last ten years, while the firm's liquidity position markedly deteriorated over the same period. Remember, though, that the balance sheet figures reflect historical costs, and that the market values of the assets could be much higher than the values shown on the balance sheet. For example, Ramoji Ltd. purchased 10,000 acres of cut timberland in southern Ramoji Ltd. in 1961 for Rs.10 per acre, and then planted trees, which are now mature. The value of this acreage and its timber is estimated at Rs.2,750 per acre, even though it is shown on the firm's balance sheet at Rs.230 per acre, the original Rs.10 plus capitalized planting costs. Note also that this particular asset and others like it have produced zero accounting income; indeed, expenses associated with this acreage have produced accounting losses.

Table 1

Ramoji Ltd
Condensed Balance Sheets for the Years Ended December 31

(In Millions of Rs.)

	1990	2000
Current assets	125.2	265.0
Fixed assets	241.5	813.4
Total assets	366.7	1,078.4
Accounts payable	18.0	55.9
Notes payable	6.7	98.3
Other current liabilities	18.6	23.6
Total current liabilities	43.3	177.8
Long-term debt	122.0	404.0
Common stock	25.0	50.0
Retained earnings	176.4	446.6
Total liabilities and net worth	366.7	1,078.4
Current ratio	2.9	1.5
Industry average	2.5	2.4
Debt ratio	45.1%	54.0%
Industry average	37.9%	40.2%

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When Ramoji Ltd. was originally organized, the senior Jenkins and members of his family owned most of the outstanding stock. Over time, however, the family's ownership position has gradually declined due to the sale of new common stock to fund expansion. In 1995, Ben Jenkins, Sr. died; the presidency of the firm was passed to his son, Ben Jenkins, Jr., who was 61 at the time. By the end of 2000, the Jenkins family held only about 35 percent of Ramoji Ltd. common stock, and this represented essentially their entire net worth. The family has sought to finance the firm's growth with internally generated funds to the greatest extent possible. Hence, Ramoji Ltd. has never declared a cash dividend, nor has it had a stock dividend or a stock split. Due to the plowback of earnings, the stock currently sells for almost Rs.2,000 per share. The family has stated a strong belief that investors prefer low-payout stocks because of their tax advantages, and they also think that stock dividends and stock splits serve no useful purpose — they merely create more pieces of paper but no incremental value for shareholders. Finally, the family feels that higher-priced stocks are more attractive to investors because the percentage brokerage commissions on small purchases of higher-priced stocks are lower than on large purchases of lower-priced shares. They cite the example of Berkshire-Hathaway, whose stock price has risen phenomenally even though it now sells for thousands of Rs.s per share and pays no dividends. (The family does acknowledge, though, that Warren Buffett, Berkshire's Chairman, has done a superb job of managing the company's assets, and that the rise of its stock reflects that factor as well as Buffett's financial policies). As the date for Ramoji Ltd Ramoji's annual stockholders' meeting approached, Mary Goalshen, the corporate secretary, informed Ben Jenkins, Jr., who is

commonly called "Junior" at the company that an unusually low number of shareholders had sent in their proxies. Goalshen felt that this might be due to rising discontent over the firm's dividend policy. During the last two years, the average payout for firms in the paper and forest products industry has been about 35 percent; yet for the 39th straight year, Ramoji's board, under the Jenkins family's dominance, chose not to pay a dividend in 2000. The Jenkins family was also aware that several reports in the financial press in recent months indicated that Ramoji Ltd. was a possible target of a takeover attempt. Since the family did not want to lose control of the company, they were anxious to keep the firm's stockholders as happy as possible. Accordingly, Junior announced that the directors would hold a special meeting immediately after the annual meeting to consider whether the firm's dividend policy should be changed.

Junior instructed Abe Markowitz, Ramoji Ltd., Ramoji's financial vice-president, to identify and then evaluate alternative dividend policies in preparation for the special board meeting. He asked Markowitz to consider cash dividends, stock dividends, and stock splits. Markowitz then identified six proposals that he thought deserved further consideration:

1. **No Cash Dividends, No Stock Dividend or Split.** This was the position Markowitz was certain that Junior and the family would support, both for the reasons given above and also because he thought the company, as evidenced by the balance sheet, was in no position to pay cash dividends.
2. **Immediate Cash Dividend, but No Stock Dividend or Split.** This was simply the opposite of the no dividend policy. If a cash dividend policy were instituted, its size would still be an issue.
3. **Immediate Cash Dividend plus a Large Stock Split.** The stock split would be designed to lower the price of the firm's stock from its current price of almost Rs.2,000 per share to somewhere in the average price range of other large forest products stocks, or from Rs.20 to Rs.40 per share.
4. **Immediate Cash Dividend plus a Large Stock Dividend.** The reasoning underlying this policy would be essentially the same as that of Alternative 3.
5. **Cash Dividend, Stock Split, and Periodic Stock Dividends.** This policy would require the company to declare an immediate cash dividend and, simultaneously, to announce a sizable stock split. This policy would go further than Alternatives 3 and 4 in that, after the cash dividend and stock split or large stock dividend, the company would periodically declare smaller stock dividends equal in value to the earnings retained during the period. In effect, if the firm earned Rs.3 per share in any given period—quarter, semi-annual period, and so on—and retained Rs.1.50 per share, the company would also declare a stock dividend of a percentage amount equal to Rs.1.50 divided by the market price of the stock. Thus, if the firm's shares were selling for Rs.30 when the cash dividend was paid, a 5 percent stock dividend would be declared.
6. **Share Repurchase Plan.** This plan is based on the premise that investors in the aggregate would like to see the company distribute some cash, but that some stockholders would not want to receive cash dividends because they want to minimize their taxes. Under the repurchase plan, individual stockholders could decide for themselves whether or not to sell some or all of their shares and thus to realize some cash and some capital gains, depending on their own situations. To begin his evaluation, Markowitz collected the data shown in Tables 2 and 3. As he was looking over these figures, Markowitz wondered what effect, if any, Ramoji Ltd Ramoji's dividend policy had on the company's stock price as compared to the prices of other stocks. Markowitz is also aware of one other issue, but it is one that neither he nor anyone else has had the nerve to bring up. Junior is now 66 years old, which is hardly ancient; but he is in poor health, and in recent years he has been almost obsessed with the idea of avoiding taxes. Further, the federal estate tax rate is currently 60 percent, and additional state estate taxes would be due; so well over half of Junior's net worth as of the date of his death will have to be paid out in estate taxes. Since estate taxes are based on the value of the estate on the date of death, to minimize his estate's taxes, Junior might not want the value of the company to be maximized until after his death. Markowitz does not know

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Junior's view of this, but he does know that his tax advisors have thought it through and have explained it to him.

Finally, Markowitz knows that several Wall Street firms have been analyzing Ramoji Ltd Ramoji's "breakup value," or the value of the company if it were broken up and sold in pieces. He has heard breakup value estimates as high as Rs.3,500 per share, primarily because other lumber companies, including Japanese and European companies, are eager to buy prime properties such as those owned by Ramoji Ltd Atlantic. Of course, Ramoji Ltdcould sell assets on its own, but Markowitz does not expect that to happen as long as Junior is in control.

Table 2

Ramoji Ltd

Selected Company and Industry Data

Earnings Year	Book Value per Share	Price per Share	Industry P/E Ratio	Industry	M/B Ratio
1985	Rs.100	Rs. 824	Rs.1,253	16.8	2.5
1990	106	1,180	1,360	17.9	2.6
1995	109	1,769	1,597	19.1	2.9
2000	143	2,483	1,902	16.5	2.5

Industry Average Compound Annual Growth Rate in Earnings per Share	
1985–90	6.2%
1990–95	7.1
1995–2000	7.9

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Table 3

Selected Stock Market Data

	Average Payout	Average P/E
Boise Cascade	25%	7.10
Chesapeake Corporation	31	9.2
Ramoji Ltd-Pacific	40	9.0
Potlatch	35	10.2
Union Camp	44	10.5
Weyerhaeuser	42	10.0

Now assume that you are Abe Markowitz's assistant, and that he has asked you to help him with the analysis by answering the following questions and then by discussing your answers with the executive committee. Junior is famous for asking tough questions and then crucifying the person being questioned if he or she has trouble responding, and that is probably why Markowitz wants you to make the presentation. So be sure that you thoroughly understand the questions, and your answers and that you can handle any follow-up questions that you might receive.

Case Study 7

Read the case carefully and answer the following questions.

1. Discuss the principles of operating leverage as they relate to production plans A and B.

2. Financial Risk is the additional risk that is placed on the common stockholders as a result of the decision to finance with debt (or preferred stock). Therefore, the appropriate production process must be identified before financial risk can be analyzed. Assume that the decision is made to adopt production Plan A.

a. Based on the estimated relationships between financial leverage and capital costs, (listed in Table 2) determine the amount of debt that will maximize value of the company. (Because the company is valued through a perpetual cash flow, the value of equity is based on the after tax income adjusted by the cost of equity. The value of the company is based on the value of equity plus the value of debt.)

b. Given the founders' shares are based on the value added to the initial investment, calculate the number and value of the founders' shares at various levels of debt. (Figure 2 has been provided to help you answer this question.)

c. Given the stock is zero-par and the founders paid nothing for their stock, should the investors paying $7.50 feel cheated? Explain. Should the SEC protect investors from the founders issuing themselves excessive numbers of shares?

3. Calculate IsleMarine's weighted average cost of capital (WACC) at each debt level. Explain the relationship between the company's value and WACC. (Figure 3 has been provided to help you answer this question.)

4. Ralph is aware of the fact that the average manufacturing company has a Times-Interest-Earned (TIE) ratio of about 6x. Using TIE as a risk measure along with the business risk information from question 2, analyze the total risk of the **company.** Calculate the TIE and, given that one standard deviation of the quantity sold is 2,100 units, determine the probability that the TIE will be less than 1. Hint : to find the probability first find the Z score and then look up the probability on a z table (An example can be found in the Intermediate Financial Management textbook by Brigham and Daves. To find the Z score, first calculate the quantity required for a TIE of 1. Then subtract this quantity from the expected quantity and divide by one standard deviation of quantity sold.)

5. What are the annual payments of Isle Marine's loan? Calculate the first-year debt service coverage ratio. (EBIT/Interest expense + Before tax principle repayment). Given the industry average coverage ratio of 4x, analyze Isle Marine's risk.

6. The financial analysis depends on choosing the appropriate production plan and, yet, the choice of the best plan was based on uncertain inputs concerning sales, price, and variable costs. The analysts attending the meeting may not agree with the estimates. If you are using a spreadsheet, perform a sensitivity analysis to determine the impact of these inputs on the choice of plan.

7. The capital structure decision depends on the estimates of the costs of debt and equity at different capital structures and the validity of the equations used to value the company. How confident are you in Ralph's estimates of ks and kd? Could changes in these estimates affect the capital structure decision? What assumptions underlie the equity valuation equation? Is it likely that IsleMarine meets these assumptions?

8. Theories of asymmetric information indicate that unequal knowledge of information about the company causes investors to interpret the sale of stock by a company as a "signal" that things may get worse in the future. The use of debt is perceived as a positive sign. In general, what implications does this have for capital structure policy? Does it matter if the firm is a mature company or a new venture? Would it matter if the founders plan to sell some of their shares at the time of the initial public offering, to make further investments of their own capital by buying some more stock, or to neither buy nor sell shares?

9. How would the issue of control of the company influence the capital structure decision?

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Chris Waterson had been a water enthusiast all of his life. He grew up with his parents in the Florida Keys. He was an avid water-skier and sport fisher, and spent most of his free time involved in water oriented activities. His first professional position was a technical and market representative for a small family owned fiberglass molder in the Midwest. His heavy involvement in all aspects of production and sales helped the company expand and provided him key insight and experience in the fiberglass industry. The owners of the company were pleased with his enthusiasm and knowledge and gave him the opportunity of opening and managing a new west coast operation in Seattle.

After seeing the plant develop and thrive over 15 years, Chris realized that the family operation did not provide an ownership opportunity, and he wanted to develop his own business. While at a trade meeting, Mark talked to the head of a fiberglass boat company who was interested in retiring. Chris felt that these facilities might provide a good business opportunity. A boat company would blend his expertise in the fiberglass industry with his interest in boating. He also believed that the numerous contacts he had developed in the area, both within the industry and through his involvement in fishing and boating associations, would be an asset in this type of venture.

Mark knew that there was strong market demand for recreational boats and an increasing interest in boats that younger family members could safely operate. He recently became aware of a jet propelled boat design that combined beneficial aspects of jet skis with the advantages of a larger boat design. The shell of the jet boat was similar to a traditional motor boat and could be molded as a single fiberglass unit. The jet boat was relatively quiet and possessed incredible maneuverability. It could operate at speeds of 45 miles per hour and had sufficient power to pull skiers and tubers. It was capable of providing low maintenance transportation from island to island in the Puget Sound. The jet propulsion mechanism eliminated the dangers of a propeller and made it relatively safe for younger boaters. The lack of a propeller allowed the boat to operate in extremely shallow water. Although higher priced than a traditional boat of comparable size, industry analysts indicated pent up demand for an upscale "water toy." A number of west coast boat dealers felt that the jet boat would cover an unfilled market niche and indicated an interested in selling them.

Waterson teamed up with Sally Sawyer, a college friend who was production engineer for a jet ski manufacturer in Florida, and Ralph Redding, a financial specialist from Portland. This founding team needed to determine the feasibility of organizing a new company called the Submarine Ltd. The company would build the jet boat using the production facilities of the fiberglass shell manufacturer. Each of the founding team agreed to invest both time and money into the new business in exchange for a significant ownership interest. Although the founders' capital would be substantial, they realized that they would need additional capital. Preliminary discussions with regional banks indicated an interest in providing debt capital. Local venture capitalist also expressed an interest in supplying some of the equity capital if the team could develop a viable business plan.

A local corporate attorney specializing in new business startups advised Submarine to incorporate immediately in order to raise outside capital through an initial public offering. She suggested that corporate charter authorize 3.75 million shares of no par stock, and the founders were advised that they could reasonably expect to issue shares to outsiders at Rs.7.50 per share. However, before the charter could be filed, it was necessary to determine the number of shares that could be issued to the founders and still have sufficient value left in the company to raise the required amount of external capital.

Ralph Redding concluded that he should create a business plan that not only described the product, the markets to be served, and the firm's production plans, but which also outlined the anticipated financing requirements and expectations in some detail. The initial marketing plan called for the production and sale of fiberglass jet boats to dealers in California, Oregon and Washington. Redding felt that sales would be strong if the new jet boats were offered to exclusive wholesale dealers at Rs.5,500 each. Although initial interest was high, the retail boat industry has always been highly cyclical, and Redding was uncomfortable with using a point estimate for unit sales. Thus, he developed estimates for three possible scenarios: most likely, optimistic, and pessimistic which are presented in Table 1.

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Table 1

Sales Estimates

Scenario	Probability	Unit Sales	Dollar Sales
Pessimistic	25%	1,800	Rs. 9,900,000
Most Likely	50%	7,000	38,500,000
Optimistic	25%	12,000	66,000,000

After an in-depth study, Sally Sawyer, the engineer-production manager, identified two alternative production processes that the company could employ. She asked Ralph to evaluate the impact of each proposal on the companyís financial situation and to discuss the differential impact on operating leverage and risk. Based on the analysis, he is expected to recommend the best course of action. Plan A involved a more labor intensive process that would require a smaller amount of automated equipment. Under this plan, annual fixed costs were estimated to be Rs.4 million, with variable costs of Rs.3,300 per unit produced. Plan B would require the firm to invest in a more comprehensive finishing process and would require Rs.4.8 million in fixed costs but would reduce variable costs to Rs.3,000 per unit. Neither fixed cost estimate includes interest expenses, since the capitalization mix is still uncertain. The company plans to set the wholesale price at Rs.5,500 regardless of which production process is chosen. Total capital requirements for both current and fixed assets, as well as start-up operating funds, are estimated to be Rs.40,000,000 under plan A and Rs.45,000,000 under plan B.

To help with the capitalization decision, Ralph had extensive meetings with investment bankers, venture capitalists, commercial bankers, and portfolio fund managers. On the basis of these meetings, he constructed Table 2, delineating estimates of the relationship between financial leverage and capital costs.

Table 2

Cost of Capital

Amount Borrowed	Cost of Debt	Cost of Equity
Rs. 0 million		12.00%
Rs.14 million	9.00%	13.00%
Rs.28 million	11.00%	15.00%
Rs.42 million	14.00%	18.00%
Rs.56 million	18.00%	23.00%

The founders must prepare for a meeting with the attorney, investment bankers and venture capitalists and present their proposed business plan. They must be prepared to discuss the issues involving risk, both business and financial, as well as strategies for maximizing return. In addition, Chris is aware that manufacturing companies on average had a Times-Interest-Earned (TIE) ratio of about 6x and a debt service or fixed charge coverage ratio of 4x.

In order to prepare the plan, the following assumptions were made. Any required debt will be raised by issuing a 25 year term loan with annual payments including both interest and principal amortization. The company's value will be based on a perpetual cash flow, so the value of the firm can be estimated on the basis of the expected EBIT. The Rs.7.50 stock price is based on the investment bankers "first approximation" number of shares and share price. The founders realize that the investment bankers will put on a "road show" where they, along with the company executives, travel around the country and meet with the institutional investors and security analysts to pre-sell the stock and obtain an idea of investor interest. The final price will be adjusted to reflect investor reactions. Thus, the founders must be prepared to discuss the impact of a change in the cost of capital, information asymmetry, and control issues.

Other uncertain factors are taxes and labor. The firm's tax rate is assumed to be 40%, but the state legislature is considering revising the tax law. The direction and amount of change is unknown, but they expect the maximum change to be less than 25 percentage points in either direction. Also, other boat manufacturers are in the midst of labor negotiations, and the variable costs associated with production may increase. Again, the magnitude of the change

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is unknown, but variable costs could increase by as little as 5 percent or as much as 40 percent. Because of the uncertainty, preparation for the upcoming meeting must include the potential effect that these factors have on the financial analysis.

You have been asked to help provide an analysis of plan A and B and make recommendations concerning the best plan for the company. In addition, you are requested to prepare an analysis of the impact of the level of debt on the cost and value of the company. Based on this analysis you must determine the optimal level of debt for the company. You have been instructed to consider the impact of risk on the decisions of the company.

Case Study 8

Read the case carefully and answer the following questions.

1. What is meant by capitalization? What is meant by a firm's capital structure? For financial planning purposes, explain why either book or market value should be used to determine the firm's capital structure. What is capital structure theory?

2. Discuss the following issues relating to business risk and financial risk.

a. What is the difference between business risk and financial risk? Explain some of the factors that contribute to each. Evaluate Reebok Ltd. Supply's level of business risk.

b. How does this risk relate to total risk?

c. How does business risk affect capital structure decisions?

3. Using Moore's projected EBIT of Rs.12 million, and assuming that the MM conditions hold, compare the value of the company as an unlevered firm (VU)with a 16 percent cost of equity (ksU) with the value of the firm if it had Rs.30 million of 9 percent long-term debt.

a. What are the values for the unlevered firm (VU), the levered firm (VL),and the cost of equity for the levered firm (ksL)?

b. Based on MM without taxes, what is the company's cost of capital if it uses debt financing? Use the formula WACC formula to verify that the leveraged firm's cost of capital.

4. Miller added personal taxes to the model in his 1976 Presidential Address to the American Finance Association.

a. What is Miller's basic equation (his Proposition I)?

b. According to the Miller model and assuming that tc is the corporate tax rate at 40 percent, td is the personal rate on debt income at 28 percent,and ts is the personal tax rate on stock income at 20 percent, what is the value of the unlevered and levered firm and what is the gain from leverage? How does this compare with the MM gain from leverage, where only corporate taxes are considered?

Reebok Ltd.

Mort Moore founded Reebok Ltd. after returning from duty in the South Pacific during World War II. Before joining the armed forces, he had worked for a locally owned plumbing company and wanted to continue with that type of work once the war effort was over. Shortly after returning to his hometown of Minneapolis, Minnesota, he became aware of an unprecedented construction boom. Returning solders needed new housing as they started families and readjusted to civilian life. Mort felt that he could make more money by providing plumbing supplies to contractors rather than performing the labor, and he decided to open a plumbing supply company. Mort's parents died when he was young and was raised by his older brother, Stan, who ran a successful shoe business during the 1920's. Stan often shared stories about owning his own business and in particular about a large expansion that was completed just before the market collapsed. Because of the economic times, Stan lost the business but was lucky to find employment with the railroad. He dutifully saved part of each paycheck and was so thankful that his bother returned home safely that he decided to use his sizable savings to help his brother open his business. Mort kept in mind his brother's failed business and vowed that his company would operate in such a way that it would minimize its vulnerability of general business downturns.

Moore's extensive inventory and reasonable prices made the company the primary supplier of the major commercial builders in the area. In addition, Mort developed a loyal customer base among the home repair person, as his previous background allowed him to provide

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excellent advise about specific projects and to solve unique problems. As a result, his business prospered and over the past twenty years, sales have grown faster than the industry. Because of large orders, the company receives favorable prices from suppliers, allowing Reebok Ltd. o remain competitive with the discount houses that have sprung up in the area. Over the years, Mort has kept his pledge and the company has maintained a very strong financial position. It had a public sale of stock and additional stock offers to fund expansions including regional supply outlets in Milwaukee, Wisconsin and Sioux City, Iowa.

Recently, Stan decided that the winters were too long and he wanted to spend the coldest months playing golf in Florida. He retired from the day-to-day operations but retained the position of President and brought in his grandson, Tom Moore, to run the company as the new Chief Executive Officer. Tom was an excellent choice for the position. After graduating summa-cum laud with a degree in communications from the University of Wisconsin, he worked in the Milwaukee operation where he was quickly promoted to manager. In ten years, sales quadrupled under his leadership and employees remained loyal. He was familiar with the supply and demand of various components and was able to spot new trends in the industry before they became widely accepted. Although he had developed a keen sense of financing working capital, he had no background in higher-level corporate finance decision-making. Tom spent the first few months on the new job trying to get a better handle on the bigger picture and puzzled over the company's historical balance sheets, income statements and cash flow statements. One area that concerned him was the company's heavy reliance on equity financing. Reebok Ltd. has a large line of credit and uses this and short-term debt to finance its temporary working capital requirements. However, it does not use any permanent debt capital. Other construction related retail and wholesale companies have between 30 and 40 percent of their long-term capitalization in debt. Tom wonders why other companies use more permanent debt and what affect adding long-term debt would have on the company's earnings and stock price.

Tom met with the company's vice president of finance, Walt Harriman, and learned that the company projected its earnings before interest and taxes to be Rs.12 million for the next year with virtually no interest expenses. Walt also mentioned that he expected the company's current and projected tax rate to be 40 percent. Tom next talked to the company's investment bankers and discovered that the company's cost of equity was 16 percent. Since the company did not use debt or preferred stock financing, this also represented the company's current weighted average cost of capital. The investment bankers indicated that the company could issue at least Rs.30 million of long-term debt at a cost of 9 percent. The company bonds would be highly rated and would carry a low coupon because the company could easily service the debt.

Because of Stan's depression experience and his early involvement in funding the initial operation, the company not only avoided debt but also followed a policy of paying out most of its earnings as dividends. Stan was frequently quoted saying " a company with high dividend policy rarely declared bankruptcy". In lieu of using retained earnings to reinvest in the company, the company used accounts payable and deferred taxes to meet its operating capital needs and issued new equity capital when additional financing needs were exceptionally high. Much of the new capital was purchased by members of the Moore family and they currently hold 75 percent of the outstanding equity.

Tom is interested in gaining additional insights into capital structure issues and has asked Walt to brief him in the area. He wants a basic review of the terminology but is particularly interested in the impact of different types of risk and in understanding of the better-known financial theorists. Walt knew that Tom could grasp complex issues quickly and felt that a thorough discussion of Modigliani and Miller's work would be appropriate. He also felt that Miller's addition of personal taxes to the earlier models would be good to cover, and he determined that a good approximation of personal tax rate on debt income was 28 percent and for stock income was 20 percent. He decided to add the more recent considerations of financial distress, agency costs and information asymmetry for a comprehensive overview. To help with this analysis, Walt developed the following estimates for cost of debt and cost of equity that included an increasing premium for financial distress and agency costs as the debt ratio increases.

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Debt ratio	kd	ks
0%	—	16.0%
10%	9.00%	17.0%
20%	9.25%	17.8%
30%	9.75%	19.0%
40%	10.50%	20.5%
50%	12.00%	22.0%
60%	15.00%	26.0%
70%	20.00%	30.0%
80%	30.00%	40.0%
90%	50.00%	60.0%

Case Study 9

Read the case carefully and answer the following questions.

1. Using Jain Industries Ltd. projected 1993 EBIT of $3.0 million, and assuming that the MM conditions hold, we can compare Jain Industries Ltd. value as an unlevered firm (VU) with a 15 percent cost of equity (ksU), with the value the firm would have, under the MM no-tax model, if it had $10 million of 10 percent debt (VL).

a. What are the values for VU, VL, and ksL?

b. Use the WACC formula to find Jain Industries Ltd.Steel's WACC if it used debt financing.

c. Use the formula WACC = EBIT/V to verify that Firm L's WACC is 15 percent.

d. Graph the MM no-tax relationships between capital costs and leverage, plotting D/V on the horizontal axis. Also, graph the relationship between the firm's value and D/V.

2. How does the addition of financial distress and agency costs change the MM (with Corporate taxes) model and the Miller model? (Express your answer in both equation and graphical forms, and also discuss the results.)

3. Briefly describe the asymmetric information theory of capital structure. What are its Implications for financial managers?

4. Now prepare a summary of the implications of capital structure theory which can be Presented to Steve Freeman. Consider specifically these issues: (a) Are the tax tradeoff and asymmetric information theories mutually exclusive? (b) Can capital structure theory be used to actually establish a firm's optimal capital structures with precision? If not, then what insights can capital structure theory provide managers regarding the factors which influence their firms' optimal capital structures?

Jain Industries Ltd. was founded shortly after World War II by Leonard Freeman. Prior to the war, Freeman had owned a small steel foundry in Pittsburgh, Pennsylvania. The business was hit particularly hard by the Great Depression of the 1930s, driving it into bankruptcy. In 1940, Freeman moved his family west and went to work as a mill foreman for American Steel Corporation in Seattle, Washington. After the war ended, Freeman decided that he again wanted to run his own business. Thus, Jain Industries Ltd. was founded in 1946.

With the memory of his last disastrous business experience still etched clearly in his mind, Freeman vowed that his new firm would be operated so as to minimize vulnerability to general business downturns. Freeman's management style, and his dedication to making the business prosper, proved to be successful, as the firm has enjoyed relatively rapid growth for over four decades. Moreover, it has maintained a consistently strong financial position.

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In late 1992, Freeman, still very energetic at the age of 85, retired from active participation in the day-to-day operations, but retained the position of Chairman of the Board. Steve Freeman, Leonard's grandson, was simultaneously appointed as the new Chief Executive Officer. Steve Freeman was well prepared for his new position. He graduated with high honors from Cornell University, obtaining a degree in materials engineering. Afterwards, he spent 10 years in various sales and technical positions with Jain Industries Ltd. His one weakness is in the financial area, where he has had no experience or training. Steve Freeman spent the first several weeks in his new job trying to obtain a better feel for the accounting and financial side of the business. One area of concern is the firm's heavy reliance on equity financing. Jain Industries Ltd. uses short-term debt to finance its temporary working capital requirements, but it does not use any permanent debt capital. Other firms in the steel industry generally have between 25 and 35 percent of their long-term capitalization in debt. Steve Freeman wonders if this difference should continue, and what affect a movement toward a greater use of debt would have on the company's earnings and stock price.

As part of the process of familiarizing himself with the operations of the firm, Steve Freeman had extensive meetings with the managers of each of the firm's major functional departments. From Doug Howser, the financial vice president, Freeman learned that the firm was projecting earnings before interest and taxes of $3.0 million for 1993. Since Jain Industries Ltd. will have essentially zero interest expense in 1993, this figure would also be the firm's earnings before taxes for 1993. Howser also reported that the firm's federal-plus-state income tax rate for 1993, and the foreseeable future, should be 40 percent.

Steve Freeman also learned from Howser, who obtained his information from the firm's investment bankers, that the firm's cost of equity — hence its weighted-average cost of capital — was approximately 15 percent. The investment bankers had indicated, though, that the firm could issue at least $10 million of long-term debt at a cost of 10 percent. Unless the company used quite a lot of debt, its bonds would be highly rated and would carry a low coupon because the firm currently has no outstanding long-term debt. In part because of Leonard Freeman's depression experience — he had observed that companies with high dividend payouts had rarely gone bankrupt — Jain Industries Ltd. has always followed a policy of paying out 100 percent of its earnings as dividends. In lieu of retaining earnings to reinvest in the business, the firm has used cash flows from depreciation and deferred taxes to meet its funding needs, but it also issued additional equity capital (80 percent of which is currently held by members of the Freeman family) when its financing needs were exceptionally high. Steve Freeman has done some reading in the area of financial management, so he is vaguely familiar with some key terms and with the works of a few of the better-known financial theorists. To gain additional insights into the capital structure issue, he asked Doug Howser to give him a briefing on the subject. Howser, in turn, asked his assistant to help him prepare a briefing report which the two of them would use in a meeting with Steve Freeman the following week. To begin, Howser and his assistant prepared the following list of questions, and the assistant must now draft answers to them prior to a meeting with Howser. Assume that you are Howser's assistant, and prepare answers to the questions. Think also about other relevant questions that Freeman might ask — he may not know much finance, but he is a very bright individual and has a reputation for "asking the right questions" and for making life difficult for subordinates who are not prepared to answer them.

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Part IV: Case Studies (Solutions)

Case Study 1

1. DIL has taken various decisions at the appropriate time which have helped it to maintain a supremacy over others in its stream of business. Certain important decisions include:
   - Entry into the oral care market
   - Identified global opportunity and promoted an export oriented manufacturing facility
   - Very quick in exploring the liberalization opportunities
   - Selected JVs to enter into unrelated markets
   - Entry into the capital markets to raise funds at an appropriate time
   - Appointment of a management consultant company for restructuring the company
   - Decision to bring down the family control and to induct professionals in the management
   - Launching of project 'STARS' to make strategic and operational changes
   - Entry into skin and hair care market
   - Entry into life insurance market
   - Benchmarked itself against top FMCG players
   - Superior position in the quality and productivity level through installing latest automated machines and other modernized equipments
   - Committed to implement the best industry practices before 2004
   - Wide retail distribution network for both traditional and new products
   - Entry into processed drinks market
   - Successful repositioning of Dabur honey.
2. Strategic management process mainly involves four basic elements. They are:
   a. Environmental scanning
   b. Strategy formulation
   c. Strategy implementation
   d. Evaluation and control.

   Environmental scanning refers to the monitoring, evaluation and dissemination of information from the internal and external environment to the decision makers within the firm. The objective is to identify the strategic factors that may determine the future of the firm. During the initial stage, DIL started mass producing both chemicals and ayurvedic drugs. But the proper scanning of the industry revealed a bright future of ayurvedic drugs and thus, the management decided to focus only on these products. The company identified the potential of entering into personal care products resulting in the development of Dabur Amla Hair Oil. Other related entries include Chyawanprash, Oral care products etc. DIL identified the latent opportunity in the global market and started a manufacturing facility at the Noida Export processing zone to cater global markets. When it scanned customer perception and realized that a majority of them identified just the brands and not the company, it appointed a consultancy firm to deal with the issue. The decisions to foray into processed drinks, cooking pastes, honey and lately, insurance, reflects the company's ability to properly conduct the environmental scanning process.

   Strategy formulation refers to the development of long-term plans to utilize the opportunities and strengths and also to manage its threats and weaknesses. The factors which come under strategy formulation are the mission of the company, specified objectives, developing strategies and setting up of the policy guidelines.

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- The mission of a company projects the fundamental and unique purpose that separates it from the others.
- Objectives refer to the end results of a planned activity and state what is to be achieved and by what time. DIL set its sight on increasing the company turnover and profitability and propagating the Ayurvedic form of medicine.
- The development of strategies is based on the opportunities available before the company. For instance, when it identified the potential boom in the insurance market, it tied up with a multinational player and entered the fray.
- Policy guidelines link strategy formulation and implementation. The companies that plan to restructure their operations, follow the policy guidelines.

Strategy implementation refers to the process by which strategies and policies are put into action. One of the major strategy implementation challenges faced by the company was following the restructuring suggestions proposed by the consultant appointed by it. It successfully reduced the management control and also restructured the company into different divisions.

Evaluation and control refers to the process by which corporate activities and performance results are monitored so that actual performance can be compared with the desired performance. In order to review its actual performance, the company set certain benchmarks to emerge as a major FMCG player in the world. DIL benchmarked itself against established players like Nestle, Colgate-Palmolive, P&G etc. The results were disappointing in terms of both financial and managerial performance. This made the company to think of a restructuring exercise followed by the appointment of Mckinsey & Co. for the purpose.

3. The mission statement of a company expresses the business philosophy of the strategic decision makers, reflects the firm's self-concept, indicates the principal product or service areas, and identifies the primary customer needs that the company attempts to satisfy. A mission statement facilitates the firm to chart its movements according to these factors.

The need and importance of a mission statement triggers from the fact that it generates a unity of direction for the organization as a whole. It pictures a sense of worth and intent that can be identified and assimilated by the external and internal environment of the company. A mission statement is often needed to ensure the unanimity of the purpose of an organization, develop a base for allocating the resources of an organization, facilitate the translation of objectives and goals into a work structure involving the assignment of tasks, provide a basis for motivating the use of the organization's resources and establish a general tone or organizational climate. The significance of a mission statement is high when one considers the fact that it is developed based on the history, distinct competencies and environment of an organization.

The formulation of a mission statement is based on certain fundamental elements. These include:

a. Belief that the product or service can provide benefits equal to its price,

b. Belief that the technology to be used in production will provide a product/service that is competitive in cost and quality,

c. Belief that the product or service can satisfy a customer need,

d. Belief that the management philosophy of the business will result in a favorable public image,

e. Belief that the business will provide financial and psychological rewards for those willing to invest their labor and money in helping the firm succeed,

f. Belief that with hard work and the support of others the business can do better that just survive,

g. Belief that the entrepreneur's self-concept of the business can be communicated to and adopted by employers and stockholders.

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Before developing a mission statement for DIL, three major issues needs to be addressed. These are:

a. purpose of the organization;

b. business of the organization; and

c. values of the organization.

Purpose of the organization explains the opportunities or needs that the company exists to address. As mentioned in its corporate philosophy, DIL accepts that its main source of knowledge is nature. Dabur which concentrates on Ayurvedic products believes that the science of life is based on the principle of nature. Thus the company exists to address the health needs of the human beings through exploiting the natural resources.

The business of the organization explains what the company is doing to address these needs. DIL is moving in the appropriate direction to address the needs by introducing various ayurvedic drugs, personal care products, processed drinks, etc. Its latest initiative to foray into life insurance business substantiates its vision of dedication to the health and well-being of every household.

DIL carries rich values in every business transaction. The company admits that it is committed to follow the ethical practices in doing its business.

Considering the above factors, the mission statement of DIL can be to

- Enhance the quality of life of the consumers and to promote public awareness about the importance of a healthy life,
- Attain leadership position in the industry through educating the consumers and by maintaining ethical and quality standards,
- Contribute to the community by conducting research and also by aiming at improved services.

4. Capital structure refers to the nature of the financing mix prevailing in a firm. The mix includes debt or equity capital depending on the financing needs of a firm.

DIL employs both debt and equity in its capital structure. The equity portion, where we consider the net worth of a firm, includes both equity capital and reserves and surplus. The company maintained a steady equity capital over the years. It has not raised equity funds since its initial IPO in 1993. The net worth of the company was increasing over the years solely due to the increase in the reserves and surplus. The increase in the profit after tax mainly contributed to the increase in its net worth.

The debt figure showed a steady increase till the financial year ended 1999, but the company reduced it's reliance on debt significantly after this period. It reached a level of 1961 mn as on the closure of the year ended 2001. The bank borrowing of the company as on 2001 is a mere 10 percent of the borrowings figure of 1997. Like wise, borrowings from financial institutions and foreign sources also recorded a decrease. While the government/sales tax deferrals increased significantly, the debenture and bond figures maintained at the same level and the reliance on commercial paper borrowings has increased significantly over the period. Debt/Equity ratio, (which is a common measure to analyze the capital structure of a firm) for DIL reads as follows:

Years	03/97	03/98	03/99	03/00	03/01
Debt	2140	2714	2949	2890	1961
Equity	1948	2273	2615	3200	3622
D/E	**1.10**	**1.19**	**1.13**	**0.90**	**0.54**

DIL's effort to reduce its reliance on debt is apparent from the Debt/Equity ratios. The equity funds are almost double the debt funds as on the financial year ended 2001, compared to a state where the debt funds were higher than the equity funds as in the initial period of our study. But the main factor to be noted is that the equity funds were stagnant at the same level, but it was the increasing reserves and surplus figures (increasing profit after tax) which contributed to a lower debt equity ratio.

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Expected EBIT and probabilities:

Current EBIT = 1148 (1373 – 225)

Increase/(Decrease)	Expected EBIT (1)	Probabilities (2)	(1) x (2)
20 %	1377.60	0.5	688.8
30 %	1492.40	0.2	298.48
(15%)	975.80	0.10	97.58
(25%)	861	0.15	129.15
No change	1148	0.05	57.40

Expected EBIT = 1271.41

The EBIT indifference point is the level at which the EPS of the firm is same for two different capital structures. The EBIT-EPS indifference point for the five options can be represented as follows:

Interest payments* under different Options:

Option 1	496
Option 2	431
Option 3	371
Option 4	326
Option 5	296

* Interest payments includes existing payments also.

Options I & II

$$\frac{(EBIT - I_1)(I - t)}{N_1} = \frac{(EBIT - I_2)(I - t)}{N_2}$$

[(EBIT – (496) (1 – 0.35)]/28.5 = [(EBIT – 431) (1 – 0.35)]/53.50

(0.65 EBIT – 322.40)/28.50 = (0.65 EBIT – 280.15)/53.50

EBIT indifference point = 570

Options II & III

$$\frac{(EBIT - I_2)(I - t)}{N_2} = \frac{(EBIT - I_3)(I - t)}{N_3}$$

[(EBIT – 431) (1 – 0.35)]/53.50 = [(EBIT – 371) (1 – 0.35)]/78.50

(0.65 EBIT – 280.15)/53.50 = (0.65 EBIT – 241.15)/78.50

EBIT indifference point = 559.40

Options III & IV

$$\frac{(EBIT - I_3)(I - t)}{N_3} = \frac{(EBIT - I_4)(I - t)}{N_4}$$

[(EBIT – 371) (1 – 0.35)]/78.50 = [(EBIT – 326) (1 – 0.35)]/103.50

(0.65 EBIT – 241.15)/78.50 = (0.65 EBIT – 211.90)/103.50

EBIT indifference point = 512.30

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Options IV & V

$$\frac{(EBIT - I_4)\,(I - t)}{N_4} = \frac{(EBIT - I_5)\,\,(I - t)}{N_5}$$

[(EBIT – 326) (1-0.35)]/103.50 = [(EBIT – 296) (1 – 0.35)]/128.50

(0.65 EBIT – 211.90)/103.50 = (0.65 EBIT – 192.40)/128.50

EBIT indifference point = 450.20

The indifference point analysis helps a firm to decide on the method of financing to be adopted. If the indifference point is lower than the expected level of EBIT, debt financing is preferable. If the indifference point is higher than the expected level of EBIT, equity financing is preferable.

5. The adjusted book value approach to valuation involves estimation of the market value of the assets and liabilities of the firm as a going concern. It is a pointer to the liquidation value of the firm.

(A) Valuation of Tangible Assets

a. Fixed Assets

   i. Land is valued at its current market price.

   ii. Buildings are normally valued at replacement cost. However, appropriate allowances are to be made for depreciation and deterioration in its conditions.

   iii. Plant & machinery, capital equipments, furniture, fixtures, etc., are to be valued at fixed costs net of depreciation and allowances for deterioration in condition.

b. Current assets

   i. The inventory is valued depending upon its nature; the raw materials are to be valued at the rates of the latest orders; the finished goods at the current realizable sale value after deducting provisions for packing, transportation, selling costs, etc. The work-in-process can be valued either based on the cost i.e., cost of materials plus processing costs incurred or based on the sales price.

   ii. Debtors are generally valued at their book value. However, allowances should be made for any doubtful debts.

   iii. Valuation of cash (including balances with bank) does not need any great expertise.

   iv. Miscellaneous current assets like income accrued but not due, prepaid expenses, deposits made, etc. are to be taken at their book value.

(B) Valuation of Intangible Assets

The valuation of intangible assets like brands, goodwill, patents, trademarks & copyrights, distribution channel, etc., is a controversial area of valuation. The two popular methods of valuing intangibles are the earnings valuation method and the cost method.

a. **Earnings Valuation Method:** This method of valuation is widely accepted in most markets around the world. The value of an intangible asset like any other asset is equal to the present value of the future earnings attributable to it. This is a two-staged process involving:

   i. Determining the future earnings attributable to the intangible asset;

   ii. Applying an appropriate multiplier to determine its present value.

   The main drawback of this approach is that the future projections of the earnings may be optimistic.

b. **Cost Method:** This method involves stating the value of the intangible asset at is cost to the company. This is relatively easier when the intangible asset is acquired. The money paid to buy the brands can be directly stated.

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(C) Valuation of Liabilities

It must be noted that share capital, reserves and surpluses are not included in the valuation but only the liabilities owed to outsiders are to be considered.

i. All long-term debts like loans, bonds, etc., are to be valued at their present value using the standard bond valuation model. This involves computing the present value of the debt servicing.

ii. Current liabilities include amount due to creditors, short-term borrowings, provision for taxes, accrued expenses, advance payment received.

(D) Valuation of the Firm

The ownership value of a firm is the difference between the value of the assets (both tangible and intangible) and the value of the liabilities. Normally no premium is added for control as assets and liabilities are taken at their economic values. On the other hand, a discount may be necessary to factor in the marketability element. The market for some of the assets may be illiquid or may fetch a slightly lesser price if the buyer does not perceive as much value of the asset to his business. Hence, a discount factor may be applied.

Calculation of Value of DIL under Discounted Cash flow approach

Cost of equity $K_e = (D_1/P_0) + g$

D_0 = 314/28.5 = 11.02

D_1 = (11.02 x 1.08) = 11.90

P_1 = 55.45.

P_0 = (55.45 x 125)/100 = 69.31

K_e = (11.90/69.31) + 0 .08 = 25%.

Average Cost of Debt (K_d) = Total Interest Payment / Total Borrowings = 296/1961

= 15 %.

Tax rate = 35%.

Calculating the cost of capital

The cost of capital to be considered is the least among the various options

Particulars	Option 1	Option 2	Option 3	Option 4	Option 5
Debt/Equity	1: 0	0.75: 0.25	0.5:0.5	0.25: 0.75	0: 1
Debt *	2961	2711	2461	2211	1961
Number of outstanding shares	28.5	53.50	78.50	103.50	128.50
Equity	285	535	785	1035	1285
New liability (Debt +Equity)	3246	3246	3246	3246	3246
Cost of capital	(0.15 × 0.65 × 2961/3246) + (0.25 × 285/3246) = 11.09 %	(0.15 × 0.65 × 2711/3246) + (0.25 × 535/3246) = 12.26 %	(0.15*0.65 × 2461/ 3246) + (0.25 × 85/3246) =13.44 %	(0.15 × 0.65 × 2211/3246) + (0.25 × 1035/3246) = 14.61 %	(0.15 × 0.65 × 1961/3246) + (0.25 × 1285/3246) = 15.79 %

* Debt figure includes the existing debt also.

Option 1, which employs only debt for the additional fund, carries a lower cost of capital, 11.09%.

Working capital for the year 2001 = 392.80 cr.

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This is expected to increase at a rate of 8 percent till 2006.

Increase in 2002 = 31.42 cr.

” in 2003 = 33.93 cr

” in 2004 = 36.65

” in 2005 = 39.58

” in 2006 = 42.75

As capital expenditure and depreciation are equal, they will not influence the free cash flows of the company.

Computation of free cash flows till 2006

EBIT for the year ended March 2001 = 1148. This is expected to grow at rate of 8 percent per annum.

Years	2002	2003	2004	2005	2006
EBIT (1 – t)	805.90	870.37	940	1015.20	1096.42
Increase in working Capital *	31.42	33.93	36.65	39.58	42.75
Free cash flows	774.48	836.44	903.35	975.62	1053.67
Present value of free cash flows (11.09%)	697.16	677.78	658.92	640.60	622.77

* Gross working capital is considered.

The present value of free cash flows up to 2006 = Rs.3297.23 cr.

Cost of capital beyond 2006

Debt will be reduced by 40 percent from the current level.

New value of debt = 1776.60

Equity = 285

Cost of capital = 15 (1 – .35) x (1776.60/2061.60) + 25 x (285/2061.60)

= 11.86 %.

Continuing Value

Free cash flow beyond 2006 = 1200 cr.

$$\text{Continuing value} = \frac{1200 \times 1.05}{(0.1186 - 0.05)} \times [1/1.1186]^5$$

= 10426.96 cr.

Value of the firm

Value of the firm = (Present value of future cash flows (till 2006) + Continuing value – Market value of the outstanding debt)

= 3297.23 + 10426.96 – 1776.60

= Rs.11,947.59 cr.

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Case Study 2

1. Asian Paints Limited has emerged as the leader in the Indian Paints industry with a majority share. The company has been able to maintain its leadership for the last three decades.

The targets set up by the company to achieve by the year 2003 are

- Gross turn over of Rs.2,100 core
- Turn over of USD 50 mn from international operations
- 10 percent of the turnover from new products
- Double the pre-tax profits and attain a return on capital employed ratio of more than 35 percent.

A gross turnover of Rs.2,100 cr. seems to be over ambitious while considering the 2001 figures of Rs.1,386.5 crore. This shows that the firm should attain a growth rate of 50 percent over the next two-year period. The sales turnover has increased by only 45 percent over the last four years. This was the period when the company marketed itself very aggressively in all types of media. The intensity of competition is also spiralling day-by-day and thus the days ahead will not be as smooth as in the past. Moreover, in the industrial segment, where the experts foresee huge potential, is dominated by players like Goodlass Nerolac. Thus the sales should generate mainly from the decorative segment. The favorable factors for APL include the stability in the top management with the induction of the new CEO, relaxation of stringent regulatory norms by the government etc. APL carries a strong brand name and a friendly symbol, which helps it to attract new customers. The company is having an advantage on the distribution network that runs to more than 15000 dealers in over 3500 cities who can make this target a feasible one.

Attaining a turnover of USD 50 mn from international operations is a challenging target for the company. The affection of the company towards the foreign market began in the early '70s when it started viewing acquisitions in global market as a vehicle to realize its overseas ambitions. The international operations are scattered around countries like Australia, Oman, Mauritius, Nepal, Fiji, etc. APL has been very ambitious about its international plans and this can be revealed from its vision which states that the company visualize itself to be among the top five decorative paint companies in the world by the year 2007. With this specific target in mind, it revamped its international business into a strategic sub unit, Decorative International. To ensure greater success, the company appointed a separate president and vice president for this division. Thus, the target of attaining USD 50 mn looks attainable while considering the company's plans, which include more acquisitions in the international markets with a focus on developing countries in Asia and Africa.

The target of achieving 10 percent of the turnover from new products seems to be realistic as there is a lot of scope for introducing a range of specialized products in both the decorative and the industrial segment. But the crucial factor to be considered is the investment to be made in the technology and R&D front.

APL has been determined to double its pre-tax profits and to attain a return on capital employed ratio of more than 35 percent. The company has been structured around its main business to attain these exciting figures. APL has been inducting eminent professionals to run the business in a more professional manner to achieve these results.

2. The highly fragmented Indian paint industry has an annual turnover of Rs.43 bn. The sector which was early dominated by the unorganized sector is now in the hands of organized players, both domestic and multinational. The dominance is mainly attributed to the rationalization of the duty structure. The industry can be analyzed using the Michael Porter's five forces model as follows:

a. Threat of Entry

The amount of capital investment required is low. So the threat of entry is high. This is evidenced by the fact that there are a large number of players in the unorganized sector in this industry. In the organized sector, there are some players like Asian Paints Ltd, who command high brand equity and a large share of the market. This when combined with the requirement of a large distributor network and high working capital, make the barriers to entry high and the threat of entry low in the organized sector.

b. Bargaining Power of Buyers

The buyers of this industry are the final consumers whose bargaining power is insignificant for decorative paints and significant for industrial paints.

c. Bargaining Power of Suppliers

One of the main raw materials, Titanium Dioxide is partly produced in India and partly imported. There are no problems with the availability of this raw material. Except Phthalic Anhydride, for which 80% of the production is concentrated in the hands of two suppliers, there is no such concentration of production capacity with few suppliers for any other raw material. Keeping everything in view, except the import of Titanium Dioxide, about which no information about the suppliers is available, it can be said that the bargaining power of suppliers is low. The suppliers of Phthalic Anhydride also cannot exercise much bargaining power because of the presence of other 5 producers as well as the low growth in demand at present.

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d. **Threat of Substitute Products**

There are no substitute products for paints. Hence threat of substitute products is almost non-existent.

e. **Competitive Rivalry among the Players**

The rivalry among the existing players is high. While Asian Paints is ahead of others, the competitors are trying hard to gain some ground. This is revealed by the increase in the adspend of Asian Paints and the competitors. The rivalry is going to increase with the rural and suburban markets, till now catered to by the unorganized sector, being opened to the organized players.

3. Asian Paints, leader in the Indian paint market forayed at a time when the industry was largely dominated by multinational companies. The company manufactures and markets a wide spectrum of decorative as well as industrial paints. Conducting the SWOT analysis of APL will provide us with an indepth picture about the company and its activities.

Strengths

- India's largest paint company with a market share of around 33 percent.
- Leading exporter of paints in the country.
- Comprehensive nation wide coverage of the market which includes urban, semi-urban and rural areas.
- Strong brand equity- APL's logo 'Gattu' is most popular and easily recognized.
- Widest product range in terms of products, shades, pack sizes-40 different decorative shades, some in 150 shades, 8 different pack sizes.
- Over 90 percent accuracy in forecasting, 100 fastest stock keeping units monitored day-to-day, far superior to competitors.
- Huge network of 13,000 plus dealers spread all over the country.
- Efficient pricing strategy which orient towards middle/lower end consumers.
- APL is quite strong in production-marketing coordination. Its policy of offering tailor-made products to suit customer needs has resulted in an ever growing product range.
- The company relies on in-house production and not outsourcing, and also believes in superior quality assurance.
- Better ROI in comparison with other players.
- High caliber human resources, employs maximum number of professionals as a proportion to the total number of employees.
- High corporate reputation which helped it in bag several awards of repute.

Weakness

- Lower market share in the industrial paints segment.
- Widening product mix puts strain on production, distribution, accounting and administration.
- Level of innovation in comparison with the industry needs is inadequate.
- Not strong on the technology front in industrial paints.
- Ever expanding product mix throws some strain on inventory management.
- The rural bias of the company's logo is likely to contradict the new positioning for the premium brands meant for urban markets.
- Demand generally shows seasonal trends.
- Difficulties due to changes in the leadership.

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Opportunities

- Increasing number of middle and upper class segments.
- Unexplored market in the rural segment.
- Huge potential in the industrial paints segment.
- Growth in automobile sales shows increased demand for industrial paints.

Threats

- Possible entry of new foreign players and also, the existing cash rich foreign companies.
- Leadership position of Goodlass Nerolac and Berger Paints in the industrial segment may result in the overall domination of the industry.
- Competitors have gone in for more technology oriented services which may attract a significant portion of the customers of the company.
- Increased competition prevailing in the industry may force the company to go for price cuts, which can affect its bottom line.

4. Financial statements reflect the performance and position of an organization. There are different types of ratios which provide a firm with results which help it to analyze its existing situation and also to chart its future movements. These ratios can be broadly classified into liquidity ratios, leverage ratios, turnover ratios and profitability ratios.

The major ratios that are considered from the strategy point of view, are calculated below.

- % pre-tax profit margin = 100 x (pre-tax profit/sales revenue)
- % profit margin = 100 x (PAT/sales revenue)
- % rate of return on assets = 100 x (profit/assets) or % profit margin x asset turn
- % rate of return on capital = 100 x (profit/capital)
- % EBIT on total assets = 100 x (pre-interest and tax profit /total assets)
- EBITD/Sales
- EBIT/Sales
- EBT/Sales
- Asset turn = Sales revenue/Assets
- Capital turn = Sales revenue/Capital
- Dividend Cover = (After - tax profit/ Dividends) or (Earnings per share/ Dividend per Share).

(Figure in mn.)

Years	03/98	03/99	03/00	03/01
Total sales revenue	8129	9096	10797	12151
EBDIT	1305	1388	1912	2099
EBIT	1135	1161	1634	1783
PBT	939	938	1431	1562
PAT	547	601	972	1075
Assets	6476	6858	7711	8819
Capital	2605	3045	3574	4111
Dividends	269.67	268.05	444.20	526.75
Earnings per share	13.64	14.99	24.24	16.77
Dividends per share	6.72	6.68	11.08	8.22
% pre-tax margin	11.55	10.31	13.25	12.85
% profit margin	6.72	6.61	9.00	8.85
% rate of return on assets	8.45	8.76	12.61	12.19

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Years	03/98	03/99	03/00	03/01
% rate of return on capital	21	19.74	27.19	26.15
% EBIT on total assets	17.53	16.93	21.19	20.22
EBDIT	16.05	15.26	17.71	17.27
EBIT / Sales	13.96	12.76	15.13	14.67
EBT / Sales	11.55	10.31	13.25	12.85
Asset turn	1.26	1.33	1.40	1.38
Capital turn	3.12	2.99	3.02	2.96
Dividend cover	2.03	2.24	2.19	2.04

The major profitability ratios like pre-tax profit margin and the profit margin are used to analyze the company's profitability position. The pre-tax profit margin shows the level of profitability of a company after all operating costs and expenses except tax and dividends to shareholders is adjusted. The pre-tax profit margin of APL witnessed minor variations over the years. The margin declined in the year 1999 but rose in the subsequent year. This has again diminished at the close of the financial year 2001. The profit margin also moved in line with the pre-tax margin. It recorded a high for the financial year 2000, but diminished slightly in 2001. The adjusted profit after tax figures showed an increase of almost 100 percent along this period.

Efficiency ratios help a firm to measure how efficiently it is using its assets or capital employed. The rate of return on assets increased substantially in the year 2000, but remained almost stagnant in the subsequent year also. The asset base of the company has increased by 36 percent over the years from, 1998 – 2001. The increase in profit figures also contributed to the increase in return on asset figures. The rate of return on capital increased from 21 percent in 1998 to 26.15 percent in 2001. The capital base i.e., the net worth of the company has increased by around 55 percent over the period under consideration. The increase has not contributed much by way of equity capital which has remained the same for the first three years at 401 mn. The company raised another 240 mn in the financial year 2001 and thus the equity base has risen to 641 mn. The major contributor to the capital base is thus the reserves figure which marked a 44 percent rise and also the other reserves amount which recorded around 400 percent rise in 2001 compared to the figures of 1998. The increase in reserve base is mainly attributed to the almost 100 percent increase in the profit figure.

The earnings before interest, tax and depreciation have increased by 60 percent, EBIT by 57 percent, PBT by 66 percent and PAT by 96 percent, over the period under consideration. Even though the figures are showing rising trends, the efficient employment of assets and capital to achieve these figures has not improving steadily.

Every business enterprise aims at making efficient use of assets to produce sales revenue from which profit is made. This ability of a firm can be revealed using the asset turnover ratio. This ratio is for most companies an eminently suitable measure of their efficiency in managing their assets. The asset turn ratio provides some concern over the employment of APL's asset as the sales revenue has increased 50 percent over the years but the asset turn has remained more or less stagnant during this period. The capital turn explains the efficiency of a firm to use its capital to produce sales revenue from which profit is made. The capital turn of APL remained stagnant at around the 3 percent level. This figure has declined slightly in the year 2001 as the net worth figure sharply in that period.

The dividend pay - out ratio assumes significance as it reveals the company's decision to rose use retained profit to meet fund requirements. Retained earnings refer to the self-generated finance of the company. APL followed a strategy of distributing almost 50 percent of the profit to its shareholders in the form of dividends. Thus it availed the remaining funds for its financing requirements. This consistency in the retained profit being reinvested in the business indicates that rather than relying on borrowing money or issuing shares, APL generates the required financial resources internally. But it does rely on borrowings and public issue of shares for the additional funds as can be seen from the increase in borrowings and the equity figures.

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5. Dividend refers to the portion of the net income which is distributed to shareholders. The undistributed portion is known as retained earnings. Dividend policy refers to the views and practices of the management with regard to distribution of earnings to the shareholders in the form of dividends. The policy assumes significance as the undistributed dividends i.e., the retained earnings, are treated as a means of financing the capital expenditure of the firm.

The different models used are Graham-Dodd Model, Walter Model, Gordon Model and MM approach.

Graham-Dodd Model contends that the market price of a share is a function of its dividends and earnings, but gives more weight to dividends as against retained earnings. The model equates the price of the equity with dividends and earnings per share as follows.

$P = \frac{m(4D + R)}{3}$; where P is the market price per share, m is the multiplier, D is the dividend per share and R is the retained earnings per share.

Here the value of 'm' is assumed to be 10.

Total dividend = 526.75 mn

DPS = (526.75/64.10) = 8.22

Retained earnings = PAT – Dividends

= 1075 –526.75= 548.25

Retained earnings per share = 548.25/64.1 = 8.55

Thus the price of APL should be $P = \frac{m(4D + R)}{3}$

i.e. $P = \frac{10(4 \text{ x } 8.22 + 8.55))}{3}$

$= \frac{10 \text{ x } 41.43}{3}$

= Rs.138.10

As per the Walter model, dividend is considered as one of the factors determining the market valuation. The model also considers the return earned by the firm on its retained earnings in comparison its the cost of capital. The model contends that the market price of a share is the sum of the present value of the future stream of dividends and the present value of the future stream of returns from the retained earnings.

The various assumptions made by the firm are:

a. The firm is a going concern and has a perpetual life span.

b. The only source of finance available to the firm is retained earnings. The firm does not have any alternative means of financing.

c. The cost of capital and the return on investment are constant through out the life of the firm.

The model calculates the market price of the share as follows.

$P = \frac{D + (E - D) r / k}{k}$; where 'P' is the market price of the share, 'D' is the dividends per share,

'E' is the earnings per share, 'r' is the return on investments and 'k' is the cost of capital.

D = 8.22

E = 16.77

Return on investments = EBIT/Total Assets

EBIT = 1783

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Total Assets = 8819

ROI = (1783 / 8819)

= 20.21%

k = 12 %.

$$P = \frac{8.22 + (16.77 - 8.22)\ 0.2021 / 0.12}{0.12}$$

$$= \frac{8.22 + (8.55) 1.68}{0.12}$$

= Rs.188.2

The Gordon Model capitalizes the future stream of dividends and arrives at the price of the share. The model maintains that the growth rate of a firm is a product of its retention ratio and the return on its investments. The model assumes that:

a. The firm is a going concern and has a perpetual life span.

b. The only source of finance available to the firm is retained earnings. The firm does not have any alternative means of financing.

c. The cost of equity and the return on investment are constant throughout the life of the firm; and

d. The cost of equity is greater than its growth rate.

The model calculates the price of the share as follows.

$$P_0 = \frac{Y_0 (1 - b)}{k - br}$$

Y_0 is the expected earnings per share for year 0, b is the retention ratio, k is the cost of capital and r is the return on investments.

We can take Y_0 as 16.77 (EPS for the year 2001)

b = Retained earnings/Total earnings

= 548.25/ 1075

= 51%

k = 12 percent

r = 20.31%

$$P = \frac{16.77 (1 - 0.51)}{(0.12 - 0.51 \text{ x } 0.2031}$$

= (8.22/ 0.0164)

= Rs.501.22

Case Study 3

1. Various steps in the development of a financial model.

– Development of a financial model involves the following stages:

– Feasibility study

– Construction of model logic

– Programming and Debugging

– Model testing and Validation

– Documentation

– Implementation

– Updating and Extension.

Feasibility Study: Firstly, a feasibility study should be conducted to determine whether it is worthwhile to develop the model or not.

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While conducting the study the following issues may be examined:

- Decisions which the model is intended to assist.
- Nature of the model.
- Managerial disposition towards the model.
- Availability of data for the operation of the model on a continuing basis.
- Integration of the model in the normal planning process of the company.
- Expected costs and benefits of the model.

In case the modeling project is viable, the next step would be construction of the model.

The construction of the model logic involves the following:

- Development of model structure in greater detail than in the feasibility study.
- Delineation of equations representing accounting identities, marketing and production relationships, behavioral patterns and managerial policies.
- Establishing the input requirements to support the model.

The successful completion of this phase of model development requires adequate answers to the questions, initially raised in the feasibility stage which largely determine the logic of the model.

Once the model has been constructed, the next step would be programming and debugging. Programming translates the model logic into a language that the computer can understand and execute, while debugging basically is the process of eliminating errors.

After the program has been debugged, tests are carried out to ensure that the model reflects the accounting logic and company operations/processes adequately. This is the validation process.

The next step would be documentation which involves keeping a systematic record of what is done at various stages of model development.

Documentation should be regarded as a very important facet of the modeling project because it facilitates communication among the persons involved in the modeling exercise, it serves as a basis for applying the model and it helps in revising the model.

Once the above steps are carried out, the model would have to be implemented. The person incharge of the modeling project must ensure that the reports produced are found readable, relevant and useful by the management.

Even if the model is implemented and used by the management, it does not mean that the modeling project is over. The model usually requires periodic updating and extension to incorporate changes in the external environment, unforeseen contingencies and new insights into certain corporate relationships and processes.

2. Simulation models used in practice suffer from certain shortcomings and these should be kept in mind by the treasurer while trying to promote the use of financial models within the company.

First and foremost, simulation models follow a bottom-up approach wherein the inputs of lower and higher level management are treated together. This easily produces a "tree versus forest" problem and can lead to an undue emphasis on lower level inputs and neglect of more important concerns.

In financial simulation models, management policies are generally represented in a very simplistic and inadequate manner.

In the absence of a well-defined objective, a simulation model is not an efficient device for screening various financial plans.

3. While corporate financial models are powerful tools, evidence indicates that many such models have been either partial successes, or even worse, downright failures. Experience of companies suggest that the following conditions, if fulfilled, significantly enhance the likelihood of successful use of corporate planning models.

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i. Clear understanding of the operations of the business.

ii. Availability of adequate good quality data.

iii. The presence of a well-defined budgetary and planning system in company.

iv. Management support

v. The decision makers, who are the potential users of the model, should be involved in the development of the model right from the beginning.

vi. Expression of inputs and outputs in familiar format

vii. The modeling project should focus on problems of serious concern to the managers.

viii. In the initial stages, the modeling project should be kept as simple and uncomplicated as possible.

ix. The model should rely on the judgmental inputs of the users of the model.

x. The model should capture the priorities of the organization and reflect the motivations of the management reasonably accurately.

xi. There should be a proper recognition of the respective roles of line managers, planners and management scientists.

xii. Proper orientation and education of users.

4. An optimization model seeks to maximize a certain objective function subject to various constraints. A simulation model, on the other hand, essentially seeks to answer "what if" questions. While optimization models are conceptually more elegant, simulation models are far more popular in practice.

The principal strength of a simulation model lies in its versatility.

It can handle problems characterized by (a) numerous exogenous variables following any kind of distribution and (b) complex interrelationships among parameters, exogenous variables and indigenous variables. Such problems can defy the capabilities of analytical methods.

Secondly, a simulation model compels the decision maker to explicitly consider the interdependencies and uncertainties characterizing the project.

Because of the above advantages, simulation model may be preferred.

5. Cash balance at the end of the month will be given by the formula

i. Opening cash balance + Sales (quantity) x Sales price per unit – Variable costs – Monthly fixed cash expenses

Correspondence between exogenous variable (sales quantity) and two digit random numbers:

Taking random numbers of 55, 95, 10, 34, 62, 64 for months 1, 2, 3, 4, 5 and 6 we get sales quantity figures of 300, 600, 400, 600, 700, 800 respectively

Cash balance for month 1	20000
Cash balance for month 2	–240000
Cash balance for month 3	–580000
Cash balance for month 4	–840000
Cash balance for month 5	–1060000
Cash balance for month 6	–1240000

6.

Year 1 cash flow Rs.	Year 2 cash flow Rs.	Year 3 cash flow Rs.	Year 4 cash flow Rs.	Year 5 cash flow Rs	Probabilities	Cumulative probability	Two digit random numbers
100000	200000	300000	400000	500000	0.30	0.30	00 to 29
200000	300000	400000	500000	600000	0.40	0.70	30 to 69
300000	400000	500000	600000	700000	0.30	1.00	70 to 99

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Taking random numbers of 55, 95, 10, 34, 62, for 5 years we get the following cash flows figures.

Cost of capital 20%

Present value of cash flows

Year 1	200000	166666.67
Year 2	400000	277777.78
Year 3	300000	173611.11
Year 4	500000	241126.54
Year 5	600000	241126.54

Present value of cash flows 1100308.64

Net present value 600308.64 lakh.

Case Study 4

1. Calculation of working capital leverage for a 10% reduction in current assets based on the data for 19xx.

Working capital leverage when there is a reduction in current assets can be derived from the formula:

CA/(TA – #CA)

Where,

CA is the value of current assets (gross working capital)

#CA is the change in the level of current assets

TA is the value of total assets

Working capital leverage for a 10% reduction in current assets

CA/(TA – 0.1CA)

Total Assets	= 1045.82 lakhs
Current Assets	= 381.15 lakhs
WCL	= 381.15/(1045.82 – (0.1 x 381.15)) = 0.378

Working capital leverage reflects the sensitivity of return on investment (earning power) to changes in the level of current assets.

2. Growth rate that can be sustained through internal equity can be derived from the given formula.

$g = [(m(1 - d)A/E)]/(A/S_0) - m(1 - d)A/E$

Where,

g	–	is the growth rate in sales
m	–	is the net profit margin on sales
d	–	is the dividend pay out ratio
A	–	is the total assets of the firm (E + D)
S_0	–	is the sales for the current year
E	–	is the equity employed by the firm

In the given case,

Net profit margin on sales 60.66/1018.11	5.96%
Dividend pay out ratio 0.9/4.85	18.56%
Total assets of the firm	1045.82 lakh
Sales for the current year	1018.11 lakh
Equity employed by the firm	608.12 lakh

Substituting in the equation we get

g = 8.80%

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3. The indifference point where EPS under both the alternatives in equation will be given by the formula

$(EBIT - I_1)(1 - t)/n_1 = (EBIT - I_2)(1 - t)/n_2$

Where EBIT is the indifference point between the two alternative financing plans.

I_1, I_2 are the interest expenses before taxes under financing plans 1 and 2

t	=	income tax rate
n_1, n_2	=	number of equity shares outstanding after adopting financing plans 1 and 2
I_1	=	10
I_2	=	(.16 x 500) + 10 = 90 lakh
T	=	17.08%
n_1	=	25 + 25 lakh
n_2	=	25 lakh

$$\frac{(EBIT - 10)(1 - 0.1708)}{50} = \frac{(EBIT - 90)(1 - 0.1708)}{25}$$

$$\frac{0.8282\,EBIT - 8.292}{50} = \frac{0.8292\,EBIT\ 74.628}{25}$$

20.73 EBIT – 207.3 = 41.46 EBIT – 3731.40

41.46 EBIT – 20.73 EBIT = 3731.40 – 207.3

= 20.73 EBIT = 3524.10

EBIT = 170.00 lakh.

4. Computation of exchange ratio on the basis of: EPS, MPS and BVS exchange ratio based on earning per share will be:

Earning per share of Kardia Extrusions Limited is 4.85

Earning per share of Jaihind Extrusions 0.044

Exchange ratio based on earnings per share will be 0.044/4.85 0.0091

Exchange ratio based on market price per share will be:

Market price of Kardia Extrusions share	Rs.100.00
Market price of Jaihind Extrusions share	Rs.50.00
Exchange ratio	0.50
Exchange ratio based on book value:	
Book value of Kardia extrusions	Rs.24.32
Book Value of Jaihind Extrusions	Rs.29.13
Exchange ratio	1.20

5. Upper limit on the exchange ratio acceptable to Kardia Extrusions

Year	Cash flows before merger x	Cash flows after merger
1	11.50	18.75
2	12.15	19.63
3	13.20	22.21
4	14.65	25.30
5	15.50	28.95

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Beyond five years cash flows under both circumstances is expected to grow continuous at 5% p.a.

PV (x)	Cash flows before merger x	PVIF @ 18%	PV of cash flows
1	11.50	0.847	9.746
2	12.15	0.718	8.726
3	13.20	0.609	8.034
4	14.65	0.516	7.556
5	15.50	0.437	6.775
beyond 5	15.50	0.437	54.723
	125.19		
Present Value			95.560

PV(x')	Cash flows after merger x'	PVIF @ 18%	PV of cash flows
1	18.75	0.847	15.890
2	19.63	0.718	14.098
3	22.21	0.609	13.518
4	25.30	0.516	13.049
5	28.95	0.437	12.654
beyond 5	28.95	0.437	102.208
	233.83		
Present Value			171.417

Ownership position of shareholders of Kardia Extrusions = 25/(25 + ER(.1))

NPVx = OP[PV(X)] – PV(X)

Where,

PV(X) is the present value of cash flows after merger.

PV(X) is the present value of cash flows before merger

NPV= 171.417 x (25/(25 + ER(2.265)) – 95.560

= 4285.43/25 + (ER (2.265)) – 95.560

= (4285.425 – 2389 – 216.4434ER)/25 + 2.265ER

PVX_1 > = 0.25PVX

(4285.425 – 2389 – 216.4434ER)/25 + 2.265ER. 0.25 x 95.560

1896.43 – 216.4434ER ≥ 23.89 (25 + 2.265 ER)

1896.43 – 216.4494ER

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6. While evaluating a merger proposal, one should bear in mind the following, legal, tax, and accounting provisions.

The procedure for amalgamation normally involves the following steps:

i. *Examination of Object Clauses:* The memorandum of association of both the companies should be examined to check if the power to amalgamate is available. Further, the object clause of the amalgamated company (transferee company) should permit it to carry on the business of the amalgamating company (transferor company). If such clauses do not exist, necessary approvals of the shareholders, boards of directors, and Company Law Board are required.

ii. *Intimation* to Stock Exchange: The stock exchanges where the amalgamated and amalgamating companies are listed should be informed about the amalgamation proposal. From the time to time, copies of all notices, resolutions, and orders should be mailed to the concerned stock exchanges.

iii. Approval of the Draft Amalgamation Proposal by the Respective Boards: *The draft amalgamation proposal should be approved by the respective boards of directors. The board of each company should pass a resolution authorizing its directors/executives to pursue the matter further.*

iv. Application to the High Court: *Once the draft o*f amalgamation proposal is approved by the respective boards, each company should make an application to the High Court so that it can convene the meetings of shareholders and creditors for passing the amalgamation proposal.

v. Despatch of Notice to Shareholders and Creditors: *In order to convene the meeting of sha*reholders and creditors, a notice and an explanatory statement of the meeting, as approved by the High court, should be despatched by each company to its shareholders and creditors so that they get 21 days advance intimation. The notice of the meetings should also be published in two newspapers (one English and one vernacular). An affidavit confirming that the notice has been despatched to the shareholders/ creditors and that the same has been published in newspapers should be filed in the court.

vi. Holding of Meetings of Shareholders and Creditors: *A meeting of shareholders should be held by each company for passing the scheme of amalgamation. At least 75 percent (in value) of shareholders, in each class, who vote either in person or by proxy, must approve the scheme of amalgamation. Likewise, in a separate meeting, the creditors of the company must approve of the amalgamation scheme. Here, too, at least 75 percent (in value) of the creditors who vote, either in person* or by proxy, must approve of the amalgamation scheme.

vii. Petition to the Courts for Confirmation and Passing of Court Orders: *Once the amalgamation scheme is passed by the shareholders and creditors, the company involved in the amalgamation should present a petition to the court for confirming the scheme of amalgamation. The court will fix a date of hearing. A notice about the same has to be published in two newspapers. It has also to be served to the Regional Director, Company Law Board. After hearing the parties concerned and ascertaining that the amalgamation scheme is fair and reasonable, the court will pass an order sanctioning the same. However, the court is empowered to modify the scheme and pass orders accordingly.*

viii. Filing the Order with the Registrar: *Certified true copies of the court order must be filed with the Registrar of Companies within the time limit specified by the Court.*

ix. Transfer of Assets and Liabilities: After the final orders have been passed by both the High Courts, all the assets and liabilities of the amalgamating company will, with effect from the appointed date, have to be transferred to the amalgamated company.

x. *Issue of Shares and Debentures:* The amalgamated company, after fulfilling the provisions of the law, should issue shares and debentures of the amalgamated company. (Cash payment may have to be arranged in some cases.) The new shares and debentures so issued will then be listed on the stock exchange.

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Case Study 5

1. Business risk is the risk faced by a firm's stockholders if the firm uses no financial leverage. It can be thought of as the inherent riskiness of the firm's assets. Financial risk is the additional risk borne by stockholders as a result of the use of debt financing. Business risk depends upon a number of factors, including competition, liability exposure, and operating leverage. Financial risk depends on the amount of fixed charge (debt and preferred stock) financing.

2. In the total risk sense, one common measure of business and financial risk is the variability of ROE, often expressed as the standard deviation, ó . An otherwise identical but unlevered firm would have a smaller ó ROE than a levered firm. The difference is a measure of financial risk:

   Total risk = ó ROE .

   Business risk = ó ROE(Unlevered) .

   Financial risk = ó ROE - ó ROE(Unlevered) .

3. Robert Hamada combined the CAPM and the MM with corporate taxes model (MM63). The result provides some insights into business and financial risk within a market risk framework. He obtained this expression for the cost of equity:

   k s = k RF + (k M — k RF)b U + (k M — k RF)b U (1 — T)(D/S).

   Here we see that investors require a return to compensate them for the time value of money, k RF; a premium to compensate them for business risk, (k M — k RF)b U ; and a premium to compensate them for bearing financial risk, (k M — k RF)b U (1 — T)(D/S). Hamada also developed this equation to show how leverage affects beta:

   b L = b U + b U (1 — T)(D/S).

   An unlevered firm's beta depends solely on the firm's business risk, but the use of financial leverage causes the firm's beta to increase. Thus, within a market risk framework:

   Total market risk = b L .

   Business market risk = b U .

   Financial market risk = b L — b U .

4. a. Partial income statements and key ratios for Srujan International Ltd at zero debt and 50 percent debt, along with the key ratios, are shown below. Note that Srujan International Ltd now has 10 million shares outstanding at a price of $12, so the value of the equity is $120 million.

		All Equity	
Probability	0.25	0.50	0.25
EBIT	$10,000,000	$32,000,000	$54,000,000
Interest	0	0	0
EBT	$10,000,000	$32,000,000	$54,000,000
Taxes	4,000,000	12,800,000	21,600,000
Net Income	$6,000,000	9,200,000	$32,400,000
ROE	5%	16%	27%
TIE	n.a.	n.a.	n.a.
E(ROE)		16%	
Std dev ROE		7.8%	
CV		0.49	

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b.

		50% Debt	
Probability	0.25	0.50	0.25
EBIT	$10,000,000	$32,000,000	$54,000,000
Interest	7,800,000	7,800,000	7,800,000
EBT	$2,200,000	$24,200,000	$46,200,000
Taxes	880,000	9,680,000	18,480,000
Net Income	1,320,000	$14,520,000	$27,720,000
ROE	2.2%	24.2%	46.2%
TIE	1.28	4.10	6.92
E(ROE)		24.2%	
Std dev ROE		15.6%	
CV		0.64	

c. If Srujan International Ltd uses all-equity financing, its expected ROE is 16 percent and ó ROE is 7.8 percent. When half debt financing is used, expected ROE increases to 4.2 percent. However, this leveraging up of expected return is not without costs—the standard deviation has doubled to 15.6 percent. The coefficient of variation (CV) increases from 0.49 to 0.64, or by 31 percent. Thus, the use of financial leverage has both benefits and costs.

Note that debt financing only increases ROE if the cost of debt is less than the basic return on the assets, or basic earning power. At $10,000,000 of EBIT, the basic return on the assets is EBIT/TA = $10,000,000/$120,000,000 = 8.33%. With debt costing 13 percent, ROE isdecreased by the use of financial leverage, from 5 to 2.2 percent. However, at $32,000,000 of EBIT, the basic return on assets is 27 percent, hence leveraging with debt, which costs 13 percent, increases the ROE from 16 to 24.2 percent.

Case Study 6

1. The annual compound growth rates are found by entering the following inputs into a financial calculator and then computing the rate.

Years	PV	FV	n	PMT	compute i
1985-1990 -	100	106	5	0	1.2%
1990-1995 -	106	109	5	0	0.6
1995-2000 -	109	143	5	0	5.6

The market/book ratio is found by dividing price per share by book value per share.

1985 1,253/824 = 1.5

1990 1,360/1,180 = 1.2

1995 1,597/1,769 = 0.9

2000 1,902/2,483 = 0.8

The P/E ratio is found by dividing price per share by earnings per share

1985 1,253/100 = 12.5

1990 1,360/106 = 12.8

1995 1,597/109 = 14.7

2000 1,902/143 = 13.3

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Following are the comparisons for Ramoji Ltd Ramoji Ltd and the industry for the information in Table 2:

	Growth Rate			P/E		Market/Book	
	GA	**Ind.**		**GA**	**Ind.**	**GA**	**Ind.**
1985-1990	1.2%	6.2%	**1985**	12.5x	16.8x	1.5x	2.5x
1990-1995	0.6	7.1	**1990**	12.8	17.9	1.2	2.6
1995-2000	5.6	7.9	**1995**	14.7	19.1	0.9	2.9
			2000	13.3	16.5	0.8	2.5

Note that Ramoji Ltd Ramoji Ltd was retaining 100 percent of its earnings, while other firms in the industry were generally retaining between 55 to 75 percent of their earnings. If a company does not retain any earnings, it starts each year at the same level as the previous year. Thus, it is a no growth company. Growth results from retaining some of the company earnings and gaining an additional return on that money. Recall the retention growth model, g = br, where g = the growth rate in EPS, b = the retention rate (1 – payout ratio), and r = the rate of return on equity investment. If a company has a relatively high retention ratio, then growth should also be relatively high. If growth is not high, despite a high retention ratio, then the company's return must be relatively low. That is, the firm must be earning a low return on its new equity investments relative to the ROEs of the other companies in its industry. The data from the case indicate that Ramoji Ltd Ramoji Ltd must be earning a low rate of return, perhaps even a negative return on marginal investments. That suggests that investors would prefer that the company pay out some of its earnings to stockholders and let them invest the funds at a higher rate. This would help to maximize the price of the stock.

All of this suggests that Ramoji Ltd has not followed a reasonable dividend policy. (One could, of course, argue that the company has simply not invested wisely, and that its dividend policy would be fine if its investment policy were better. However, most of the academic work on dividend policy assumes that firms are managing their investments as well as possible, and corporate executives would similarly say that they do the best they can at investing. Thus, some payout is definitely suggested.)

2. The advantage of announcing a dividend policy is that it reduces investor uncertainty. Since investors require a higher return for taking on risk, the certainty of an established dividend policy could lower the cost of equity capital somewhat, and thus, to increase the price of the stock. However, if a company's earnings are unstable and fluctuate such that it does not know the appropriate dividend policy, it may have to change the announced policy. In this case it is generally best not to announce a policy. In other words, announcing a policy and then changing it within a fairly short period would create more investor uncertainty than simply not announcing a policy in the first place.

3. A high dividend payout policy reduces the rate of growth in earnings, g = br. For any rate of return on investment (r), the larger the payout ratio (the smaller the value of b), the slower the rate of growth. Lumber firms in general (Ramoji Ltd is an exception) have approximately a 36 percent payout ratio (simple average of the average payout from table 3). Since the other companies have, on average, been growing at an annual rate of about 7 percent over the last fifteen years, versus an average annual growth rate of 2.47 percent for Ramoji Ltd, it is clear that Ramoji's ROE on investment is substantially below the industry average. (Note: the rates are simple average annual rates and not compound growth rates in order to be consistent with the industry data provided.)

$b = 1$; $g = br = (1)(r) = 2.47\%$, so $r = 2.47\%$.

Industry: $b = 100\% - 36\% = 0.64$; $g = br = (0.64)(r) = 7\%$, so $r = 10.94\%$.

Stockholders receive returns in the form of dividends plus capital gains. We do not know what capital gains stockholders in other lumber company stocks received, nor do we know their average dividend yields, but if their capital gains matched the 7 percent earnings growth, then their realized return was 7 percent plus at least some dividend yield. Ramoji Ltd stockholders, on the other hand, would have received, on average, a 2.47 percent capital gains return plus a zero dividend yield. So, if Ramoji Ltd were selling at the same P/E as the average stock, Ramoji Ltd stockholders would be getting lower returns, which would lead to a falling price and P/E ratio. This does indeed appear to have happened.

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4. High priced stocks such as Ramoji's are not attractive to all investors because many cannot afford to trade in round lots of 100 shares for which the commission costs are lower. Ramoji's very high price per share is far above the range that most people on Wall Street would say is optimal. To maximize the value of the firm's shares, Wall Street people often say that a stock's price should fall in the range between $20 and $80. A stock split would probably be advisable to move the price of Ramoji's shares somewhat closer to the range that is considered optimal.

There are people who would argue with this position (but not many). The counter argument is the one expressed by Junior based on commission costs. That argument might have been valid years ago, but today commissions are increasingly based on dollar amounts, not number of shares traded, and discount brokers in particular do business this way. In addition, Internet trading has reduced commissions to average traders substantially.

The Berkshire-Hathaway/Buffett argument is probably nonsense. Berkshire does have a very high price, and it has done well, but it has also had an extraordinarily high ROE for many years due to Buffett's extraordinarily good selection of investment assets.

5. MM and most other financial theorists regard leverage policy and dividend policy as being independent of one another. In practice, however, if other things are held constant, the higher a firm's debt ratio, the lower its dividend payout ratio as the company must meet higher debt servicing costs. Firms with good investment opportunities tend to borrow heavily; they also tend to retain a high percentage of their earnings as they have the ability to obtain a high return on new investments. In addition, high debt ratios put firms under pressure to reduce debt, and this may require using retaining earnings. In Ramoji's case, the company has expanded very rapidly (a 10-year increase of 194 percent from an asset base of $366.7 to $1,078.4 million based on Table 1 data). This increase in assets is funded using both debt and retained earnings. However, debt has risen proportionately more than retained earnings (231 percent versus 153 percent respectively), so the debt ratio has increased. If the same rate of asset expansion is to be maintained, and, if no policy changes are made, the debt ratio would continue to rise. This would create increasingly serious problems, and one might question how far creditors would go in lending the company additional money.

Since the stock is selling at a relatively low P/E ratio (13.3 percent versus 16.5 percent for the industry) and below book value (market to book ratio of 0.77), it would not seem appropriate to issue new common stock. Thus the equity capital needed to support the growth would have to come from retained earnings. This would make it difficult for the firm to start paying dividends, if it chooses to maintain the same growth rate in assets.

If Ramoji Ltd had not used so much debt in the past, and its debt ratio was at or below the industry average, then it could maintain its expansion plans and use debt financing. This illustrates how past financing and present debt positions influence current dividend decisions, and why many firms maintain a reserve borrowing capacity.

Furthermore, MM looked at dividend policy and leverage in isolation. Later, the Miller model provided a link between the two. Until now, the company's shareholders have preferred high dividends. It may be reasonable to assume that they have done so because their tax rates are low. For example, university endowment funds often have a zero tax rate. In Miller's Proposition I, debt has the greatest advantage when shareholders have low tax rates:

$$VL = VU + (1 - ((1-TC)\,(1-TS)/\,(1-TD)))\ X\ D$$

Once the firm adopts the policy of a low, stable dividend, it will gradually acquire a clientele of shareholders whose TS is higher. Hence, the tax benefit of debt will fall: agency costs and costs of financial distress will overpower tax benefits of debt even more than they do now.

Case Study 7

1. For the external factors affecting operating return, Submarine can choose production plan A or B. Plan A has lower fixed costs but higher variable costs, while plan B costs $800,000 more in fixed costs but reduces per unit variable costs by $300 per unit. As a result of plan B's higher fixed costs, it subjects the company to higher operating leverage. Greater levels of sales are required to cover the higher fixed costs. However, once fixed costs are met, the lower variable costs per unit will increase return. The greater operating leverage results in higher risk but higher potential return. The decision to implement plan A or B must be analyzed in a risk return framework.

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2. a. The value of the firm (V) can be found as the market value of debt (D) plus equity (S). The value of equity equals the after-tax earnings available to shareholders capitalized at the required rate of return on equity (ks). Thus,

$$S = \frac{(EBIT - KdD)(1 - t)}{Ks}$$

and

$$V = D + S$$

b. Given the founders' shares are based on the value added to the initial investment, calculate the number and value of the founders' shares at various levels of debt. (Figure 2 has been provided to help you answer this question.)

Value of company and number of founders' shares at various levels of debt:

D = 28 million

Value of company:

$$S = \frac{(\$11{,}290{,}000 - 11\% (\$28{,}000{,}000))(1 - 0.4) = \$32{,}840{,}000}{0.15}$$

V = $28,000,000 + $32,840,000 = $60,840,000

Number of founders' shares:

The value of founders equity is the value added over the initial investment. At $28 million, the value added is $60,840,000 ⁻ $40,000,000 = $20,840,000. At $7.50 per share the number of shares = $20,840,000/$7.50 = 2,778,667.

Another approach is to determine the number of shares that comprise the value of equity and subtract the external shares required to augment the debt and provide the initial investment.

number of shares = n = S / P

n = $32,840,000/ $7.50 = 4,378,667

Number of external shares to raise the required $12 million ($40,000,000 less $28,000,000 provided by debt) at $7.50/share:

External shares required = $12,000,000/$7.50 = 1,600,000

Number of shares remaining for founders:

founders shares = 4,378,667 - 1,600,000 = 2,776,667

value of founders shares 2,776,667 ($7.50) = $20,840,000

D = $42 million

Value of company:

$$S = \frac{(11{,}290{,}000 - .14(42{,}000{,}000))(1 - 0.4)}{0.18}$$

S = $18,033,333

V = $42,000,000 + $18,033,333 = $60,033,333

Number of founders' shares:

The value of founders' equity is the value added over the initial investment.At $42 million, the value added is $60,033,333 - $40,000,000 = $20,033,333.At $7.50 per share, the number of shares = $20,033,333/$7.50 = 2,671,111.

Alternately

n = $18,033,333 / $7.50 = 2,404,444

No external shares are required to provide the required capital. In fact an additional $2 million in debt over the initial capital of $40,000,000 is available for operations. Additional shares = $2,000,000/$7.50 = 266,666

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Number of shares remaining for founders:

founders shares = 2,404,444 + 266,666 = 2,671,111

value of founders' shares 2,671,111 ($7.50) = $20,033,333

The following table completes the analysis:

Cost of Debt	Cost of Equity	Debt	Firm Value	Number of Founders Shares	Founder's Wealth at$7.5/share
–	12%	$0	$56,450,000	2,193,333	$16,450,000
9%	13%	14,000,000	60,292,308	2,705,641	20,292,308
11%	15%	28,000,000	60,840,000	2,778,667	20,840,000
14%	18%	42,000,000	60,003,333	2,671,111	20,033,333
18%	23%	56,000,000	59,156,522	2,554,203	19,156,522

The value of the firm is maximized at $28 million in debt. Beyond this point the risk of the company increases to the point where the rate at which the equity is capitalized and the interest rate on debt are so great that they offset the benefit of using a larger proportion of the relatively cheap debt. The increased costs of capital lower the value of the company. The value of the company is maximized at the same level of debt as the value of the founders'shares.

c. The firm's prospectus must state the nature of the company financing prior to the initial stock offering. Therefore, investors should be aware of the number of shares that will be allocated to the founders. The founders are receiving payments for their "human capital" investments by receiving the shares. They possess the skills and entrepreneurial talent to create a potentially valuable firm, and they should reap the benefits of their efforts. This does not mean that the outside investors should subsidize the founders—they should receive p$7.50 value for each $7.50 that they contribute. This is exactly the situation in this case. The SEC should be concerned only with full disclosure of the required facts pertinent to the financing. The investors must then make their own decisions regarding the purchase of the shares.

3. The cost of capital is the weighted average of the cost of debt and cost of equity, where the weights are the proportion of financing from debt or equity. The weight of debt equals the level of debt divided by the value of the firm.

% debt = D / V

% equity = 1 – % debt

WACC = (% debt)(kd)(1– t) + (% equity)(ke)

at D = $28,000,000:

Company value = $60,840,000

Equity = $60,840,000 - $28,000,000 = $32,840,000

% debt = $28,000,000 / $60,840,000 = 46.02%

% equity = 1 – 0.4602 = 53.98%

WACC = 0.4602(11%)(1 – .4) + 0.5398(15%) = 11.13%

The following table completes the cost of capital calculations:

After-tax Cost of Debt	Cost of Equity	Debt	Equity	Weight of Debt	Wt. of Equity	Cost of Capital
----	12%	$0	$56,450,000	0.00%	100.00%	12.00%
5.4%	13%	$14,000,000	46,292,308	23.22	76.78	11.24
6.6%	15%	$28,000,000	32,840,000	46.02	53.98	11.13
8.4%	18%	$42,000,000	18,033,333	69.96	30.04	11.28
10.8%	23%	$56,000,000	3,156,522	94.66	5.34	11.45

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Debt is cheaper than equity because of lower investor risk and the tax advantage of exempting interest payments from taxes. The cost of capital is decreasing as the increased cost of debt and equity is not sufficient to offset the higher portion of relatively cheaper debt.

The cost of capital will continue to decrease until the level of debt is $28 million. At this point the higher incremental cost of debt and equity offset the savings from using a higher portion of relatively cheaper debt. It is important to note that the optimal level of debt financing minimizes the cost of capital and this is exactly the same level that maximizes the value of the company. The values for the full range of debt level are shown below.

4. TIE = Expected (EBIT)/I

I = k d (D) = .11 ($28,000,000) = $3,080,000

TIE = $11,290,000/$3,080,000 = 3.67

The TIE ratio of 3.67 indicates the company is expected to be able to pay its interest from pretax earnings 3.67 times. Isle Marine has more financial risk than the average manufacturing industry as the TIE is well below the industry standard of 6. Given its level of earnings, it has a higher level of fixed capital commitments than the industry.

Probability of TIE <1 under plan A:

Find EBIT for a TIE of 1

TIE = 1 = EBIT/$3,080,000

EBIT = $3,080,000

At EBIT of $3,080,000 units sold are found as follows:

$3,080,000 = Q (P - VC) - FC

$3,080,000 = Q ($5,500 - $3,300) - $4,000,000

Q = 3,668 units

Expected sales from question 2 = 6,950

$$Z = \frac{Q - \text{Expected sales}}{s} = \frac{3,668 - 6,950}{2,100}$$

$$Z = \frac{3,668 - 6,950}{2,100}$$

Z = 1.5628

The area under the curve for this Z is approximately 0.4406. So the probability of the TIE falling below 1 is

$0.5 - 0.4406 = 5.94\%$.

Note that sales below 3,668 do not necessarily imply that the company cannot meet their interest payments. Interest is paid from cash, and Isle Marine might have sufficient cash flows from depreciation to cover its interest payments.

Another important consideration is if the sales probability distribution estimates reflect random or cyclical variations or a "permanent" expectation. Because this is a new venture, there is a great deal of uncertainty concerning "normal" sales and the variability surrounding these sales. As the company matures, the uncertainty about the normal level of sales will be reduced.

In this case it is not clear if the probability distribution relates to the normal sales level, or if the expected value represents the normal levels and the variance represents cyclical volatility. If the variance represents random cyclical movements, then there is relatively little risk; profits will be low in one year but high in the next and over time expected values will be realized. However, if the uncertainty relates to the normal sales level then the risk is much higher. The realization of the low sales levels will mean negative EBIT on average. In this situation the firm will face certain bankruptcy.

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5. Annual Amortization Payment:

Loan = payment (PVIFA i,n)

$28,000,000 = payment (PVIFA11%,25)

Payment = $3,324,727

Interest = $28,000,000 X 0 .11 = $3,080,000

Before tax principle payment = (payment - interest)/ (1-t)

Before tax principle payment = ($3,324,727 - $3,080,000)/.6 = $407,878

Debt service coverage = EBIT/(interest + BT principle payment)

Debt service coverage = $11,290,000/($3,080,000 + $407,878)

Debt service Coverage = 3.24 for the first year

Thus, the company can cover interest and principle 3.24 times from first year expected earnings, and it is somewhat riskier than the industry average at 4x.

6. The choice of plan is sensitive to the wholesale price of the boat. An increase in price results in a stronger argument for plan A. However, reduced prices would result in the profit margin for plan A declining by a greater percentage, and A becomes less favorable. This can be demonstrated by changing the price input in the spreadsheet and observing the changes in the risk return relationship between the two plans. With a sufficiently large price decline plan B would be preferred. For example a 10 percent reduction in price, to $4,950, would result in a CV of .80 for both plans, but plan A would have a lower ROI (18.67%) than plan B (19.45%). If sales price is only 75 percent of expected, at $4,125, the CV of plan A is much larger (1.72) than that of plan B (1.34). In addition, the return of plan A (4.33%) is much less than that for plan B (6.71%). The lower risk and higher return for plan B at this price would make plan B more desirable.

Sales Volume

The choice of plan is not sensitive to the expected level of units sold. Even with a 25 percent increase or decrease in units sold at each probability, plan A is preferred as it has lower risk and higher return.

Variable costs

The choice of plan is also sensitive to variable costs. A reduction in variable costs would continue favor plan A, as the risk would be lower and the return would be greater. However, a 10 percent increase in variable costs in both plans would result in a slightly lower CV of .75 in plan A versus .76 for plan B, but the lower risk is also accompanied by lower return of 22.49 percent for plan A versus 23.31 percent for plan B. If costs increased to 25 percent more than expected, plan B would become more beneficial with a lower CV (0.86) versus plan A (0.89) and a higher return (16.36%) than plan A (13.89%).The choice of production plan is more sensitive to the amount of variable costs and sales price than the level of units sold. Therefore, the company should put more energy into determining accurate estimates for price and variable costs than in predicting the units sold before adopting the production plan.

7. The cost of capital is difficult to estimate for a new venture because of the level of uncertainty. In addition, the costs change as debts become a greater proportion of the company's capital structure. The estimates are developed from other companies' data since IsleMarine has not yet been organized. A proportional change in both the cost of debt and equity will not change the optimal capital structure. However, if the risk premium increases such that the incremental change in cost of debt and equity increases if the cost of debt exceeds the original estimate, the optimal capital structure will include more equity.

The valuation equation for equity assumes that cash flows are a perpetuity. This requires that EBIT must be constant and the debt must be perpetual to keep interest payments constant. Under these conditions the company must have zero real growth. When these assumptions hold true, the numerator, which is net income, must equal dividends since zero growth firms pay out all earnings as dividends. Since the dividend stream is perpetual, it is valued by dividing earnings available to common stockholders by the required rate of return.

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IsleMarine is a new venture. Therefore, it is highly unlikely that it will pay all earnings out as dividends. It is more difficult to develop the analysis. The annual income streams must be forecasted; a series of expected cash flows from financial statements must be developed, and then the expected initial value of the firm as the PV of the expected cash flows must be found. The analysis is similar to the typical spreadsheet capital budgeting setup.Time series models and be used but they are too complex for a case such as this one, especially since the perpetuity model gets the important concepts across quite well.

8. In general, investors regard the sale of new common stock as a negative signal, hence tending to mark down the price of the stock of companies announcing new stock issues. Since managers recognize this, they do not want to issue new stock except under extraordinary circumstances. Thus, firms tend to maintain a reserve borrowing capacity that can be tapped when they require outside capital. The impact of the firm's capital structure decision is that firms tend to set a target structure toward the low end of the optimal range and to maintain this reserve capacity.

Investors recognize that new venture companies typically do not have reserve debt capacities, hence, they must obtain new equity financing to sustain growth. Thus, new stock issues by firms that are still in the early stages of their life cycle are generally not regarded as negative signals. Conversely, mature firms having limited growth opportunities usually do not have a pressing need for new equity capital, and new issues by such firms are regarded as strong negative signals.

The actions of the firm's founders also affect investors' interpretation of new stock issues. If the founders make additional investments in the firm, this sends a strong message that the firm's insiders, who know the firm best, believe that it is a good investment. On the other hand, founders cashing out by selling shares may signal a belief that the value of the firm is at its peak. It could also mean that the founders have an urgent need to cash their own personal investment portfolios. If investors neither buy or sell shares in the initial public offering, investors are sent a neutral signal.

9. Control involves the ability to make the decisions affecting the company and is often a major factor in capital structure decisions. Typically founders view the firm as "their baby" and want to maintain control by retaining a greater percentage of outside shares. This may mean that the firm initially will use excess debt financing to lower the number of shares outstanding. This would lower the value of the company but would allow fewer shares to outside investors. Alternatively, the fledgling firm might limit growth in order to limit the need for external financing.

Case Study 8

1. Capitalization represents the capital required to fund a company’s operations. In practice, it generally refers to total long-term debt, preferred stock, and common stock. Companies with a high-risk tolerance may use some short-term debt to fund their long–term capital needs as it generally has a lower cost. However, it is more sensitive to risk from changing interest rates and funding availability. Capital structure is the mix or proportion of debt and equity financing used by the company to fund their assets. In the theoretical literature, capital structure generally refers to the entire right-hand side of the balance sheet, and discussion of it focuses on 1) the proportion of debt and equity and 2) the maturity structure of the debt. Although business executives generally describe everything in book or accounting value, financial theorists concentrate on market value. Book value of debt and equity are historical values based on prices at the time the company obtained the capital. Changing rates and economic conditions will affect the market prices of stock and bonds and change these values. Since financial planning is forward rather than historically focused, and the market represents the relevant value for investors, market values are more representative of the company’s capital structure.

Capital structure theory refers to the body of literature that attempts to establish the relationship between a firm’s capital structure and 1) its stock price, and 2) its cost of capital. This theory can provide insights into the benefits and costs related to debt financing; hence, it could help financial managers choose the optimal capital structure for their firms.

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2. a. Business risk is the risk faced by a firm's stockholders if the firm uses no debt financing. It can be thought of as the uncertainty inherent in the firm's operations or return on assets. Business risk varies from industry to industry and relates to the company's ability to generate revenue to cover fixed and variable costs of operations. Business risk is affected by such things as competition, uncertainty earnings resulting from prices, input costs, demand or sales, exposure to liability, new *product development, and fixed operating costs. Financial risk is the additional risk borne by stockholders because of the use of debt. It relates to the company's need to cover the additional fixed cost of financing. Financial risk depends on the amount of fixed charge financing (debt and preferred stock).

Reebok Ltd. Supply has a moderate level of business risk. They have steady growing sales and are able to compete with the discount stores in the area. However, the construction industry, to which Reebok Ltd. Supply is closely tied, is very sensitive to general economic conditions. When the economy is in a recession, the construction of new commercial and residential building and home remodeling are sharply reduced, and this would have a large impact on sales. As a retail operation, a large portion of Reebok Ltd.'s assets is tied up in inventory and not in fixed assets. In addition, the company would not have a large exposure to high cost legal suits.

b. The company's total risk is made up of business risk and financial risk. In the total risk sense, one common measure of business and financial risk is the variability or ROE, often expressed as the standard deviation. An otherwise identical but unleveraged firm would have a smaller standard deviation or ROE than a leveraged firm would. The difference is a measure of financial risk.

c. Business risk is the single most important determinant of a firm's optimal capital structure. The greater the risk inherent in a firm's assets, the greater the probability of financial distress for the firm at any debt level. Because total risk equals business risk plus financial risk, a company with high levels of business risk cannot afford to take on a lot of financial risk. If the company has a lot of uncertainty about its ability to meet operating costs, it cannot afford the added risk of needing to cover high fixed cost of financing. Also, for greater business risk, kd and ks would increase more quickly with an increase in the firm's debt ratio. Thus, high (low) business risk results in an optimal capital structure with a low (high) debt ratio.

3. a. If unlevered, VU = EBIT/KsU = Rs.12,000,000/.16 = Rs.75,000,000.

If levered, by Proposition I, the value remains unchanged: VL = VU = Rs.75,000,000.

To find the cost of equity for a levered company (KsL), first find the market values of debt and equity. The value of debt is given as Rs.30,000,000 and the value of the firm is debt plus equity. Therefore, the value of equity is the value of the firm less the value of debt or Rs.45,000,000(= 75,000,000 – 30,000,000). By proposition II, the cost of equity is the cost of equity for an unlevered firm plus a leverage premium:

KsL = KsU + (KsU - Kd) (D/S)

= 16.0% + (16.0% – 9%)30,000,000/45,000,000

= 16.0% + 4.67% = 20.67%

b. From Proposition I, K_sU = WACC = 16 percent for all firms in this risk class, regardless of leverage. This can be verified using the WACC formula.

WACC = wd K_d + ws K_s

WACC = (D/V)kd + (S/V)K_s

= (30,000,000/75,000,000)9% + 45,000,000/75,000,000)20.67%

= 0.40 (9%) + 0.6 (20.67%) 3.6% + 12.4% = 16.0%

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4. a. Millers basic proposition is represented by the following two formulas.

$VU = [EBIT(1 - t_c)(1 - t_s)]/ksU$

In addition to the corporate tax adjustment found in the MM model, the Miller's model includes an adjustment for personal taxes paid by the investor for their equity income. Thus, Vu is further reduced from the MM with corporate taxes model.

$VL = VU + [1(1 - t_c)(1 - t_s)/(1 - t_d)]D$

Here the tax term in the MM model is replaced by the bracketed term. The second term in the equation represents the effect from leverage and results from the cash flows associated with debt financing (under the MM model it is assumed to be risk free).

b. With t_c = 40%, t_d = 28%, and t_s = 20%, the Miller model indicates thevalue of the unlevered and levered to be as follows.

Value of unlevered firm

$VU = [EBIT\ (1 - t_c)(1 - t_s)]/KsU$

= Rs.12,000,000 (1 – .4) (1– .20)]/.16

= Rs.36,000,000

Value of levered firm

VL = VU + [1 – (1 – tc)(1 – ts)/(1 – td)]D

= Rs.36,000,000 + [1 – (1 – .4) (1 – .20)/(1 – .28)] Rs.30,000,000

= Rs.36,000,000 +.3333 (Rs.30,000,000)

= 46,000,000

The gain in leverage under the Miller model is Rs.46,000,000 – Rs.36,000,000 = Rs.10,000,000. In contrast, if only corporate taxes were considered, we have Vu = Rs.45,000,000 and VL = Rs.57,000,000 (from question 5), and the gain from leverage for Rs.30,000,000 and debt is Rs.12,000,000. Thus, the gain from leverage when considering personal taxes in the Miller model is less than the gain found using just corporate taxes under the MM model.

The net effect of the Miller model depends on the relative effective tax rates on income from stocks and bonds, and on corporate tax rates. The tax rate on income from stocks is reduced if the company retains more of its income and thus provides more capital gains. If ts declines while tc and td remain constant, the slope coefficient, or benefit of debt, is decreased. Thus, a company with a high payout ratio gets greater benefits from debt under the Miller model than does a company with a low payout, assuming that the cost of equity is not affected directly by dividend policy (which MM also assumed).

Case Study 9

1. a. Here are the firm's estimated values, with and without debt, under the MM no-tax model:

If unlevered, $UV = \frac{EBIT}{ksU} = \frac{\$3,00,000}{0.15} = \$20,00,000$

If the company uses leverage, by Proposition I, the value remains unchanged:

VL = VU = $20,000,000.

To find ksL, it is necessary to first find the market values of debt and equity. The value of debt is stated to be $10,000,000.Therefore, we can find S as follows:

D + S = VL

$10,000,000 + S = $20,000,000

S = $10,000,000.

Now we can find the cost of equity, ksL:

ksL = ksU + (ksU – kd)(D/S)

= 15.0%+(15.0% – 10.0%)($10,000,000/$10,000,000)

= 15.0% + 5.0% = 20.0%.

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b. We know from Proposition I that ksU = WACC = 15.0% for all firms in this risk class, regardless of leverage, but this can be verified using the WACC formula:

WACC = wdkd + wsks

= (D/V)kd + (S/V)ks

= ($10,000/$20,000)(10.0%)+($10,000/$10,000)(20.0%)

= 5.0% + 10.0% = 15.0%.

c. The formula WACC = EBIT/V is not part of MM's propositions; rather, itis a rearrangement of the valuation equation V = EBIT/WACC, which applies to any firm with perpetual cash flows, whether MM are correct or not. Still, we can use it to verify that WACCL = 15%:

$$WACC = \frac{EBIT}{V} = \frac{\$3,00,000}{\$20,00,000} = 15.0\%$$

d. Figure 1 plots capital costs against leverage as measured by the Debt/Value ratio. Note that, under the MM assumptions, kd is a constant 10.0 percent, but ks increases with leverage. Further, the increase in ks is exactly sufficient to keep the WACC constant--the more the firm adds lower-cost debt to its capital structure, the riskier the equity and hence the higher its cost.

2. In both the MM and Miller models, the authors assume that debt is riskless, and that the interest rate is constant regardless of how much debt the firm uses. However, as firms use more and more debt financing, they face a higher and higher probability of future financial distress. This increases the riskiness to both the stockholders and the bondholders, and hence the MM and Miller models clearly understate the cost of debt and thus overstate the value of leverage. Also, certain agency costs increase with leverage, and the MM and Miller models ignore these costs, which must be borne by shareholders. With financial distress and agency costs included, the models become:

VL = VU + [X]D – distress costs – PV of agency costs.

Here the bracket term X represents either Tc in the MM model or the more complex Miller term which includes personal taxes. Both the MM with corporate taxes and Miller models as modified to reflect financial distress and agency costs can be described as tradeoff models; that is, the use of leverage involves a tradeoff between the tax benefits of debt financing and certain risk-related costs.

3. The asymmetric information theory of capital structure is based on two assumptions: (1) that managers have better information than investors, which means that information asymmetry exists, and (2) that managers act in the best interests of the current stockholders in the sense that they try to maximize value to current stockholders (including themselves, which would be specially true in this case, since members of the freeman family own 80 percent of the stock).

Managers are reluctant to take actions which lower their stock's price,and they especially do not want to issue new shares at depressed prices. Therefore, they try to avoid issuing stock when they believe investors will react negatively. However, since they may still need external capital to finance especially good investment opportunities, financial managers try to maintain some reserve borrowing capacity which they can tap if needed.

4. a. The tax tradeoff and asymmetric information theories are not mutually exclusive--there is some truth in each theory. Most experts believe that each firm has an optimal structure, or at least an optimal range, at which the costs and benefits of debt are balanced, and the stock price is maximized. However, managers generally use less debt than the amount that would maximize their firm's value in the short run, because they want to maintain a borrowing reserve which can be tapped in the future if need be, and which will thus help to maximize value in the long run. Since the value-versus-debt ratio curve is relatively flat over a fairly wide range, minor deviations from the optimum should not significantly affect the firm's value. Thus, a firm could operate at the left end of the relatively flat range in Figure 6, giving it (1) a stock price not too far below the maximum feasible short-run price and,at the same time, (2) flexibility to raise additional debt capital without seriously affecting its stock price.

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b. Unfortunately, capital structure theory cannot be used to set a precise optimal capital structure. However theory does provide the following insights:

1. Other things held constant, firms with high tax rates should Use more leverage than firms with low rates. The primary reason why debt financing increases value is the tax savings that results from the deductibility of interest. The size of these tax savings increase with the tax rate.
2. Firms with relatively high business risk should use less leverage than firms with low risk, because (1) riskier firms have higher probabilities of financial distress, and (2) this probability is the major offset to the tax benefits of debt.
3. Firms with high potential financial distress costs, such as firms whose value is derived from intangible factors such as "growth opportunities" rather than from tangible assets which can be readily sold, should use less leverage than firms with low potential distress costs.
4. Firms characterized by a high degree of information asymmetry, such as those with highly confidential R&D programs, should maintain a larger reserve borrowing capacity, and hence use less leverage, than firms with low asymmetries. The public utility industry is characterized by low information asymmetry—utilities must disclose their capital expenditure and capital attraction plans years in advance, along with other aspects of their operations—so investors are not generally surprised by utility financing announcements. This characteristic, along with other characteristics, explains the utilities' greater than average use of debt.

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Part V: Caselets (Questions)

Read the caselets carefully and answer the questions preceding each caselet.

Caselet 1

1. Discuss the Home Appliance Corporation's strategic concept and explain the various phases of strategic management.

2. How did the process of transition to strategic management take place in Home Appliance Corporation?

3. Explain the top management's role in initiating the management strategy in an organization.

Home Appliance Corporation was a successful full line manufacturer of major home appliances. It traded in many successful home appliances like high quality washers and dryers. It diversified into many other products such as cooking appliances, refrigerators, microwave ovens, vacuum cleaners etc., through acquisitions.

RE Klein, founder of the company, made a direct impact on the company's philosophy of management. He strongly valued commitment to quality, promotion from within, dedication to hard work, and emphasis on performance. The resulting commitment to quality became a key aspect of the corporate culture and strength of the organization. Home Appliance Corporation expanded during the 1920s into a national company. Initially, the corporation was simply a laundry appliance manufacturer. During 1930s, it became the most successful washing machine company in the US. Unfortunately, the innovative genius and entrepreneurial drive of the company's early years were no longer present. This was apparent when the Home Appliance Corporation failed to get over the competition posed by a new entrant in the industry. When the new company introduced a range of automatic washers, the corporation was reluctant to convert its existing range and this cost it's position as the industry leader. The market share was reduced to a meager 8 percent. Daniel Walsh, the CEO of the corporation was not satisfied with its performance as a mere successful niche player in the maturing US market. He decided to adopt a strategy to become a full line manufacturer to defend the competition.

Until 1989, however, its only experience with any sort of strategic planning was in preparing the next years' budget. In 1989, Daniel Walsh asked the company's assistant controller in charge to prepare the annual budget. He also assigned two other officials from marketing and manufacturing to serve as a strategic planning task force. Daniel was not happy with the company's strategy 'to keep doing what the company has done earlier'. He wanted to change the strategy and also to diversify into some other field, so that the company's volume and profitability could increase. But the problem was that the company had never done financial modeling and none of the officials knew much about strategic planning. The assistant controller was trained in accounting and worked with the programmer in his section to develop "what if" scenarios. The task force presented its strategic scenario to the Board of Directors thus. "A large part of Home Appliance Corporation's profit comes from products and services with no future. These were repair parts, portable washers and dryers, and wringer washing machines."

This report triggered the company's interest in strategic change, which also boost up Daniel's moral to take the initiative regarding strategic planning. After engaging in a series of acquisitions, including cooking appliances, the company broadened its product line within the country. This achievement also enhanced the management's interest to become a player in the global major home appliance industry. The corporation identified the trend towards the unification of global market with the rapid economic development of the country and suggested the management to expand its business worldwide rather than survive simply as a specialty appliance manufacturer in US. This could be achieved through establishing new branches or by purchasing some established company in a foreign country to promote and market its product.

Home Appliance Corporation subsequently purchased 'Hoover Ltd.' in 1995 to not only acquire its worldwide strength in floor-care appliances, but also its strong laundry, cooking and refrigeration appliance business in the United Kingdom and Australia. Thus, the strategy appeared to be sound and helped the company become successful.

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Caselet 2

4. Discuss the characteristics of a strategic leader to motivate his employees to achieve the target. Do you think George fits into this category?

5. Discuss the strategy to be adopted by George Samuel to increase the profitability of the company.

6. Enumerate the steps involved in a strategic planning process.

The Allied Group has established itself as one of the leading names in the field of wire drawing machines with its promise of quality products that stay ahead of time. The Allied Group of Companies is an integrated conglomerate of engineering companies engaged in manufacturing all types of equipment and accessories used in making Alloy Steel, Carbon Steel, Mild Steel, Stainless Steel and other non-ferrous wires. The Company works on a solid foundation of the latest technology and best equipments, supported by a team of highly qualified and well-trained personnel. In a short span of time, it has become one of the leading names in India as well as abroad as the manufacturer of superior quality wire machinery.

Mr. George Samuel, CEO of the Allied Group, is a highly experienced and qualified professional. He is the member of Wire Association International since 1992 and takes keen interest by participating as a panel member of various wire-manufacturing units, involving himself from the inception stage up to the completion and helps in establishing and organizing the units with his vast experience in the field.

He has developed various prototype machines, which are performing efficiently at various defense establishments. He has developed various machines for drawing ferrous and non-ferrous wires. He has also developed the Carbondioxide Wire Drawing Plant indigenously for the first time. He also has the credit of carrying developmental work in the machinery building for drawing PC Wires, CO_2 Wire, Resistance Wire, Stainless Wire, High Carbon Wire and other categories of non-ferrous wire with very fine gauge.

George was one of the most sought-after CEOs in corporate America. When he joined the company, it was a poorly performing enterprise based in a number of dull businesses in aerospace, auto parts, and engineered materials. Its stock price was $10 per share and net profit was $250 million. Under his guidance and leadership the stock price climbed to $40 per share and net profit to $590 million.

George's primary goal was to increase earnings per share by 15% annually. To achieve this, he stressed upon the need to increase sales by 9% annually, so that productivity would increase by 6%. Such strategy helps in competing in mature low-growth industries. In order to achieve the target, he forced the heads of each of Allied Groups' 10-odd businesses to do three things:

i. Enter foreign markets, particularly in the fast-growing Asian segment.

ii. Make selected niche acquisitions to round out a business's product line.

iii. Develop new products to boost earnings growth.

He tirelessly monitored his managers in all-day meetings about what strategies they were adopting to meet the goals and to improve the performance of their businesses. Once a week he paid a surprise visit to any of the business group of the company to check out the work progress. If he found any work lagging behind or any official failing to meet the stretched targets, then he either rigorously punished the concerned personnel or transferred them. George's management style was demanding, relentless and tough.

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Caselet-3

7. What were the major strategically significant steps taken by Andrew for restructuring and bringing about financial stability in Sears, Cliffs and Co.?

8. How well did the company implement the strategy?

9. In the context of the above caselet, explain the advantages of strategically managing the company.

Sears, Cliffs & company has over a century full of history and incredible achievements. It has been a dominant force in the retail industry for many years. In 1886, Richard Sears began a company known as RW Sears Watch Company in Minneapolis. A year later in 1887, Sears moved his newfound business to Chicago, and placed an advertisement in the newspaper for a watchmaker. The ad received a response from an Indian man by the name of A Cliffs. Sears hired Cliffs and in 1893, the corporate name of the firm became Sears, Cliffs & company. In 1895, Sears had introduced a mail order catalog that consisted of 532 pages offerings shoes, women's garments, wagons, fishing tackle, stoves, furniture, saddles, bicycles, etc., that helped customers in rural areas receive merchandise that they might not be able to receive at local stores. Between the years 1940 and 1970, Sears went through many changes and expansions making it one of the leading retail contenders. One aspect that Sears developed and perfected was the idea of developing the stores around the merchandise. It also expanded the business to Canada and Mexico.

However, in 1992, Sears realized an extreme financial loss and was faced with the possibility of a deteriorating business. There were many reasons that caused the problems, foremost being absence of positive communication between higher up officers within the company. But, March 2000 unveiled the new image for Sears, Cliffs & Co. as the nations' third largest retailer. By the end of the year, the 500-store chain had bounced back from the previous years' record loss to a profit, and delivered a 19 percent return on equity to its investors. Sears achieved this success, in large part, because it was able to do in one year what it had planned to do in three years.

The person behind this success was the company's chairman, Andrew John, who joined the company a year back as chairman of its merchandise group. Under his leadership, the company saw an extreme turn around not only financially but also internally throughout the stores. Andrew had an ambitious strategy to turn the company into a competitive, moderately priced department store. His strategy emphasized selling apparel, which is profit-rich, while defending the company's market share in hardware and appliances. It included a $5 billion plan to renovate stores, build more free-standing hardware stores, and move furniture into separate emporiums.

Andrew had begun his job with three objectives:

i. Sell or close operations that were unprofitable or that diverged from the company's new strategy,

ii. Assemble a new management team, and

iii. Put the new merchandising plan to work.

In May 2000, Andrew had taken the first initiative by closing the company's 30-year-old catalog business, which had been losing $104 million a year. His next step was to clear the organizational decks. The 3,000 employees who accepted the company's early retirement offer included the heads of the marketing, public relations, retail, and automotive divisions. Although clothing accounted for only 26 percent of the company's annual store sales of about $22.5 billion, it brought in some 57 percent of the merchandise unit's profits. Because higher apparel sales also increased store traffic, the company wanted to boost the apparel's share to about 39 percent of store sales. Andrew took a lot of short-term measures to enhance service, such as emphasizing training, putting the best people in the stores during evenings and weekends when the best customers were shopping, offering Sunday deliveries etc. Under Andrew's direction, the company developed three compelling factors:

a. A compelling place to shop measured by overall customer satisfaction and customer retention,

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b. A compelling place to invest measured by revenue growth, operating margins, asset utilization, and indicators of productivity improvement,

c. A compelling place to work measured by attitudes about the job and the company.

The company's measurement practices were based on the desire to develop leading, not lagging indicators of performance. To raise consumer awareness of the changes, the company boosted its $1 billion marketing budget by 9 percent. It also began increasing the number of national brands it offered, from 40 percent to half of its merchandise mix.

The new operational strategy of the company had its costs. The company's big marketing push was expensive. Industry analysts estimated that the company spends $50 million more on advertising in the fourth quarter of 2000 than in the same period last year. Shifting fund from traditional media such as newspaper inserts to newer, less-proven forms such as infomercials, and sponsoring a 30-city concert tour by singer 'Madonna' also cost the company, and exposed it to risks. Yet the risks seemed to pay-off. The company's $40 million print and broadcast campaign, "Softer Side of Sears, Cliffs & Co." improved its image among women, and apparel sales rose. Thus, changes that Andrew brought to Sears helped it to regain its strength as a retail giant, and currently it is ranked number two in the retail industry.

Caselet 4

10. Discuss the importance of planning under uncertainty in an organization. Was Cramer successful in planning ahead in uncertainty?

11. What strategy was adopted by Cramer to decrease cost and ensure a profitable return?

12. Discuss the process of control and evaluation in implementing a strategy.

Cramer Oil Co. was the world's largest oil company. It was well known for its implementation of strategic planning activities. Despite the fact that many management and CEOs now consider strategic planning an anachronism, Cramer Oil Co. was convinced that long-term strategic planning had served the company well. Part of the reason for this success is that at Cramer, planning does not take the form of complex and inflexible ten-year plans generated by a team of corporate realities. Rather, the planning process generates a series of "what if" scenarios whose function is to try to get general managers at all levels of the corporation to think strategically about the environment in which they do business.

The strengths of Cramer's scenario-based planning system was perhaps most evident during the early 1980s. At that time the price of a barrel of oil was hovering around $30. With exploration and development costs running at an industry average of about $11 per barrel, most oil companies were making record profits. Moreover, industry analysts were generally bullish; many were predicting that oil prices would increase to around $50 per barrel by 1990. Cramer, however, was mulling over a handful of future scenarios, one of which included the possibility of a breakdown of the OPEC oil cartel's agreement to $15 per barrel. In 1984, Cramer instructed the managers of its operating companies to indicate how they would respond to a $15 per barrel world. This "game" set off some serious work at Cramer exploring the question, "what will we do if it happens?"

By early 1986, the consequences of the "game" included efforts to cut exploration costs by pioneering advanced exploration technologies, massive investments in cost-efficient refining facilities, and a process of weeding out the least-profitable service stations. All this planning occurred at a time when most oil companies were busy diversifying outside the oil business rather than trying to improve the efficiency of their core operations. As it turned out, the price of oil was still $27 per barrel in early January 1986. However, the failure of the OPEC cartel to set new production ceilings in 1985, new production from the North Sea and Alaska and declining demand due to increased conservation efforts had created a growing oil glut. In late January 1986 the dam burst. By February, oil was priced at $17 per barrel, and by April it was $10 per barrel.

Because Cramer had already visited the $15 per barrel world, it had gained a head start over its rivals in its cost-cutting efforts. As a result, by 1989 the company's average oil and gas exploration costs were less than $2 per barrel, compared with an industry average of $4 per barrel. Moreover, in the crucial refining and marketing sector, Cramer made a net return on assets of 8.4 percent in 1988, more than double the 3.8 percent average of other oil majors.

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Caselet 5

13. Elbee tried to reduce costs by 8% and also focused on customer profitability. These steps are adopted as a part of strategic decision process to concentrate on domestic business. Explain how strategic decisions are taken, in consideration with different dimensions.

14. Elbee entered into tie-ups with UPS, TNT, and DHL. The tie-up gave Elbee an edge in logistics management. In this context, explain various strategic moves that Elbee can adopt.

15. Courier industry is operating in a competitive environment, with dominant players like Blue Dart, Fed Ex, and Gati. They are leveraging on their performance to prove the best in the industry. In the context of the given caselet, explain how competitive forces influence in formulating strategic reasons for mergers.

Bespectacled, with quiet unassuming manners, Sandip Shah is not the prototype of a corporate chieftain. Sitting slightly self-consciously in the over sized chair of his Vice-President, Marketing, in the Delhi office of his company, the Chairman and Managing Director of the relatively little known Elbee Services Limited, seems more like a professor than a man who has steered his company back into reckoning. Elbee, the second largest player in the domestic express industry with a market share of 20 percent, had posted its maiden profit (almost) of Rs.0.50 crore in the first quarter of financial year 2001. This was recorded after almost three years of negative earnings, mainly on the back of a strong growth in sales, of around 23 percent. To corporate watchers, the net profit may seem quite miniscule but when combined with other healthy financial ratios, operating profit margin of 10.10 percent in March 2000 as compared to 5.78, and a return on capital employed at 6.76 as compared to 0 earlier, it is not bad.

More importantly, Merrill Lynch, the God of stock market analysts has given the company and its scrip the thums up sign. In a report published last September, Merrill Lynch said the scrip was trading at a 30 percent discount to its historical levels. It recommended investors to accumulate in the intermediate and long-term. It also expects its net profit to jump to Rs.4.2 crore by the next financial year. No wonder, Shah smiles confidently and talks softly about his companys initiative to become the one stop shop for the industry. Be it third-party logistics, domestic air, domestic ground or international courier, his company seems to have one finger in the pie. But it has not been an easy ride.

A macroeconomic slowdown together with internal problems had meant that sales had remained flat for almost four years. Admits Shah: "Our bid to run our own cargo aircraft was a financial disaster. We had to write off Rs.17 crore, our entire investment in the aircraft in March, 2000." Adds Ashish Nain, the companys Chief Operating Officer: "With the advent of the open air policy, we found that it was much cheaper to buy space in the commercial airlines than to operate our own aircraft." Today, the company is looking for buyers for its three 5.5 tonnes Fokker aircraft. That it has not been able to do so far, even after three months, perhaps has something to do with the aircraft being a Fokker. Its hub, which is coming up near Hotel Centaur in Santa Cruz in Mumbai, also ran into rough weather. Legal tangle, cost over-runs and what have you, give an ample depiction of Murphy's Law, which means that the project was delayed by more than two years. Today, the first stage is near completion; the company is planning to lease and sell excess space, which it hopes will bring around Rs.60 crore.

The company also made a strategic decision to focus more on the domestic business. Traditionally, the international business accounted for almost 60 percent of revenues. It has come down by about 9 percent. Says Nain: "It should be less than 40 percent in around 2 years." It makes sense. International business is high volume and low margin, with Indian companies more or less at the mercy of their foreign partner, whose infrastructure they utilize. Whereas the company with offices in 1,200 locations within the country has more control over its overheads in the domestic business. And this means better margins. Elbee is also trying to focus more on the profitable non-document segment as the document section is becoming increasingly competitive with smaller and regional players undercutting the bigger players. The company is also shedding fat. A business process review by Arthur Anderson has helped the company reduce cost by around 8 percent. Says Nain: "We have also started focusing more on customer profitability. Sometimes clients promise certain

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quantity for which they enjoy favorable rates, but they don't keep their promises. And our margins fall." The express industry in the country with an annual turnover of Rs.14,000 crore is still in its nascent stage, even by Asian standards. The Chinese express industry, for instance, is almost six times as big. But with the industry slated to grow by over 25 percent, according to an ORG-MARG study, there are umpteen numbers of players. But the company is yet to come into the radar screens of the other industry majors. Blue Dart, which is perhaps, the biggest player in the industry with a market share of around 37 percent, refuses to acknowledge Elbee as its rival. Says Yogesh Dhingra, Managing Director, of Blue Dart: "Elbee is not our main rival. There are many other strong players, First Flight, Gati, and Safe Express among them." Other industry insiders claim that the company is not in too strong a position financially. Its preferential allotment of Rs.37 crore to institutional investors was because of its inability to pay its debts. So will the company be able to leverage on its present performance and become an industry major in the coming years? Too early to say, perhaps, what will stand the company in good stead is its efforts to evolve into a total logistics management company, especially through its tie-up with Bax Global, a global leader of the logistics supply management. The companys tie-ups with UPS, TNT, and recently with DHL India will also be useful. In the meantime, belying his laid-back exterior, Shah and his company have moved fast to tap the e-commerce market. They have tied-up with 70 portals to manage their total product supply as well as payments. Only time will tell whether the company will become really successful or not.

Caselet 6

16. Comment on the strategic planning adopted by Mattel against the backdrop of lost opportunity in the video games business.

17. Mattel adopted brand extension strategy for its toy brand. How far was this successful?

18. Toy industry was hemmed by lack of creativity. Is this the reason why Mattel emphasizes on established brands over innovation? Comment.

On August 22, 1996, Jill Barad was named the new Chief Executive Officer (CEO) of Mattel. At 45 years of age, she had become one of the youngest women to head a major US corporation. For Barad, the announcement was the fulfillment of a fifteen-year career at Mattel during which she was best known for transforming Mattel's flagging line of Barbie dolls into the most profitable toy brand in the world. As product manager for Barbie, she had pioneered a brand extension strategy that had tripled Barbie sales to $1.4 billion between 1988 and 1995. In the process she had gained a reputation for being a hard-driving manager and skilled marketing visionary. As CEO, Barad's first task was to decide on a strategy that would enable Mattel to grow earnings per share in line with the company's stated goal of 15 percent per annum.

Mattel is the world's largest toy maker, with its 1995 revenues of $3.64 billion. The company's strengths lie in its Barbie brand; its Fisher-Price line of toys for young children, which generated 1995 revenues of more than $1 billion; the Hot Wheels brand; and its Disney licenses. Negotiated in 1988, the Disney licenses give Mattel exclusive rights to make products based on Disney's movies for kids. In 1995, Mattel earned revenues of $450 million from its Disney connection alone. Between 1988 and 1995 these four core product areas helped Mattel to attain a compounded annual growth rate of 20 percent in sales and 38 percent in operating income. In total, Mattel commands about 16 percent of the market share for toys sold in the United States, although its share in Europe, the other great toy market, is less than 8 percent.

Despite Mattel's glittering past and Jill Barad's own starring role in it, many knowledgeable observers of the toy industry believe that the company's goal of 15 percent growth in earning represents a difficult challenge for the new CEO. Barad takes over the top spot at a time when Mattel's growth rate appears to be slowing. In June 1996, Mattel reported that sales for its most recent quarter would be "approximately the same as last year," marking the first time that quarterly results had been flat in eight years. To be sure,

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part of the slowdown was due to lackluster sales of its toys based on Disney's latest film, *The Hunchback of Notre Dame.* Although this shortfall could easily have been met by a strong showing from toys linked to future Disney films, critics charge that the toy industry in general seems to be suffering from a chronic lack of creativity. Of the fifteen top-selling toys in 1996, only three were toy company inventions that originated within the last year. Mattel is very much a case in point. The Barbie brand has been around since 1959; Hot Wheels and Fisher-Price were acquired rather than developed internally; while the creative minds behind the Disney line of toys clearly lie with that company, not Mattel.

Of course, it can be argued that given the fickle nature of the toy business, in which last year's mega-hit can become this year's bust (remember Cabbage Patch Kids?), Mattel is right to focus on established and enduring brands. However, by emphasizing established brands over innovation, Mattel runs the risk of missing out on successful new blockbusters. That's what happened with video games. Having given up after some early forays into video games, Mattel watched Nintendo and Sega take that business from zero to $6 billion in sales.

So what strategy will Barad pursue in order to attain the goal of 15 percent growth in earnings? The early signs are that her strategy for Mattel will have four main elements. First, she has made it clear that she intends to continue with the highly profitable practice of extending the company's existing brands. For example, she has plans to develop a line of collectable Barbies. Second, she intends to develop new product categories, particularly in boys' toys and board games, two areas in which Mattel has traditionally been weak. This could be accomplished either by developing the toys in-house or by acquiring an existing company and then growing its business through further investments. Third, she intends to focus more effort on expanding sales in overseas markets, where Mattel's presence is more limited than in the United States. Her goal is to increase overseas sales to more than 50 percent of Mattel's total, up from 40 percent today. Finally, she will try to increase earnings by driving down costs. Cost reductions will be achieved by moving production to low-cost foreign factories in places such as China and Thailand. This will represent a major shift for Mattel, which currently manufactures two-thirds of its core product lines in its own plants.

Caselet 7

19. Microsoft failed to visualize the changes in the Internet and the impending threat to its windows operating system. Comment.

20. Microsoft was forced to react to the upsurge of Netscape navigator, which had the advantage of being an early contrast. Comment on the strategy adopted by Microsoft to counter Netscape's increased market share.

Over the last decade Microsoft has emerged as the dominant software company in the desktop computing market. By 1995, Microsoft's Windows operating system was to be found on 90 percent of all personal computers, while the company enjoyed a market share in excess of 50 percent for a large number of popular desktop computing applications, including word processing, presentation software, and spreadsheets. So complete was Microsoft's dominance that in the early 1990s several of its competitors filed complaints with the United States Department of Justice, alleging that Microsoft engaged in unfair trade practices – a charge that Microsoft vigorously denies. Meanwhile, the business press hailed the company's founder and CEO, Bill Gates, as one of the greatest strategic thinkers in the computer industry. The linchpin of Gate's strategy was to ensure the continued dominance of Microsoft's Windows operating system as the standard of choice in the personal computer environment.

In mid 1995, however, Microsoft suddenly began to look vulnerable when it was blind-sided by two related and unexpected developments. The first of these was the explosive growth of the global network of interlinked computers known as the Internet and the

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associated World Wide Web, or WWW that sits on top of the Internet. In the late 1980s, Tim Bernes Lee, a physicist at the CERN research institute for particle physics in Switzerland, developed a method for encoding, displaying, and transmitting text and graphics over the Internet using HTML (Hypertext Markup Language). In effect, Lee had invented the World Wide Web. In 1993, a young computer programmer, Mark Andersen, at the University of Illinois masterminded the development of a "browser" that could be used to travel the Internet, read HTML documents, and display them on a personal computer screen. In 1994, he left Illinois to help found Netscape, a software company that produced an improved version of the HTML browser, Netscape Navigator, along with "Web server software," which could be placed upon the computer servers that were the nodes of the rapidly developing WWW to manage Web files and handle Web traffic. The growth of the WWW was nothing short of stunning. In 1990, less than 1 million users were connected to the Internet. By late 1995, largely as a result of the popularity of the WWW, the figure was approaching 80 million, and Netscape, not Microsoft, had supplied more than 70 percent of all Web browsers and Web server software.

The second development was the invention of the Java computer programming language at Sun Microsystems, one of the leading suppliers of computer workstations and servers. A program written in Java can be stored anywhere on the WWW and accessed by anyone with a Web browser that contains a Java interpreter, and the new versions of Netscape Navigator is capable of this. Java is indifferent to the operation system of the personal computer on which a Web browser resides. So in theory, someone using a current version of Netscape Navigator can access a word processing program placed somewhere on the Web as and when they need it. Instead of purchasing the program outright for hundreds of dollars, all they need do is pay a few cents for the "run time" during which they use the program.

This represents a potential body blow to Microsoft. It raises the possibility that people will no longer need to purchase expensive applications software from Microsoft and store it on their computers. Nor do they need a machine that utilizes Microsoft's operating system. All they need is a simple and inexpensive machine that is able to run a Netscape browser with a Java interpreter. They can then use this machine to access programs on the Web as and when they need them, using the computing power of a remote server. As Scott McNealy, the CEO of Sun Microsystems says, "the network is the computer." The standard is based not on Microsoft's Windows, but on Netscape and Java.

Microsoft's initial response to this unanticipated threat was to dismiss it. Bill Gates called Netscape's browser technology trivial. However, by late 1995, it was clear that Microsoft had decided to respond to the unexpected threat posed by Netscape and Java by shifting its own strategic focus toward the WWW. Microsoft was to continue its focus on being the dominant software player in the desktop computing business, but its strategy for attaining this objective would start to change. In an all-day Internet conference, Microsoft stated that it would give away its own Web browser and Web server software for free. The company also announced that future software applications produced by Microsoft would contain "browser functions" that would enable users to roam the Web for information. In addition, new version of its popular word processing program would enable users to convert their documents into HTML format that could be transmitted over the Web. Microsoft also announced that it would license Java from Sun and incorporate Java interpreters into some of its own products. Microsoft also announced an alliance with America Online (AOL), the world's largest on-line service, which would allow AOL's 5 million subscribers to use Microsoft's browser. This was followed by a deal with Intel to develop technology that will make video, voice, and data conferencing via the WWW, as commonplace as placing a telephone call. By quickly abandoning its prior strategy and developing a new Internet strategy in response to an unanticipated threat, Microsoft had suddenly positioned itself as a viable alternative to Netscape.

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Caselet 8

21. What were the reasons for the fall in the growth of new product sales of 3M and how can they be rectified?

22. How did 3M succeed in promoting its Rust Soap Pads? What were the precautions taken by the company to do so?

23. Do you agree that the new products generate more revenues for any organization?

The 3M Company has long had a reputation for being one of the most innovative corporations in the United States. For years the company operated with the seemingly ambitious vision of generating 25 percent of its revenues from products introduced within the last five years, and for years it consistently attained this stretch goal. The result was a company with sales of $14 billion per annum and a potpourri of more than 60,000 different product offerings.

However, back in 1991 the new CEO of 3M, LD DeSimone, decided that this vision had lost its magic. Sales growth had stalled since 1988, while the percentage of revenues being generated from new products had remained essentially flat for three years. DeSimone's solution was to unveil a new vision for 3M. The company was intended to generate 30 percent of its sales from products introduced within the last four years. Since new products generally grow revenues faster and have higher profit margins than older products, the CEO argued that this goal would effectively boost 3M's profit performance.

Armed with this new vision, managers at 3M searched for ways to improve its rate of new-product innovation. Under pressure from DeSimone to reveal how they would attain the new vision, managers quickly concluded that a major reason for a slowdown in the rate of innovation at 3M was that researchers were wasting far too much time on a large number of products that not only had limited market potential but were also similar to products, which 3M already had in the market. Moreover, products were taking far too long – as much as five years – to progress from prototype to full production.

To attain the new vision, DeSimone pushed his managers to concentrate their efforts on a limited number of products that had the potential for big sales. He also insisted that they launch a "pacing program" to identify potential blockbusters in the lab and rush them to market. This new approach helped to break the logjam that had developed in R&D. For example, in 1992 within 3M's $6 billion consumer and industrial goods business, fifty projects were earmarked for the pacing program and put on an accelerated development schedule. By late 1994, more than half these projects had already produced products that were on the market, and the eight largest new-product introductions were targeted to generate sales of around $1 billion by 1998.

One of the most successful of these new products was Scotch Brite's 'Never Rust', soap pads. Ordinary scouring pads are made of steel wool that rusts quickly. In contrast, Never Rust is made from recycled plastic beverage bottles. In January 1992, 3M made Never Rust one of the first products in its pacing program. The result was the fastest product introduction in the company's history. Construction crew broke ground for the manufacturing plant in March 1992, and by November 1992, the plant was completed.

Whenever development problems were encountered, experts were called in from all over 3M to try to solve them so that the ambitious schedule could still be met. They were, and the product was introduced in January 1993. In its first eighteen months, Never Rust captured a 22 percent share of the $100 million market. According to De Simone, this kind of impressive performance would not have been possible had it not been for the stretch goal that focused the attention of managers on the need to break with the old ways of doing things and do extraordinary things in order to accelerate the development process.

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Caselet 9

24. Discuss the factors that have contributed to the rapid increase in demand for DRAM?

25. How did the Micron Technology of Boise benefit heavily during the period 1993-1995?

26. Discuss the situation in the DRAM industry after 1995. Why did the growth rate register a sudden slowdown?

For much of the first half of the 1990s, the semiconductor industry seemed like one of the most extraordinary moneymaking machines ever invented. In no case has this been truer than in the market for Dynamic Random Access Memories (DRAM), the memory devices used in Personal Computers (PCs), which account for about one-third of all semiconductor sales. In 1993 the global market for DRAM was valued at $13.6 billion. In 1994, it increased to $23.1 billion, and in 1995, it surged to a staggering $55 billion. This rapid increase in demand for DRAM was due to the confluence of a number of favorable factors.

First, stimulated by price cutting in the PC market, worldwide sales of personal computers grew at an annual average compound rate of 30 percent over the 1990-1995 period. Second, as more and more users of PCs switched to graphics-based software, such as Microsoft's Windows 95 operating system, the memory component of PCs increased. (Running graphics programs on a PC requires a large amount of memory.) Between 1991 and 1995, the average amount of DRAM contained in each PC sold increased from 2 megabytes to 12 megabytes. Third, other applications for DRAM (particularly in telecommunications equipment and cellular phone handsets) also grew rapidly. For example, global shipments of cellular phones increased from 5 million to 50 million between 1991 and 1995.

Not only did the demand for DRAM surge during the 1990-1995 period, supply was also constrained. One reason for the shortage was the reluctance of many semiconductor companies to undertake investments in new semiconductor fabricating plants. By 1995, a new fabrication facility could cost anywhere from $1 billion to $2.5 billion and take eighteen months to construct. Faced with such enormous fixed costs, many companies were reluctant to undertake the investment, particularly since demand conditions could change significantly in the eighteen months required to bring a new facility on-line. Managers in this industry still remember the 1985-1987 period, when a combination of slowing demand and massive capacity expansions by Japanese semiconductor companies led to an excess supply of DRAM, which plunged prices and resulted in significant financial losses for most of the world's DRAM manufacturers. Indeed, it was during this period that a number of US companies exited the DRAM market, including Intel, the company that invented the DRAM.

The result of surging global demand for DRAM and constrained supply was that during the 1993-1995 period prices for DRAM increased dramatically. In 1993, the average selling price for DRAM was $8.89 per megabyte, in 1994 it was $11.69, and by the middle of 1995, it had risen to $14.00. One company that benefited from this situation was Micron Technology of Boise, Idaho. Micron was one of only two US firms that remained in the DRAM market after the debacle of 1985-1987. (The other was Texas Instruments.) In 1990, Micron had sales of less than $300 million and was only just breaking even. Riding the industry wave, by 1994 the company had revenues of $1.63 billion and net income of $400 million. This was followed by the 1995 revenues of $2.95 billion and net income of $844 million. Micron's gross profit margin for 1995 was 55 percent – almost unheard of for a DRAM company – compared with 23 percent in 1990. Nor was Micron alone in achieving such impressive profit performance. By 1995, almost every DRAM company in the world was making record profits.

These huge industry profits, however, became a signal for incumbent companies to expand their capacity and for new companies to enter the semiconductor industry. Starting in late 1994, an increasing number of companies announced intentions to invest in semiconductor fabrication facilities. Those jumping on the capacity expansion bandwagon included Micron Technology, which in June 1995 unveiled plans to invest $2.5 billion in a new fabrication facility in Lehi, Utah, that was scheduled to begin production at the end of 1996. When Micron made its announcement, almost 100 new semiconductor fabrication facilities were being constructed around the world, many of which were scheduled to come online in 1995 and 1996. Moreover, by the end of 1995, plans to build another 100 facilities had been announced.

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In the fall of 1995 the other shoe dropped. After four years of rapid growth, there was a sudden slowdown in the growth rate of personal computer sales, particularly in the huge North American market. This slowdown occurred just as the new DRAM capacity was becoming operational. To make matters worse, throughout 1995 manufacturers of personal computers had been building up their inventories of DRAM, both to hedge against future price increases and to ensure an adequate supply of DRAM for what they thought would be a very busy Christmas season. When the anticipated surge in Christmas sales of PCs failed to materialize, PC manufacturers found themselves holding too many inventories. They responded by cutting back dramatically on their orders for DRAM. The result was that DRAM sales volume and prices slumped. Between late 1995 and March 1996, DRAM prices fell from $14 per megabyte to $7 per megabyte. The consequences included falling profit margins for DRAM companies.

Reflecting the widespread perception that a situation of excess demand and rising prices had been replaced in short order by one of excess supply and plunging prices, the Philadelphia Semi-Conductor Index, a measure of the share price of American semiconductor companies fell by 45 percent between September 1995 and March 1996. In February 1996, Micron Technology responded to this situation by dramatically slowing down the construction schedule for its Lehi facility, pushing out the start date for volume manufacturing to another two to five years. Nor was Micron alone; by spring 1996, companies around the world were also announcing that they had put their capacity expansion plans on hold.

Caselet 10

27. Discuss the difficulties to be faced by the new entrants to the Japanese beer industry.

28. The owners of restaurants appear to be loyal to the big brewer and reluctant to take on competing brands that might alienate their main suppliers. Comment.

29. Why are the barriers for new entrants receding after 1994 in the Japanese breweries industry?

In 1556, an English visitor to Japan noted that the Japanese "feed moderately but they drink largely." This is still the case today; the Japanese have one of the highest levels of beer consumption per capita of any country in the world. In 1994, for example, 56 liters of beer were sold for every man, woman, and child in the country, making Japan's per capita level of beer consumption similar to that of big beer-drinking nations such as Australia, Britain, and Germany.

Four companies dominate the vast Japanese market: Kirin, Asahi, Sapporo, and Suntory. In 1994, these four had a combined market share of 98 percent. Collectively, these companies enjoy one of the highest profit rates of any industry in Japan. Suntory is the only successful new entrant in the last thirty years, and its market share stands at no more than 6 percent.

Normally, absence of a new entry into a profitable industry indicates the presence of high barriers to entry, and that is certainly true in this case. As with large brewers all over the world, Japan's big four spend heavily on advertising and promotions. The resulting product differentiation and brand identification have certainly helped to limit the potential for new entry. However, there is more to the story than this. Japan's big brewing companies have also been the beneficiaries of significant regulatory barriers to entry. Brewers in Japan must have a license from the Ministry of Finance (MOF). Prior to 1994, the MOF would not issue a license to any brewer producing less than 2 million liters annually. This restriction represented an imposing hurdle to any potential new entrant. Interestingly enough, the reason for the licensing scheme was bureaucratic convenience rather than a desire to protect brewing companies from new entry; it is easier to collect tax from 4 companies than from 400.

Another significant barrier to entry has been Japan's distribution system. In Japan there are often close ties between distributors and manufacturers, and this is the case in the brewing industry. Roughly half the beer consumed in Japan is sold in bars and restaurants. Their owners appear to be loyal to the big brewers and reluctant to take on competing brands that might alienate their main suppliers. Small liquor stores are the other main distribution outlets for beer, and they, too, have traditionally maintained close ties with the big brewers.

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However, it now appears that the barriers to entering Japan's brewing industry are receding. As part of an economic liberalization plan, in 1994 the MOF reduced the production threshold required to gain a license from 2 million liters to 60,000 liters; low enough to allow for the entry of microbreweries using the same technology that is now found in many brew pubs in the United States and Britain. Moreover, regulatory changes have also allowed for the establishment of large new discount stores in Japan. Until 1994, small retailers could effectively block the establishment of large new discount stores in Japan. Unlike traditional small retailers, large discount retailers are motivated more by price and profit than by loyalties to an established supplier, and they are proving increasingly willing to sell the beer of foreign companies and microbreweries, in addition to that of Japan's big four. Given the decline in traditional barriers to entry, it seems increasingly likely that Japan's big four brewers will have to face up to new competitors, increased competition, and lower profit margins in the years to come.

Caselet 11

30. How do you justify the P&G move to bring the flows of Omo Power to the public?

31. Comment on the strategy followed by unilever in launching and promoting their brand Omo Power.

The European retail detergents market, like the global detergents market, is dominated by the products of just two companies: Unilever, the Anglo-Dutch concern, and the American consumer products giant, Proctor & Gamble (P&G). Both companies sell a broad product line of detergents to consumers; both spend heavily on advertising, promotions, and brand positioning; and both de-emphasize price-based competition. The net result is that historically both companies have benefited from a relatively benign competitive environment that has enabled them to earn higher profit margins than would be the case in a more price-competitive industry.

This cozy situation was rudely shattered in early 1994, following the Pan-European launch of a new detergent by Unilever. The product in question was Omo Power, which Unilever promoted as the biggest technical advancement in fabric detergents in fifteen years. According to Unilever, Omo Power contained a powerful cleansing agent that washed clothes cleaner than any other product in the market. Consumers seemed to agree; sales of Omo Power surged in every country in which it was introduced during the first few months of 1994. P&G was alarmed by this development. The introduction of Omo Power seemed to violate a tacit understanding between the two companies that they would share technical information with each other. Moreover, Unilever was gaining market share at P&G's expense for the first time in two decades.

P&G's initial response was to try and discover what the secret ingredient in Omo Power might be. After extensive lab studies, P&G discovered that Unilever had used crystals of manganese. This surprised P&G, for although manganese could speed the bleaching process, it knew from its own research that manganese attacked fabrics, which was why P&G had abandoned work on manganese ten years previously. After submitting Omo Power to its own tests, P&G found that clothes washed repeatedly in the powder did indeed develop holes. Armed with this information, P&G decided to go the counterattack. Top executives from P&G visited top management at Unilever and stated bluntly that Omo Power was fundamentally flawed and should be pulled off the market. Unilever executives chose to discount this private warning. After two years of market testing with no complaints from consumers, Unilever saw no need to withdraw the product and believed P&G was overstating the problem because it was losing market share. It was at this point that P&G broke with the industry's tradition of not criticizing the products of competitors. P&G went public with the problem, launching a ruthless public relations campaign pointing to the flaws of Omo Power. P&G gave the press a set of color pictures showing clothes purportedly suffering the ill effects of Omo Power, including shots of some tattered boxer shorts that were duly reproduced by the press all over Europe.

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Unilever initially tried to dismiss P&G's claims, but a growing number of independent research institutes backed up P&G's findings. After several months of increasingly bitter public recriminations between the two companies, Unilever was eventually forced to concede that there was a problem. Unilever repositioned Omo Power in the marketplace from a product with broad applicability to a niche product for use with white fabrics and low water temperatures (conditions that minimized the damage problems).

In the end, Unilever was forced to admit that its $300 million investment in Omo had been a washout. By the end of 1994, Unilever's market share had fallen back to the level the company had attained prior to the launch of Omo Power. Moreover, executives from both companies admitted that the rules of the game in the industry had changed as a result of the dispute. Gone forever was the cozy agreement of sharing technical information and forbearing from directly attacking the products of a competitor. Non-price competition in the industry would now be much more difficult than before. P&G fully expected Unilever to try and get its revenge by attacking any new product launch that it might try.

Caselet 12

32. How were powerful buyers formed in the pharmaceutical industry and how did they change the price scenario of medical drugs?

33. Discuss what the prices of medical drugs and competition would be in the future health care industry.

For decades pharmaceutical companies, as major suppliers of critical health care products, have been in a powerful position in the health care industry. Pharmaceutical companies spend hundreds of millions of dollars annually to develop new drugs. Although this is a risky process with a low probability of success, the companies that do develop new drugs with important medical applications have historically been in a powerful position. Companies can patent new drugs, which prohibits competitors from producing and marketing products based on the same chemical compound for a seventeen-year period. Protected by patents, pharmaceutical companies have been able to charge very high prices. Since the prescribers, the doctors, do not pay for the drug, they have had no reason to concern themselves with prices. Instead they have been more concerned with medical benefits to patients. As for the patients themselves, since their insurance companies often end up paying for prescription drugs, they, too, have not had a strong incentive to focus on prices. As a result, prices in the pharmaceutical industry have risen rapidly. During the 1980s and early 1990s, drug prices in the United States rose at two to three times the annual inflation rate. In 1992, they rose at an annual rate of 5.7 percent, much faster than the 2.9 percent inflation rate.

There are signs that this situation is changing. Increasingly, powerful buyers are beginning to limit the ability of pharmaceutical companies to raise drug prices. Two factors are at work. The first is the rise of Health Maintenance Organizations (HMOs). HMOs were started in an attempt to control health care costs. Subscribers to HMOs sacrifice freedom of choice in selecting a health care provider for lower insurance costs. HMOs have proved attractive to companies that find it is often cheaper to provide employees with health care coverage through HMOs than through conventional health insurance. In their attempt to control costs, HMOs negotiate directly with pharmaceutical companies on behalf of all their doctors for attractive prices on key drugs. The larger purchasing power of HMOs has made them powerful buyers. One result has been a marked slowdown in the rate of increase in drug prices.

A second factor slowing down the rise in drug prices is that drug companies are starting to introduce "me-too" drugs to compete with the patented drugs of competitors. Me-too drugs are those that are chemically different from the pioneer's product and, therefore, not covered by a patent but offer similar medical benefits. For example, three companies are now marketing very similar antidepressant drugs: SmithKline Beecham with Paxil, Eli Lilly with Prozac (the pioneer among the three); and Pfizer with Zoloft. The shift to me-too drugs is occurring because pharmaceutical companies have made so many major medical breakthroughs during the last few decades and there are very few therapeutic areas for which there are no existing drugs. So in order to maintain their historic growth rates, drug companies are increasingly looking up to me-too drugs.

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From the HMO's perspective, the recent emergence of me-too-drugs suddenly gives them a choice. Thus, for example, if Eli Lilly refuses to reduce the price for Prozac, an HMO can always threaten to use a substitute such as Paxil. The fact that HMOs now have a choice combined with the fact that the pharmaceutical companies are apparently willing to engage in price discounting is beginning to change the power relationship in the health care industry. If the trend continues, the end result is likely to be not only more intense competition and lower drug prices and profits in the pharmaceutical industry but also lower costs for HMOs.

Caselet 13

34. Why did Lever adopt a multi brand strategy?

35. How well justified is Lever's decision to maintain dual production of Comfort and Teddy Bear?

36. Is the strategy cost effective? Explain.

Almost every large company operating in Europe has been affected by the effort to unite Europe politically and create one huge common market. As internal EU barriers fall, companies are trying to sell the same products in the same way across the continent, creating economies of scale to help them survive increasingly brutal marketing wars. Unfortunately, creating or selling a "Euro product" is more than just difficult; the nuances of established markets, local consumer tastes, and decades-old marketing strategies are complicating standardization.

As Europe's borders began to blur in the late 1980s, Lever Europe, a subsidiary of Anglo-Dutch food and detergent maker Unilever, recognized the need to adjust its strategy. Its American archrival, Procter & Gamble, was introducing single products with single names across Europe. Lever, despite being more established in Europe, has faced large-scale adjustment problems, both within its organization and among consumers. It sells hundreds of products under various brand names in different countries. Its fabric softener, for example, is known within Lever under two different brand names – Snuggle and Teddy Bear. The brand is sold in ten European countries under seven different names, often with different bottles, different marketing strategies, and sometimes even different formulas. The brands share only one thing: A picture of a teddy bear on the label.

The wide diversity of brand images is the legacy of what once seemed a shrewd strategy for many European consumer-product companies. Heavily decentralized, Lever left most product manufacturing, and marketing decisions to powerful country managers. They, in turn, chose names that sounded appealing in the local language, designed packages to fit local tastes, manufactured the products in local factories, and sometimes tinkered with the formulas.

Lever began its attempts at unifying product lines in 1986, appointing a few European brand managers for its pan-European brands. It also began centralizing production, which required some painful plant closures. Today, Lever products like fabric softener, dishwasher soap, and skin cream are overseen across much of the continent by individual managers based in various European capitals. To stay close to local markets, though, Lever still distributes through its national marketing people. Other things have stayed the same, as well: To avoid tampering with success, the company has kept many of its established local brand names and even some of the formula variations.

Changing those local formulas is a difficult step – one that Lever is taking gradually. Lever's strategy calls for introducing an environment friendly formula across the continent, which delights Lever workers in Sweden, where such a change is required by law, and in Germany, where consumers will pay premium prices for products that are gentle on lakes and rivers. But it creates problems in cost-conscious Spain; Lever's fabric softener has a quarter of the fast-growing market there, and the new strategy means higher costs for a price-sensitive product.

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Lever figures that it will lose profits in the short-run because of the switch, but managers remain convinced that its uniform, more advanced products would ultimately maximize profits across Europe. Complexities continue to mount, however. For historical reasons, Lever sells its Teddy Bear and Snuggle fabric softeners in ten European countries while it sells a creamier, more expensive product, Comfort, in seven others. To cut production costs and unify marketing, it is taking the first step towards merging the two, by introducing identical bottles. To avoid alienating any loyal consumers, however, it will keep producing Comfort as a thicker liquid with a mother and child on its label while Teddy Bear features a bear. Selling fabric softener with a catalog of different brand names and at least two formulas ensures a worse cost position than P&G, which has one formula, one brand name, and one package.

Caselet 14

37. The success of Nokia is attributed to history, geography and political economy of Finland. Comment.

38. Which strategy followed by Nokia made it successful than Motorola?

The cellular telephone equipment industry is one of the great growth stories of the 1990s. The number of cellular subscribers has been expanding rapidly. By the end of 1994, there were more than 50 million cellular subscribers worldwide, up from less than 10 million in 1990. Three companies currently dominate the global market for cellular equipment (cellular phones, base station equipment, digital switches): Motorola, Nokia, and Ericsson. Of the three, the dramatic rise of Nokia is perhaps the most surprising.

Nokia's roots are in Finland, not normally a country that jumps to mind when we talk about leading-edge technology companies. Back in the 1980s, Nokia was a rambling Finnish conglomerate with activities that embraced tire manufacturing, paper production, consumer electronics, and telecommunications equipment. Today it is focused $10 billion telecommunications equipment manufacturer with a global reach second only to that of Motorola and with sales and earnings that are growing in excess of 30 percent per annum. How has this former conglomerate emerged to take a global leadership position in cellular equipment? Much of the answer lies in the history, geography and political economy of Finland and its Nordic neighbors.

The story starts in 1981, when the Nordic nations got together to create the world's first international cellular telephone network. Sparsely populated and inhospitably cold, they had good reason to become pioneers; it cost far too much to lay down a traditional wire line telephone service. Yet the same features that made it difficult make telecommunications all the more valuable there; people driving through the Arctic winter and owners of remote northern houses need a telephone to summon help if things go wrong. As a result, Sweden, Norway, and Finland became the first nations in the world to take cellular telecommunications seriously. They found, for example, that while it cost up to $800 per subscriber to bring a traditional wire line service to remote locations in the far north, the same locations could be linked by wireless cellular for only $500 per person. As a consequence, 12 percent of people in Scandinavia owned cellular phone by 1994, compared with less than 6 percent in the United States, the world's second most developed market.

Nokia, as a long time telecommunications equipment supplier, was well positioned to take advantage of this development from the start, but there were also other forces at work in Finland that helped Nokia develop its competitive edge. Unlike virtually every other developed nation, Finland has never had a national telephone monopoly. Instead, the country's telephone services have long been provided by about 50 or so autonomous local telephone companies, whose elected boards set prices by referendum (which naturally results in low prices).

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This army of independent and cost-conscious telephone service providers has prevented Nokia from taking anything for granted in its home country. With typical Finnish pragmatism, its customers have been willing to buy from the lowest-cost supplier, whether that was Nokia, Ericsson, Motorola, or someone else. This situation contrasted sharply with that prevailing in most developed nations up until the late 1980s and early 1990s, in which domestic telephone monopolies typically purchased equipment from a dominant local supplier or made it themselves. Nokia has responded to this competitive pressure by doing everything possible to drive down its manufacturing costs while staying at the leading edge of cellular technology.

The consequences of these forces are clear. While Motorola remains the number one firm in cellular equipment, the once obscure Finnish firm, Nokia, is snapping at it's heal. It is Nokia, not Motorola, which is the leader in digital cellular technology.

In no small part Nokia has the lead because Scandinavia started switching to digital technology five years before the rest of the world. Moreover, spurred by its cost-conscious customers, Nokia now has the lowest cost structure of any cellular phone equipment manufacturer in the world. The result is that it is a more profitable enterprise than Motorola. Nokia's operating margins in 1994 were 17.7 percent, compared with 14.4 percent at Motorola.

Caselet 15

39. Which materials management principles and operations features commonly used by manufacturing operations could be best applied to Redner's service operations?

40. How much leverage has Redner allowed itself with its low-price positioning strategy?

41. What factors should be considered while developing an operational mission statement for Redner?

In the five years since Redner converted from a conventional supermarket operation to a warehouse store format, sales at the Reading, Pennsylvania, company have tripled to the current level of $230 million. That's an average store-for-store increase from $100,000 to roughly $300,000 a week.

President Dick Redner has a bullish prediction that the company will be a billion-dollar operation by the end of the century and have 100 stores by 2010.

Redner was a healthy company, its nine stores reporting industry-average sales trends and good profits. Executive interest was piqued, however, by the success of wholesalers, who sell huge volumes with hardly any advertising. One of Redner's stores was a likely prospect for a test conversion: Its 38,000-square-foot Palmyra store was the fourth operation in the small town. Even after Redner cut its losses in half, business had not increased beyond what the previous owner had done – $90,000 to $100,000 a week. Conversion was a no lose proposition: Operating on only a two-year lease, the chain could test the warehouse concept and, if it failed, close the store and walk away.

The transformation was completed in three days, and business immediately doubled. Despite the good customer reception, Redner's managers were troubled. 'You know, it's not broke, so let's not fix it,' says Dick Redner. "But as we noted the results, we just felt we couldn't be a dual operator. We were either going stay a conventional operator or we were going all the way with the warehouse concept."

The company converted the rest of its chains within a year, with identical results: Business doubled and the sizes of the stores followed suit. As business tripled, Redner built new stores, bringing its total to 15. Construction is concluding on a new 120,000-square-foot warehouse to feed the rapid growth in the company's direct-buying program, part of a drive to increase margins with the increase in volume in all departments. Other moves included eliminating sales games, gimmicks, and double coupons.

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Dick Redner says the formula is simple – no deviation from the program to become a price leader in the marketplace. Everything is discounted, from produce to meat to deli products to health and beauty aids. That message is pounded home with the phrase WAREHOUSE MARKET printed on everything from store signs to management business cards. Redner's warehouse concept is an ego less operational philosophy that takes priority over everything, including family identity – a departure from the traditional supermarket strategy of stressing a family name and involvement.

Caselet 16

42. Do you think Intel's success is due to its symbiotic relationship with IBM and Microsoft?

43. What technical core competencies does Intel possess?

44. What was the set back faced by Intel for its aggressive 'intel inside' campaign in the mid '90s?

Founded in 1968, Intel invented the microprocessor, or "computer on a chip," in 1971 and was rewarded for its efforts in 1980 when IBM picked its 8086 microprocessor as the central component of its original IBM PC. Since the introduction of the PC in 1981, Intel and Microsoft, whose MS-Dos and Windows operating systems are designed to run on Intel's microprocessors, have created the technical standard for the personal computer industry. Most popular applications software, such as word processors, only run on one of Microsoft's operating systems. Until recently Microprocessors were compatible with Intel's X86 series, such as the 486 and Pentium processors. This symbiotic relationship between Intel and Microsoft has helped propel Intel to a staggering 80 to 85 percent share of the global market for personal computer microprocessors. As a result, in 1995, the California-based company recorded a net profit of $3.5 billion on sales of $16.2 billion.

It would be wrong to attribute Intel's monopoly position simply to its role in setting the industry's standards. This monopoly position is challenged continually by major competitors like Advanced Micro Devices (AMD), NextGen and Cyrix. They made Intel compatible microprocessors, or clones, that are capable of interfacing with MS-DOS and WINDOWS operating systems. But Intel emerged as the successful player due to its higher competency compared to the rivals.

The reason that Intel has been able to acquire and hold on to such a staggering market share (despite the best efforts of competitors) is that the company's success is based upon competencies that its rivals lack.

First, Intel has proved repeatedly that it has world-class product development capabilities. Since 1978, when it introduced the 8086 microprocessor, Intel has released five subsequent microprocessor platforms – the 286, 386, 486, Pentium, and Pentium Pro – each significantly more powerful than its predecessor. Within each of these platforms, the company had produced a number of derivative products, each of which is also more powerful than its predecessor. Thus, while the first Pentium processors had a clock speed of 75 megahertz, within a year the company was shipping Pentiums with clock speeds of 150 megahertz. (Higher clock speed translates into faster performance.) Each successive microprocessor generation has involved a quantum leap in the number of transistors crammed onto a single, small silicon chip that is less than 1 inch square.

Designing such micro circuitry requires magnificent micro engineering and software capabilities, and the evidence suggests that Intel has a substantial edge over its competitors in this regard. Intel has consistently beaten its competitors to market new generations of the X86 series with ever more powerful derivative products within each generation. For example, it was more than one year after the introduction of the Pentium, before Intel's major competitor, AMD, was able to produce its own version of the Pentium, the K5 processor. By the time the K5 hit the market, Intel had already introduced its subsequent processor, the Pentium Pro. Thus, it is its rapid product development, which allows the company to stay one step ahead of competitors and sustain its monopoly in leading-edge processors.

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Second, Intel is also a world-class manufacturing company. The manufacturing of microprocessors entails substantial fixed costs (including more than $1 billion for a fabrication facility) but relatively small ongoing production costs. The result is that as production volume increases, unit costs fall steeply once the manufacturer starts to realize substantial economies of scale. Intel's rapid product development has allowed the company to start volume production of leading-edge microprocessors ahead of competitors. Consequently, when competitors do enter the market, Intel's huge economies of scale give the company a substantial cost advantage. In turn, this allows Intel to price its offerings below those of competitors and still make significant profits.

Intel's manufacturing advantage is not based just on economies of scale. Working together with equipment suppliers, Intel has also proved adept at pushing out the technical limits of manufacturing microprocessors, and its competitors cannot match its manufacturing expertise. In 1996, for example, Intel doubled the number of microprocessor chips that it could place on a single 8-inch silicon wafer, which increased its revenues per wafer from $90,000 to $382,500.

Despite its impressive competencies in product design and leading-edge high volume manufacturing, Intel is not immune to making mistakes. In the early 1990s, Intel began its "Intel Inside" campaign. This campaign was designed to create "pull through" demand for its microprocessors by building brand loyalty for Intel processors among the end users of computers by stressing the superior quality of Intel's processors. The idea was that end users would purchase computers with Intel's microprocessors inside, as opposed to those produced by AMD or Cyrix. The campaign worked well until late 1994, when a US mathematician revealed a flaw in the Pentium processor that led to a small error in the calculation of certain complex numbers. Intel responded that the problem was irrelevant for most end users, since it occurred too rarely to concern any but the most demanding scientists. Furthermore, the company offered to replace flawed Pentiums only if an end user could demonstrate that it affected his or her work. While Intel may have been correct in categorizing the problem as "irrelevant for most users," it was caught off guard by the storm of criticism that its apparent lack of customer responsiveness unleashed among end users and the media. After weeks of controversy, an embarrassed Intel was forced to reverse its original position and offer a free replacement for any Pentium processor that contained the fault.

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Caselet 17

45. Discuss the reasons for higher labor productivity of Nissan and Toyota. Why have the other companies failed in achieving the above?

46. Do you think the labor productivity of Nissan and Toyota is more efficient than the other companies?

47. Do you think labor productivity is a major aspect in reflecting the firm's efficiency?

Every year since 1980, Harbor Associates, a consulting company founded by former Chrysler executive James Harbor, has issued a report on the level of productivity in assembly plants of US based volume manufacturers of automobiles. Until 1993, the report focused on just the big three US companies – General Motors, Ford, and Chrysler –but now it also includes data on the US based assembly operations of Nissan and Toyota, both of which have a significant table showing the amount of labor hours that it took to assemble a car at each of these companies in 1988, 1993, and 1994.

Research suggests that Nissan and Toyota are the most efficient volume producers in the United States, while General Motors is the least efficient. The higher labor productivity of Nissan and Toyota is attributed to their lean production systems, which are based upon a large number of productivity enhancing management techniques. For example, both companies make extensive use of self-managing work teams. Each team is given the responsibility of performing a major assembly task, and the teams are also set challenging productivity and quality goals. At the same time, the teams are empowered to find ways to improve their productivity and quality control and are rewarded through the use of

incentive pay if they exceed their productivity or quality goals. While the big three US companies have also tried to introduce self-managing teams into the work-place, diffusion of the technique has been held back by a long history of adverse labor relations at these companies, which has made it difficult for management and labor to cooperate to introduce new concepts.

Another source of the superior labor productivity enjoyed by Nissan and Toyota is product design. Both these companies have long adhered to a design-for-manufacturing philosophy, whose central principle has been to design cars in a way that makes them less complex to assemble. In turn, this has helped boost labor productivity, which translates into a cost-based competitive advantage.

Having said this, we must recognize that the big three US companies have made rapid improvements in their productivity in recent years. Between 1988 and 1994, GM improved its labor productivity by 22.5 percent, while Chrysler did so by more than 24 percent, primarily because both companies are doing their best to imitate the lean production techniques utilized by their Japanese rivals. If this trend continues, the productivity-based competitive advantage currently enjoyed by Toyota and Nissan may disappear by the early next century.

Moreover, Chrysler in particular claims that the data presents an incomplete picture of productivity, primarily because it ignores that company's low product development costs. According to Chrysler, these are a source of superior productivity not recognized in the Harbor report. Until the early 1990s, it took Chrysler at least four years and 1,400 design engineers to design a new car, or 5,600 engineer years. The Chrysler Neon, however, was designed in just thirty-three months and required only 740 design engineers, which translates into 2,035 engineer years, a more than 50 percent improvement in productivity and a saving in design costs of $45 million. Chrysler estimates that the design for its next major car project can be completed in two years with just 540 design engineers. James Harbor, the author of the Harbor report, agrees that Chrysler's superior design capabilities are an important source of superior productivity. In his 1995, report he concluded that when design costs are added to assembly costs, Chrysler emerges as the most productive automobile company in the United States.

How has Chrysler done this? Primarily by forming teams of design engineers, component suppliers, manufacturing personnel, and marketing staff to oversee the design process. These teams make sure that there is very tight integration in the design process between suppliers, engineering, manufacturing, and marketing. Cars are now designed for ease of manufacturing, and with input upfront marketing, while suppliers are brought into the process early to ensure that their design for component parts interfaces well with Chrysler's design for the finished car. The result is a dramatic reduction in the amount of redesign work that has to be undertaken, and a corresponding reduction in the design cycle time from four to six years to less than three.

Caselet 18

48. Why did Zoloft overtake Prozac, though as per medical experts, the differences between them are slight at best?

49. How is marketing efficiency related to Zoloft's success?

50. Is Pfizer's aggressive marketing strategy a threat to Eli Lily?

The antidepressant drug Prozac, introduced by Eli Lily in 1988, had been one of the most lucrative mental-health drugs in history. In 1995, US consumers alone filled almost 19 million prescriptions for Prozac, hoping to mitigate the effects of a wide range of mental disorders including chronic depression, bulimia, and obsessive disorders. Worldwide sales of the drug topped $2 billion in 1995, making it a gold mine for Lilly.

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However, Prozac's market position is now under attack from an aggressive marketing and sales campaign by rival pharmaceutical company Pfizer. In 1992, Pfizer introduced its own antidepressant, Zoloft. According to medical experts, the differences between Prozac and Zoloft are slight at best. Both drugs function in the same basic manner, by boosting serotonin, a chemical in the brain believed to be in short supply in many depressed people. Both drugs also have a similar list of possible side effects. Prozac's label cites nausea, nervousness, anxiety, insomnia, and drowsiness as possible side effects; Zoloft's label lists nausea and other stomach problems, diarrhea, sexual dysfunction, and sleepiness. As one expert noted, "these drugs are so similar that you have to be kidding yourself if you think one drug is going to be consistently superior to the other in treating patients."

Despite the similarity between the two products, however, Pfizer has been gaining share from Lilly in the market for antidepressant drugs. By 1995, Zoloft accounted for 33.5 percent of the market, up from little more than 0 percent in 1992. The main reason for the success of Zoloft seems to be an aggressive marketing and sales campaign by Pfizer that has created an impression in the eyes of physicians that Zoloft is a safer drug. Pfizer salespeople bill their product as a kind of "Prozac Lite": Just as effective but without Prozac's occasional downside, anxiety. The reference to anxiety seems carefully designed to remind doctors of a spate of failed lawsuits alleging that Prozac caused suicides and violent acts. Pfizer's sales force has also logged more "face time" with physicians than Lilly's. According to Scott-Levin and Associates, in 1995 Zoloft sales representatives made 660,000 sales visits to doctors, 70,000 more than the Prozac sales force logged. About three-quarters of the visits by Zoloft representatives were not to psychiatrists but to basic primary care physicians, who increasingly prescribe antidepressants but presumably are less familiar with their subtler properties. Doctors also claim that Pfizer salespeople play up Prozac's clinical reputation for being more agitating than Zoloft's. They also emphasize that unlike Zoloft, Prozac remains in the bloodstream for weeks after a patient stops taking it, raising the possibility of adverse drug interaction if a patient switches to other medications.

The important point here is that Pfizer is using its marketing staff and sales force to alter physicians' perceptions of the relative value of Prozac and Zoloft. For Pfizer the pay-off has come in terms of rapidly increasing revenues and market share and, of course, a greater return on company's investment in developing Zoloft.

Caselet 19

51. Analyze the Swatch's mobile industry using Porter's five forces model.

52. Based on your analysis, what strategy would you recommend to Mercedes and Swatch for their new product? How would you (a) position, and (b) price the product?

53. Based on your analysis, what do you see as the biggest threats to the strategy as proposed above? From which competitors would you expect serious retaliation in the market?

Nicholas Hayek says that a chief executive has to believe in Santa Claus. The chairman of Swatch manufacturer SMH Swiss Corp. has persuaded others, most notably automobile executives, to believe along with him. He, after all, heads a company whose product – the low-cost, Swatch timepiece with the plastic band – has sold more than 100 million units since its 1983 debut, in the process becoming a collector's item. Now, although sales of Swatch's other, larger-scale products – clothing, telephones, and sunglasses – haven't taken off, Hayek and a partner, Daimler-Benz AG's Mercedes-Benz unit, are readying the prototype of the Swatch mobile.

Observers won't be able to test-drive the car until the 1996 Olympics; it won't be available for months afterward. But the interval between the announcement and the introduction of the Swatch mobile is part of Hayek's plan to make the car known to the world. To Hayek, a car is an "emotional consumer item, like a watch. I was born to sell emotional consumer products." The Swatch mobile, a two-seater expected to come in snappy colors, will combine what Hayek calls the three most important features of the watch: affordability, durability, and stylishness. He says the car will cost well under $10,000 and measure less than 10 feet long. Not only will it perform well, says Hayek, the Swatch mobile "will have the crash security of a Mercedes."

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Some question whether the marriage of Swatch and Mercedes can work. A Swatch partnership with Volkswagen AG fell apart early last year; VW officials determined that the project wouldn't turn a sufficient profit. Hayek however says other top auto-industry executives have come begging. Confident as he is with his product, Hayek needs Mercedes for its distribution system, if not its manufacturing facilities. (Britain's Board of Trade has already asked Hayek to consider basing production there.)

Mercedes, already planning to introduce a series of small "A-class" luxury cars in 1997, thought the collaboration with Swatch a daring bid to broaden its presence in the mass market. It hasn't disclosed many details of the partnership, including how many Swatch mobiles it would aim to produce, what price it would charge, what quality standards it would set, how much it would invest, or how closely it would tie the new car to its prestigious Mercedes name.

Hayek is not reluctant to boast that the project will aim to sell 1,00,000 cars in the first years, possibly 1996 or 1997, and up to 1 million annually in the fifth year. The car will succeed on low price and a with-it image, he claims.

Even one of the company's own engineers says those features alone won't do it. "There are too many small cars in the market already," says Daniel Ryhiner. He maintains that the Swatch mobile's only unique selling point will be its environmental friendliness. When operating on electricity, it will emit virtually no pollutants, and when operating on gas, it will go great distances on one gallon, thanks to an engine that weighs one-tenth as much as any existing engine with equal power. Solar products and other "green" ideas are slow starters in the marketplace, giving Hayek "a masterful public relations and marketing challenge."

Caselet 20

54. What were the strategies, which enabled Toys "R" Us to grow astonishingly during 1980?

55. What are the non-price competitive moves did the company adopted to face competition?

56. What pricing strategy did Toys 'R' Us follow to under cut the price of its rivals and make two of its competitors go bankrupt?

Toys 'R' Us, based in Paramus, New Jersey, grew at an astonishing 25 percent annual rate throughout the 1980s and today holds a 20 percent share of the $15 billion retail toy market, which makes it the industry leader. To reach its dominant position, the company used a strategy of market penetration based on developing a nationwide chain of retail outlets and a cost-leadership strategy. To lower costs, Toys 'R' Us developed efficient materials-management techniques for ordering and distributing toys to its stores. It also provided only a low level of customer service. Together, these moves allowed it to obtain a very low expense-to-sales ratio of 17 percent. Toys 'R' Us then used its low costs to promote a philosophy of everyday low pricing. The company deliberately set out to undercut the prices of its rivals, and it succeeded. In fact, its two largest competitors in the 1980s, Child World and Lionel, went bankrupt. Pursuing a market-penetration strategy based on low cost, thus brought spectacular results for Toys 'R' Us.

In the 1990s, however, the company's commanding position was being threatened by a new set of rivals, also pursuing market-penetration strategies. Companies such as Wal-Mart, Kmart, and Target Stores rapidly expanded the number of their stores trying to beat Toys 'R' Us at its own game by selling toys at prices that are often below its own. Indeed, Wal-Mart has more than doubled its share of the toy market (to more than 13 percent), and both Kmart's and Target's toy sales are rapidly increasing. This new competition is squeezing profits for Toys 'R' Us, and the company is turning to non-price competition to attract customers. For example, Toys 'R' Us is promoting its wide range of products as a competitive advantage; it carries more than 16,000 items versus 2,000 at a typical discount store. It has also decided to increase the level of customer service by offering customers more personalized attention. By emphasizing quality and customer responsiveness, as well as low price, the company seeks to fend off the new challenge from the discount stores and maintain its growth in the 1990s.

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Caselet 21

57. What is your assessment of Ryka's strengths, weaknesses, opportunities, and threats?

58. What would you consider the most significant factor in each of these four groupings?

Finding a product niche was not difficult for Sheri Poe; keeping it to herself was the hard part. When Poe came up with the idea for a women's athletic shoe, the competition was a vast wasteland – no one else has a shoe like hers – yet overwhelmingly formidable, due to competitors' brand recognition and marketing and advertising budgets. But Poe made Ryka, her Norwood, Massachusetts, company, something different: Its shoes were designed for a woman's foot, *based on* a woman's foot, not on a smaller version of a man's foot. "Women have different hips and pelvises and their feet strike the ground differently," said Poe. "We developed a special last (a block of foot-shaped plastic on which shoes are made) that considers this matter.

Poe said that retailers recognized the need for Ryka's shoes, and industry analysts agreed that Ryka was the only athletic shoemaker designing strictly for women. (Its giant competitors have since adopted special lasts more friendly to the female foot.) Like any other small company entering crowded markets, Ryka also needed to get some attention for its medium sized single product company. The company is competing in a market where the major athletic-shoe companies spend millions of dollars on advertising and other promotional activities.

With a smaller budget, Ryka has ventured onto smaller avenues. Its marketers discovered that the syndicated TV fitness show hosted by Jake Steinfield, a Hollywood body trainer, had a 70 percent female audience. Ryka gave the bodybuilder an undisclosed amount of stock and a small stipend to outfit his assistants in Ryka shoes.

Quality control is another problem common to small companies. Ryka confronted difficulties perfecting its patented technology – nitrogen molding resembling clear-rubber bouncing balls that fit into the foundation of the shoe. Quality problems, including poor stitching, promoted one athletic-shoe chain to return almost its entire fall shipment to Ryka. The company corrected the molding problems and its distributors became happier. "We think their technology is excellent," said a spokesman for Jordan Marsh. "Their styling is definitely contoured for a woman's foot."

The marketing message continued to focus on shoes made by women for women. This was no accident, since the idea for Ryka arose during Poe's latent recovery from a sexual assault 21 years earlier. She wove her story into a marketing message that helped boost Ryka's sales 53 percent in 1992, to $12 million. A hard-edged print advertising campaign inspired by Poe's intimate history juxtaposed the image of a woman working out with the photo of a teary-eyed woman, with a copy that read: "Sometimes the only way to work it out is to work it out."

Though the campaign received mixed reviews, it worked. The six-year-old company was expected to grow another 53 percent in 1993 to more than $18 million in sales. Through a foundation that Poe established, groups helping women who have been victims of violent crimes receive 7 percent of company profits. Such moves boost Ryka's profile and further define its niche as shoes made for women, by women.

Caselet 22

59. Perform a SWOT analysis of Indigo Radio Pvt. Ltd.

60. What Strategy is Indigo Radio following to gain competitive advantage?

61. Which factors influence the success of Indigo Radio in its venture?

Indigo Radio Pvt. Ltd. is ready to get the Indian music listener tune into its radio stations. But it is not a media firm, at least not in the conventional sense. A venture of BPL Innovision, the dream project of BPL's Rajeev Chandrashekar, it sees itself in the 'audioscape' business. "It's about anything that lets us reach people's ears," says Vineet Singh Hukmani, COO, Indigo Radio Pvt. Ltd. The Company wishes to captivate the 'trendy

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traditionalist' with panoply over satellite radio, FM and Web radio services, in addition to a music label. The core strength is the content, specifically music. Indigo FM initially planned to do the terrestrial broadcast from Bangalore and Cochin, for which it paid Rs.9.1 crore as the license fees. Now it has plans to broadcast from other major cities also.

That's quite a sum, given that these stations depend largely on advertising for revenue, and airtime will struggle to go above Rs.1,000 for a 10-second spot. But then, the potential audience runs into millions, now that cheap FM receivers (snug portables for under Rs.350) are filling up shop shelves. Getting the cities 'radio active' would require intensely localized programming, says Hukmani, who doesn't see why other players are trying FM on a national scale.

What has struck greater curiosity, however, is Indigo's satellite venture, which will function in a lease arrangement with Worldspace, which has an all-India footprint for its 36 channels, all beamed through a single L-band signal. Receiving this service requires the listener to buy a special reception box, available in major stores for around Rs.5,000. Given this barrier, Indigo is targeting 'high net worth, entertainment-positive households', of which it estimates there are six million in India. Getting just Rs.1,00,000 of them in the first year would be fine, says Hukmani, an ex-NRI who was born and brought up in Kuwait and took his first job with the Kuwait Radio.

Indigo's content is focused, too. It has just two channels, the first of which would be the same as the terrestrial *Indigo FM* in Bangalore. The second, *Indigo Fem*, is more ambitious. It is aimed at the 'trendy traditional' woman, as psycho graphically defined. To begin with, Indigo will be sending eight-hour programming packs daily to Singapore for up linking (each to be run twice), but the service could go round-the-clock once it starts. It sounds heavy-duty, but it's not a capital-intensive business, according to Hukmani. The real operating costs always relate to the stuff being aired; this calls for strategic cost planning.

Best of all, the plan is obsolescence-proof. If broadband Internet services turn the Web into a major medium for music, then Indigo will be ready for it – with Indigo Web. The real reason that Indigo expects to make technology irrelevant to the health of the business is that Indigo is banking on its content-creation skills. This will keep costs low while differentiating Indigo as a brand. And the brand-building strategy is quite sharp. The idea is to carve out a niche (to cut a route into the market), before attempting to expand the brand's presence.

What Hukmani would really like is for Indigo to be regarded not just as a brand but, as an entire genre unto itself. The idea is to sell something appealing in a novel sort of way. Hence the need for a music label, which is the fourth way Indigo is targeting the Indian audioscape.

Here too, Indigo wants to set itself apart from regular music marketers. For one, claims Hukmani, the music is authentic – the real expressions of people out there far from the big city lights. "Most artistes are shaping their content according to what the music company wants," laments he, "But Indigo is a music company run by musicians." Hukmani himself is a member of a band, Balle Balle Boys, which gives him a natural understanding of artiste's sensitivities.

Indigo has been on a grassroots hunt for talent, folksy music which can be packaged for an audience open to, say, Tamil folk, *bhangra* rock and classic *raagas* set against innovative sounds. This is a genre where the soul, expression and voice are distinctly Indian, even rustic, but not necessarily the instruments, beats and other accompaniments. Shankar Mahadevan and Shubha Mudgal, for example, come close to the Indigo genre, but not quite.

Indigo has already started nurturing eight artistes it has spotted, all of whom are claimed to be instrument-playing musicians who can perform passionately on stage, and not pretty faces with nice voices. And they have been signed up on stock options in place of big bucks, so this helps Indigo keep its music-acquisition costs low.

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Of course, the risk is very high too. "Tactically, it's sample, sample, sample," says Hukmani, keen to have his musicians *heard*. Indigo radio airplay will help. Still, the COO accepts that Indigo tapes (Rs.100 apiece) and CDs (Rs.475) aren't likely to sell by the million. But he expects long shelf life to make up for that. The primary task is to establish the brand, and Indigo would be satisfied with a loyal base of 1,00,000 listeners to start with. Moreover, Artistes have discovered that they need to differentiate themselves," he adds. In *bhangra*, for example, the Daler-cloning days could well be over. Besides, Indian players haven't yet fully exploited the potential in crossover music.

So long as Indian ears remain open, new things can always be done. Indigo is aiming for a turnover of Rs.20 crore in 2001-02, which sounds slightly over-ambitious, given that the brand might require a warm-up period before it makes its critical breakthroughs. Also, it might find that it can't do without big-time hits. For this, it might need to pick up the mass-market insights from the Hindi-film soundtrack market. One can learn from other genres without having to *sound* like them.

Caselet 23

62. What strategy did Compaq initially adopt in its attempt to eliminate the PC market and how did it do so?

63. Why did Compaq change its strategy to produce a low cost computer and begin mail-order distributions? How can such direct selling help in competing in a third world country like India?

As new developments in technology alter the nature of competition in the personal computer industry, the distribution strategies of its major players are also changing. These changes are evident in the struggle between Dell Computer and Compaq Computer for domination of the personal computer market. Founded by a team of engineers, Compaq has from the start emphasized the engineering and research side of the PC business. For example, it was the first company to bring out a computer using Intel's new 486 chip. Its differentiation strategy was to produce high-end PCs based on the newest technology, which would command a premium price. Compaq specialized in the business market, and it developed a sophisticated dealer network to distribute, sell, and service its expensive PCs.

Dell, on the other hand, focused from the beginning on the marketing and distribution end of the PC business. Its low-cost strategy was to assemble a PC and then sell it directly to consumers through mail-order outlets, cutting out the dealer in order to offer a rock-bottom price. The company was viewed by its managers primarily as a distribution or mail-order company, and not as an engineering one.

As computers increasingly became commodity products and prices fell drastically, Compaq realized that its strategy of selling only through high-priced dealers would mean disaster. It changed its strategy to produce a low-cost computer and in 1993, began its own mail-order distribution, offering its machines directly to consumers. Its new low-cost distribution strategy has been very successful. The result is that Compaq is now battling Dell for the same customers. To compete, each company is advertising its ability to serve customers more quickly and efficiently than the other. For example, each offers next-day delivery and installation of computers as well as extended warranties. For both companies, distribution and sales strategies have become a vital part of the competitive game.

Caselet 24

64. What type of strategic change did the Mustang redesign effort demand at Ford?

65. What was Ford's approach to managing the Mustang project? What structure and culture challenges did Ford's top managers face in supporting the Mustang team? How did they meet these challenges?

66. What would you recommend to Mr. Trotman about overall strategy implementation at Ford, based on the results (to date) of the Mustang project?

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The Ford Mustang may be an American icon, inspiration for romance and rock songs, but in the brutal global auto industry of the 1990s, romance takes a back seat to cash flow. When Ford Motor Co. executives first looked at a Mustang overhaul in late 1989, the $1 billion development price tag looked far too expensive.

That's when a group inside Ford known as "Team Mustang" got together. The group of about 400 people spent three years reconciling the conflicting forces of finance and feeling.

The 1989 version of the Mustang was essentially unchanged from the dumpy 1979 incarnation, one of Ford's most trouble-plagued models. It bore little resemblance to the 1964 model that swept a generation off its feet. At the model's 1966 peak, 600,000 Mustangs were sold; by 1992, sales were down to just over 86,000. Japanese cars – even the Eord Probe, built by Ford partner Mazda Motor Corp.–were literally whizzing by in sales and popularity.

In August of that year, John Coletti and a small group of managers were assigned the task of saving the Mustang. They began with a six-month global tour of auto plants, to uncover how rivals brought out new cars for hundreds of millions less than Ford had been spending. They had the backing of Alex Trotman, executive vice president of Ford's North American automotive operations.

The "skunk works" development team flushed out a plan to bring out a new Mustang in just three years using a new product-development approach that put everyone from engineers to stylists to financial officers under one roof.

The plan would give them unprecedented freedom to make decisions without waiting for approval from headquarters or other departments. The plan for managerial autonomy cut sharply against the grain of Ford's corporate culture. It called for breaching budgetary walls and persuading department heads to cede some control to their subordinates. Dia Hothi, the program's manufacturing chief, demanded – and got – veto power over changes to the Mustang body that would threaten his plans to build the car with many of the factory tools used for the odd one. Trotman signed on to the project, and in September 1990, the group began to work.

Engineers were grouped into "chunk teams," with responsibility for every aspect of a particular piece, or chunk, of the car. The new process disposed of the standard bidding procedure; Mustang team leaders simply picked the best available suppliers and asked them to join the process.

Time and money were saved by testing most of the convertible's designs on computer rather than by building actual cars. Still, initial test-drives of prototypes showed the need for major structural revisions. An eight-week blitz of reengineering work, computer manipulations, and budget discussions began. Although, Trotman and other senior Ford executives were aware of the crisis, they kept their promise not to interfere.

Team Mustang made its September 1993 production start date; the aerodynamically designed car, styled along the lines of the original model, went on sale on December 9. Its three-year overhaul at a cost of about $700 million is about 25 percent less time and 30 percent less money than for any new car program in Ford's recent history. The automaker used the savings to price the Mustang below the $13,999, the starting price of its archrival, the Chevrolet Camaro. Ford executives hope the Mustang's low-cost salvation will inspire other Ford engineers.

Caselet 25

67. Gallo was considered to be special owning to its family owned structure and a passion to run the business. In this context explain how culture influences organizational structure.

68. Gallo had a strong value proposition in the US. Its stake in India remained questionable, due to variances in culture. Explain various determinants and aspects of culture that affect the organization.

69. Gallo found that consumers were ready to pay higher prices for quality-imported wines. This shows that uniqueness does not lead to differentiation, unless the firm's product gives value to the buyers. Discuss how differentiation is done in accordance with buyer's value.

Wine consumption in India is in no way comparable to the trends in countries like Italy and France. But the growth projections have always been attractive to the major players, especially to Ernest & Julio Gallo.

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Ernest & Julio Gallo is the largest wine maker in the world and the producer of several popular brands like Carlo Rossi wines and Bartles & Jaymes wine coolers. The company entered the Indian market through a distribution alliance with Radico-Khaitan, a Lalit Khaitan promoted company. Even though Gallo was aware of the wine drinking culture in India, it was very optimistic with the growth projections and set-up a 350 men strong International Brands Division to market through out the country, aiming at starters.

Compared to a market of 66.5 million cases per annum for Indian-Made Foreign Liquor (IMFL), the wine market is estimated at 5 lakh cases per annum. Since this includes the cheap port wines (from Goa, for instance), the relevant segment would be even small, say, at 3.5 lakh per annum. Says Richard Moore, Director of International Sales, E&J Gallo Winery: "We are here to help develop the market with Radico."

That would be easier said than done. Nevertheless, Gallo plans to develop the market by building consumer awareness and inviting consumers for testing. What's encouraging for Gallo is that Indians, especially the young and the upwardly mobile, like wines. A study by Gallo reveals that Indians see wine as a beverage of moderation, and are increasingly becoming aware of the health benefits of red wine.

Riding on this awareness, the latent demand and the first-mover advantages, Gallo plans to corner 25 percent of the 5 lakh cases per annum market by ensuring that quality wines are available to consumers at all price points. Adds Amar Sinha, President, Radico Khaitan, Gallo's Indian distributor: "'We want to be present at every price point, from the low-end (Rs 400) to the premium end (Rs.1,500) of the market." To ensure that, Gallo plans to bring in 15 brands in the Indian market to suit different pockets.

The brands to be launched include Carlo Rossi, one of its popular brands; Turning Leaf, a contemporary premium Californian wine; Wine Cellars, which highlights the true varietal nature of grapes; Andre, a popular sparkling wine, and Gallo of Sonoma County, crafted from the select varietal California grapes, one of the most coveted viticulture areas.

What make Gallo so special is its family-owned structure and the passion with which the family runs the business. Ernest, the eldest brother, who oversaw the winery's sales operations in its early days, often worked 16-hour days and took long sales trips around the country by car. In 1936, he reportedly was hospitalized six months for exhaustion. The tradition continues with Julio's grandchildren (Julio died in a car accident in 1993), Matt (35) and Gina Gallo (32), personally supervising operations.

Over the years, Gallo has emerged as the political powerhouse – the Gallos learned the value of political connections as they built their wine empire and dealt with liquor regulators at the national, state, and sometimes county levels. They have given millions of dollars to both the Republican and the Democrat candidates. But for all its success, the business has in some ways kept a low profile. Eighty-six year old Ernest Gallo gives few interviews and the winery offers none of the tours and tasting found at other California vineyards.

Gallo may have a strong value proposition in the US, but can it generate the reasonable volumes in India? To be sure, it's not really looking for volumes; all it wants is to seed the market and build on its first-mover advantage. The locally produced wines cost Rs.300-400, with the cheaper port wines available at Rs.90-100. The imported wines, with Customs (100 percent) and countervailing duties, would cost upwards of Rs.400, with the premium ones coming even dearer (Rs.1,500). Will there be takers at these prices?

As Gallo will have 15 brands straddling across the price spectrum, Sinha is confident of rustling up the numbers. For, unlike the Scotch whiskey market, which is stagnating at 1-million cases per annum, wines would start at a higher base (5 lakh cases per annum). And wine drinkers, paying Rs.300 for a locally produced wine, may not mind paying higher prices for quality, imported wines. What's more, the per capita consumption of wines in India is 0.007 liters per annum, compared to a per capita consumption of 60 liters in countries like Italy and France.

But, as many a transnational operating in India would tell you, a low per capita consumption doesn't necessarily indicate a huge market – at least, for the present. For Gallo, the challenge is not just to build its brands, but hard sell a new concept to the Indian consumer to gain any meaningful volumes.

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Caselet 26

70. How effectively has Benetton completed the three major steps in the strategic control process? Explain.

71. How can Luciano Benetton maintain strategic control within the company's structure? Will Benetton's structure be an impediment to future growth?

72. Identify the interrelationships among components of Benetton's strategic system. What are some alternative solutions to the company's problems and ways of capitalizing on opportunities?

Benetton, purveyor of brightly colored clothing in more than 7,000 shops in 110 countries, prides itself on confounding conventional wisdom. Despite the recession in its West European heartland, the Italian company's 1993 post-tax profits increased 12.6 percent on sales that were up 9.5 percent. It runs what many call tasteless advertisements – a priest kissing a nun, the bloodstained clothing of a Bosnian war victim – which offend some but bring the company a high public profile at a low cost. Benetton, still 70 percent family-owned, spends only 4 percent of sales revenue on marketing.

Now it intends to pose its greatest challenge to conventional wisdom –refuting the idea all fashion retailers eventually go out of fashion.

Benetton has thrived through a unique organizational system and a philosophy that it is a clothing services company rather than a retailer or manufacturer. Its customers are its shops, which are owned by outsiders; unlike normal franchise systems, the shops pay no royalties and Benetton accepts no returned stock. The company's in-house responsibilities are similar; Benetton handles only those bits of manufacturing – design, cutting, dyeing, and packing – that it thinks crucial to maintain quality and cost-efficiency. The rest it contracts out to local suppliers, reducing Benetton's risk and allowing it the flexibility to respond to sales trends.

The formula has worked well; unlike most retailers, Benetton is debt-free. But there are drawbacks to the developed structure. With little control or leverage over shop owners, Benetton has had problems encouraging them to expand and invest in larger quarters; only 5 percent have done so. Instead, the company is relying on price cuts of up to 40 percent to increase market share in Europe; volume is up 25 percent in some markets.

Luciano Benetton says that losing creativity is the biggest risk his company faces. He counters that possibility by building innovation into the corporate structure – the firm has 200 young designers and is setting up a new international design school. Nevertheless, most of Benetton's future profits depend on cut-and-dried business issues: diversification and cost-cutting. The company should soon formalize a joint venture for 300 shops in China, and it is fast expanding in Egypt, India, and South America. But progress abroad is not perfect. After breakneck expansion into the world's most competitive retail market – the United States – Benetton has only150 stores, down from 800 in 1988.

Benetton maintains 80 percent of its clothing production in Europe; Luciano Benetton believes that the key to competing with Asia-based producers is a computer, or what he calls "modern industrial production." In 1993, the company opened a 4,30,000-square-foot, high-tech cutting and packing plant for jeans. Plans for another plant were approved a few months later. Both will be linked by tunnels to a computerized warehouse, opened in 1986, that handles 30,000 boxes a day with a staff of 20. The company has also developed software for machine-knitted, seamless sweaters that require no hand finishing.

Caselet 27

73. "With most fast-food restaurants now offering corporate prices, the focus of competition burger chains shifted to other aspects of their producers". Discuss the steps taken by burger companies to increase the value of their product offerings.

74. What was the competitive strategy followed by Burger giants Burger King and McDonald to attract new customers?

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Competition for customers between the different hamburger chains in the mature and saturated fast-food industry had been intense during the 1990s. McDonald's, the industry leader, has been under pressure to maintain its profit margins, because, price wars have periodically broken out due to fall in prices. Taco Bell started a major price war when it introduced its $.99 taco, for instance, which pushed McDonald's and other burger chains such as Burger King and Wendy's to find ways to lower their costs and prices. As a result of price competition, all the burger chains were forced to learn how to make a cheaper hamburger, and they have been able to lower their prices.

With most fast-food restaurants now offering comparable prices, the focus of competition between the burger chains has shifted to other aspects of their products. First, the major chains are all introducing bigger burger patties. The battle was started by Burger King, which is still waging an aggressive campaign to increase its market share at the expense of McDonald's. In 1994, Burger King added a full ounce of beef to its 1.8 ounce regular patty and followed this with an intense advertising campaign based on the slogan, "Get Your Burger's Worth," directed at McDonald's burger, which was more than 40 percent lighter. The campaign worked for Burger King, and the chain's market share rose by 18 percent in 1995. As a result, in May 1996, McDonald's announced that it would enlarge its regular patty by 25 percent to beat back the challenge from Burger King and from Wendy's which has always offered a larger burger (and whose "Where's the Beef?" slogan helped it gain market share in the 1980s).

Developing bigger burgers is only one part of competitive strategy in the fast-food industry. The main burger chains are constantly experimenting with new and improved kinds of burgers to appeal to customers – burgers that add cheese, bacon, different kinds of vegetables, and exotic sauces. They are also trying whole-meal offerings, such as McDonald's "value meals," to provide a competitive package to attract customers. Finally, recognizing the competition from other kinds of fast-food chains such as those specializing in chicken or Mexican food, the burger chains have moved to broaden their menus. McDonald's, for example, offers chicken dishes, pizza, and salads and also allows restaurants to customize their menus to suit the tastes of customers in the region in which they are located. For example, McDonald's restaurants in New England have lobster on the menu, and those in Japan serve sushi. Product development is a major part of competitive strategy in the industry.

Another major competitive strategy that Burger King and McDonald's have adopted is market penetration, opening up new restaurants to attract customers. Because all the big chains have thousands of restaurants each, many analysts thought that the market was saturated, meaning that it would not be profitable to open more restaurants. However, McDonald's in particular has opened hundreds of restaurants in new locations such as gas stations and large retail stores (for example, Wal-Mart), all of which are profitable and have helped it protect its market share and maintain its margins.

Finally, a major aspect of the burger chains' competitive strategy has been to take its core competencies and apply them on an international level by building global restaurant empires. Indeed, so important have global operations become that both McDonald's and Burger King earn a significant part of their profits from their foreign operations. In the mature fast-food industry, developing new competitive strategies to tend off attacks by other companies within the industry and to protect and enhance competitive advantage is a never-ending task for strategic managers.

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Caselet 28

75. Value added activities in the Insurance sector provide competitive advantage. Substantiate in the light of the given Caselet.

76. Making use of porters five force model, analyze the insurance industry.

77. The configuration and economies of the value chain has powerful effect on competitive scope. Discuss in the light of insurance industry.

Service, that's likely to be the single-most important plank on which private players in the insurance business are going to differentiate themselves from the public sector major, the Life Insurance Corporation (LIC). For, an initial look at the products being launched by

HDFC Standard Life Insurance and ICICI Prudential Life Insurance does not show major differences in the product offerings of the private players and the LIC. Even the products have been christened similarly. So, if LIC has money back policies (it's best-selling products), ICICI-Prudential calls its variant as ICICIPru CashBack and HDFC Standard Life actually calls it Money Back. Says Pankaj Seith, Head of Marketing, HDFC Standard Life: "That's deliberate because when the company and the product is new, a customer may not be able to appreciate too innovative a product. We will soon introduce more innovative products."

The innovations come in terms of the flexibility private players' offer; the way products can be customised to suit individual requirements. For instance, ICICI Prudential offers a set of basic products to which a consumer can add health and term (maturity period) riders and design his policy depending on his or her needs. Says Saugata Gupta, Marketing Head at ICICI Prudential: ''the basic philosophy of our product design is to give the consumer freedom to choose and pay only for what he needs."

So, ICICI has five basic products, which come with four add-on riders like Level Term Cover (double the cover), Critical Illness Benefit, Accident and Disability Benefit, and Major Surgical Assistance Benefit. The idea: A customer who buys a basic product (say, a pizza), and depending on his age and need, he can take the add-on riders (toppings) by paying a nominal premium. HDFC Standard Life provides similar flexibility.

For instance, a customer may not take a critical illness benefit if he's young and not married. But as he gets married, he may like to double his cover by taking a level term cover. As he grows old, he may take the critical illness benefit and the major surgical assistance benefit. Similarly, someone having a credit card may not need an accident benefit. A common plank that cuts across spectrum is need-based selling. What's more, the products launched by the private players are competitively priced.

LIC, though taking note of competition, doesn't seem to be too impressed with the product offerings. Says PN Subramanian, Executive Director (Marketing), LIC: "The add-on riders provide a lot of flexibility to a product. Right now, we may not have products that match on a product-to-product basis with those being offered by private players. But we have 61 schemes which can be combined to offer customized solutions."

LIC believes that a customer's prime concern in an insurance product is the kind of cover he's getting and how much he is likely to earn upon maturity. "In some cases, while the premium installment could be less than ours, upon maturity we offer a better maturity value," says Subramanian. "They promise guaranteed additions at the end of 20 years; we offer the same. They promise guaranteed loyalty additions; we don't but we have a track record of providing loyalty additions," adds Subramanian.

Any new player entering the insurance business would try to differentiate its product offering, but it's in the service delivery system, which could become the key differentiator between both pre-sell and post-sell service. For instance, the agents (private players euphemistically call them consultants or insurance advisors) are being specially trained – after they get the 100-hour mandatory training from institutes like NIS SPARTA, ILFS-promoted Schoolnet, College of Insurance – to customize solutions after assessing individual needs.

Companies are also investing heavily in back-end infrastructure, especially IT systems. HDFC Standard Life, for instance, will connect all its branches that will allow for real-time access, enable its consultants with MIS support and premium calculator in a specially-designed 'Consultants Corner', and set-up call centers. ICICI Prudential is also putting in place a host of systems to provide superior customer service. Royal & SunAlliance, which will enter the non-life insurance business, has set-up an IT subsidiary, Royal & SunAlliance IT Solutions (India), which will provide back-end services for its operations worldwide.

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Caselet 29

78. What is Boston Beer's competitive differential advantage?

79. How are environmental factors contributing to the company's success?

80. What are the marketing limits of Boston Beer's reliance on premium pricing to differentiate its product?

During the past decade, Jim Koch has built Boston Beer Co. into a $50 million company and the largest specialty brewer in the United States. Boston Beer has won market share by hammering away at the key weaknesses of imports – lengthy shipping times and less hearty, made-for-export formulations-while touting its own quality ingredients and brewing processes. Indeed, Koch's beer, Samuel Adams Boston Lager, has won a number of industry awards. On four separate occasions at the Great American Beer Festival, it has been voted the Best Beer in America; it also has received six gold medals at the festival's blind tastings. Consumer response has been strong. Sales jumped 63 percent in 1992, when the company went national and placed its beer in the bars and restaurants of 48 states.

Initially, however, Koch's marketing challenge was deceptively simple: Create sales in a market that focuses as much on the image of the consumer who drinks the product or the fantasy world it creates. He had created a full-bodied beer to compete against premium imports in the high end of the beer market. Koch believed that the quality of his product would be his best sales tool. While other microbrewers aimed their marketing at more sophisticated beer consumers, however, Koch was determined to sell directly against the imports. Koch based his marketing approach on his product, using a recipe for a pre-prohibition beer that was heavier in taste and more full-bodied than Budweiser or Miller. His compliance with Germany's strict beer-purity laws and use of "noble" hops was aimed at attracting a select group of beer drinkers past their college days who could pay premium prices for good-tasting beer.

With only $240,000 in start-up capital, Koch hired a brewery to brew his beer; besides saving the $10 million it would cost to build a state-of-the-art brewery from scratch, this move gave Koch access to superior facilities and skills. The downside was that the beer would retail at $20 a case, roughly 15 percent more than premium imports such as Heineken. "It was a marketing nightmare," he says. He began the slow process of convincing retailers–bars, restaurants, supermarkets, and package stores–as well as consumers to try his beer and to pay the higher price. He relied on persistent personal sales calls, occasionally visiting a potential customer 15 times before winning an agreement to carry the product. Many told him: "My customers don't drink the beer; they drink the advertising."

He responded in 1986, with a $100,000 marketing and advertising campaign that sold the beer rather than the lifestyle. No beaches, bikinis, or funny dogs were featured. Instead, print ads proclaimed that imported versions of Heineken, Beck's, and St. Pauli Girl did not pass Germany's purity standards because they contained cornstarch or sugar. In addition, Koch appealed to drinker's patriotism by playing up Samuel Adams' domestic origins: "Declare your independence from foreign beer." The brashness of the campaign garnered media attention and further reestablished Samuel Adams' brand-name recognition. In addition, Koch redefined point-of-sale marketing. Samuel Adams table tents featured more than the Boston Beer logo. They also include the bar's name and a listing of all its beverages. While ensuring that Boston Beer had the production capacity to supply each new market as the company expanded, Koch began hiring sales reps. In 1989, the firm had fewer than a dozen; today it has 70 across the nation – about the same as beer giant Anheuser-Busch. Highly personalized selling is still the company's hallmark; the sales force calls on 1,000 accounts a week, and each salesperson carries a supply of hops to be able to offer a sample.

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Caselet 30

81. How far is restyling of cars important for Ford to sustain its market share?

82. Is Ford's basic strategy correct?

83. Comment on the effectiveness of reducing costs to boost sales.

In the 1990s, Alex Trotman, Ford Motor's current CEO, faced the problem of how best to compete in an increasingly competitive car industry. On the one hand, Ford like other large US carmakers, had been forced to find ways to reduce costs to compete effectively against low-priced competitors from Japan and Europe. On the other hand, Ford had to differentiate its cars from its rivals to make it an attractive decision for the customer.

To reduce costs, Ford has forged ahead with a global cost-cutting plan called 'Ford 2000'. The plan includes producing very similar models of cars and trucks that can be sold globally to customers in all the countries of the world in which Ford does business. It also means centralizing all car design activities at five global design centers to reduce costs. Finally, the plan reduces the number of different car platforms (the frames on which the car models are based) and the number of component parts, again to reduce costs. For example, Ford used to use more than thirty different kinds of car horns. Now it employs only three, which it buys in bigger volume from a few manufacturers. Ford projects a $ 1 billion saving in engineering costs and $11 billion in reduced plant investment costs from this plan.

To make Ford's products unique, CEO Trotman also authorized a radically new program of car styling. Throughout the 1970s and 1980s, Ford had been known for the big, boxy, plain look of its cars, a look that had changed little in decades. From the mid 1980s on, Ford began to restyle all its cars. Trotman's multibillion-dollar program culminated in the radical redesign of the best-selling car in the United States, the Ford Taurus, which Ford launched in the fall of 1995. The accentuated curves and oval shape of the Taurus reflected the redesign of Ford's other cars, such as the Lincoln Continental, the Mustang, and the Mondeo, Ford's first world car.

By 1996, however, it became clear to Trotman and other top Ford executives that the dual push to reduce costs on a global level while launching a whole new series of redesigned global cars was not working. The enormous development costs of the new cars had raised costs dramatically and forced up car prices. The typical well-equipped Taurus, for example, was retailing for more than $20,000, more than $3,000 above the old model, and customers were experiencing sticker shock. In essence, all the cost savings brought about by the Ford 2000 plan were being eaten up by the high costs associated with its push to produce a radically new, differentiated line of cars. By mid 1996, the Honda Accord had once again become the best-selling car in the United States, Ford's profits had plunged 58 percent, its stock price was flat, and many analysts were worried that Ford's new strategy was not working.

In May 1996, Trotman announced a new plan to bring together the cost and differentiation sides of Ford's business-level strategy. Trotman argued that Ford's basic strategy was correct and that all the benefits of the launch of new cars and the saving in costs would be reaped well into the next century. In the short-term, however, to boost sales Ford announced that it would bring out stripped-down models of the Taurus and other cars to reduce price and attract more customers. Furthermore, recognizing that its new cars were costing too much to develop, Ford announced that it would close down two of its global design centers and further consolidate its design program to reduce development costs. Trotman and his top management team have continued to search for ways to align both the cost and differentiation sides of the business-strategy equation to provide Ford's customers with a well-designed car at a price they are willing to pay. By the fall of 1996, there were signs that this was paying off, as sales rose sharply.

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Caselet 31

84. What were the reasons for the decline of Nissan after peaking in 1985?

85. "As sales and profits declined, the company realized that it needed to rethink its US strategies". What did Nissan do to revise its US business?

86. What are the disadvantages of the 'low-cost' strategy Followed by Nissan?

Nissan, the Japanese automaker, had watched its US sales slide 35 percent from their peak in 1985. The reason was that the quality and design of its cars simply did not keep up with those of other Japanese competitors, such as Honda, Mazda, and Toyota. While these companies had been innovators in introducing stylish, new round-car designs and cars such as the Miata and the Previa for new market segments, Nissan plodded along with its boxy Stanzas and Maximas, which were at least as expensive as the cars of its rivals. As sales and profits declined, the company realized that it needed to rethink its US strategy. As part of a company wide shakeup, Nissan appointed Earl J Hester berg as vice president and general manager of the US Nissan division and gave him wide authority to turn the US division's fortunes around.

Recognizing that Nissan was now far behind its rivals in terms of its reputation for product innovation and design, Hester berg decided on a new strategy for introducing the new Nissan mid-sized car: a cost-leadership strategy. The mid-sized cars of Nissan's rivals - the Toyota Camry, Honda Accord, and Mazda 626 – had increased steadily in size and price with each new model. A well equipped Camry or Accord, for example, had a sticker price of more than $19,000. Hester berg decided that Nissan would not increase the size of its car and hence would keep its cost and price low. Nissan's designers were instructed to aim for a car that would be cheap to produce but of a quality comparable to that of other Japanese manufacturers. The result was the Nissan Altima, whose four-door base model lists for $14,000 and the better-equipped one costs thousands less than the Camry or Accord. Nissan kept costs low by deliberately restricting the number of different models to these two, an approach that both Ford and Toyota, among others, have copied.

Another part of Hester berg's strategy was to concentrate most of Nissan's marketing budget (more than $100 million) on the Altima and the Nissan Quest, its minivan, and to focus on building a large market share for these cars in order to build sales revenues. In marketing, Nissan was careful to emphasize the value of the Altima by comparing its quality with that of the Toyota Lexus, which costs three times as much.

The results of this low-cost strategy were astounding. Nissan hoped to sell 100,000 cars in its first year; it sold more than 140,000. Although the profit margin on each car was lower than it was for the Accord or the Camry, the extra sales volume brought Nissan a huge profit. Its pursuit of a low-cost, low-price strategy in the mid-sized car segment has been very successful and has hurt its competitors. For example, for the first time in its history, Honda was forced to offer discounts on its Accord, and sales of the Toyota Camry and Mazda 626 were below projections. Clearly, a low-cost strategy can pay big dividends.

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Caselet 32

87. What were the reasons for success of rival companies (master card advice) during 1990s leading to a decline in Amex's business?

88. "By 1992, more than 2 million of its (Amex) users had deserted Amex. What were the steps taken by Amex to revise its business?

American Express Company's green, gold, and platinum credit cards used to be closely linked with high status and prestige. Obtaining an American Express (AmEx) card required a high income, and obtaining a gold or platinum card required an even higher one. AmEx carefully differentiated its product by using famous people to advertise the virtues – exclusively and uniqueness – of possessing its card. Consumers were willing to pay the high yearly fee to possess the card, even though every month they were required to pay off the debit balance they had accumulated. AmEx's cards were a premium product that allowed the company to charge both customers and merchants more because it offered

quality service and conferred status on the user. For many years the credit card operation was the money-spinner of AmEx's Travel Related Services (TRS) division, and the company's stock price soared as its profits reached more than $200 million by 1990.

AmEx's differentiated strategy, however, suffered in the 1990s. Rival companies such as Master Card and Visa have demonstrated how their cards can be used at locations where AmEx's cannot. Moreover, as they make clear, anybody can own a MasterCard or a Visa gold card; it is not just for the fortunate elite. In addition, various companies and banks have banded together to offer the consumer many other benefits of using their particular credit cards. For example, banks and airlines have been forming alliances that allow consumers to use a bank's credit card to accumulate miles toward the purchase of an airline's tickets. Moreover, large companies such as AT&T and General Motors have issued their own credit cards that offer customers savings on their products, often without a yearly fee.

The emergence of all these new credit cards has broken the loyalty of AmEx customers and shattered the card's unique image. It has now lost its differentiated appeal and become one more credit card in an overcrowded market. By 1992 more than 2 million of its users had deserted AmEx, and the firm took a one-year loss of more than $100 million.

AmEx is trying to fight back and restore profitability to its division. To reduce costs, it announced a layoff of more than 5,000 employees in the TRS division, it started its own airline mileage program to try to attract its users back, and it has made its card more available to potential users. It has also tried to increase the number of outlets that accept the card by lowering the fees it makes merchants pay. For example, the card can now be used at Kmart. Finally, it hired a new advertising agency to try to restore its differentiated appeal. These moves have had some success in attracting customers, and in 1996 Visa and Master Card fought hard to prevent the banks that issue their cards from issuing AmEx cards as well. However, in making its card's more accessible, AmEx has reduced the card's differentiated appeal and if anybody can use the card and use it anywhere, why choose AmEx?

Caselet 33

89. Discuss the reasons for the dwindling fortunes of the company during 1980s.

90. "This state of affairs changed in 1990, when David W Johnson arrived." What strategies did he pursue to revitalize the company?

91. Drawing from the case, when do you think should the company pursue the hold-and-maintain strategy?

The name Campbell Soup is closely linked with its well-known soups, and for many years they have been the source of the company's profitability. However, during the 1980s, the company's fortunes declined as its top executives failed to manage the business and keep it abreast of changes in the environment. While competitors such as Heinz and Nestle were innovating products and introducing new cost-saving machinery, Campbell was content to do business the way it had always done, even though its costs were rising and its sales were stagnant. This state of affairs changed in 1990, when David W Johnson arrived from Gerber Products to revitalize the company.

Johnson moved immediately to reduce costs and to increase profits. He closed twenty inefficient plants, including Campbell's famous multistory Camden, New Jersey, factory, where it had made soup in the traditional way in large copper pans. Moreover, he fired 16 percent of Campbell's work force and divested many of Campbell's unprofitable businesses. All these actions were part of his turnaround strategy to move Campbell back to a hold-and-maintain position in the food industry in order to redeploy its resources so that it could compete for market share against its more efficient rivals. His actions were successful, and the company's stock price doubled in one year as profits rebounded.

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Although analysts have applauded his efforts, they became concerned that Johnson might be pursuing his cost-cutting strategy a little too vigorously and at the expense of new-product development. Normally, a hold-and-maintain strategy includes investing resources in developing new products that build and maintain market share. However, Johnson killed many of the company's new product lines because they were unprofitable and seemed reluctant to invest much in new-product development. It soon became clear that the pause in product development was just to give Johnson and his top management team time to study the situation carefully. By 1996 Campbell was making record profits and was once again in a very strong position after having brought out a large number of successful new products.

Caselet 34

92. How do you think Shell consolidated its position against its counter parts in the 1980s?

93. As a CEO of an oil company, how much importance do you give to strategic planning?

94. Do you support Shell's mode of visionary planning?

Royal Dutch/Shell, the world's largest oil company, is well known for its addiction to strategic planning. Despite the fact that many management gurus and CEOs now consider strategic planning an anachronism, Shell is convinced that long-term strategic planning has served the company well. Part of the reason for this success is that at Shell planning does not take the form of complex and inflexible ten-year plans generated by a team of corporate strategists far removed from operating realities. Rather, the planning process generates a series of "what if" scenarios whose function is to try to get general managers at all levels of the corporation to think strategically about the environment in which they do business.

The strength of Shell's scenario-based planning system was perhaps most evident during the early 1980s. At that time the price of a barrel of oil was hovering around $30. Moreover, industry analysts were generally bullish; many were predicting that oil prices would increase to around $50 per barrel by 1990. Shell, however, was mulling over a handful of future scenarios, one of which included the possibility of a breakdown of the OPEC oil cartel's agreement to restrict supply, an oil glut, and a drop in oil prices to $15 per barrel. In 1984 Shell instructed the managers of its operating companies to indicate how they would respond to a $15 per barrel world. This "game" set off some serious work at Shell exploring the question, "What will we do if it happens?"

By early 1986 the consequences of the "game" included efforts to cut exploration costs by pioneering advanced exploration technologies, massive investments in cost-efficient refining facilities, and a process of weeding out the least-profitable service stations. All this planning occurred at a time when most oil companies were busy diversifying outside the oil business rather than trying to improve the efficiency of their core operations. As it turned out, the price of oil was still $27 per barrel in early January 1986. However, the failure of the OPEC cartel to set new production ceilings in 1985, new production from the North Sea and Alaska, and declining demand due to increased conservation efforts had created a growing oil glut. In late January 1986 the dam burst. By February 1 oil was priced at $17 per barrel, and by April the price was $10 per barrel.

Because Shell had already visited the $15-per-barrel world, it had gained a head start over its rivals in its cost-cutting efforts. As a result, by 1989 the company's average oil and gas exploration costs were less than $2 per barrel, compared with an industry average of $4 per barrel. Moreover, in the crucial refining and marketing sector, Shell made a net return on assets of 8.4 percent in 1988, more than double the 3.8 percent average of the other oil majors.

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Caselet 35

95. What is the MM stand regarding the relevance of dividends on the value of the firm?

96. Dividend pay outs convey information about the company. What in your view is the management trying to convey by declaring dividends?

Why do companies pay dividend? This has been the focus of controversy and confusion among academics and financial practitioners for a very long time. As the classic argument in financial economics (the Modigliani and Miller theory) goes, how can investors benefit from a dividend when it is in effect paid, rupee for rupee, out of the value of shares? When one rupee of a company's earnings is distributed as dividends, it is only logical that share prices decline by a similar amount to reflect the decline in overall wealth. This means that shareholders are wealth neutral as far as dividends are concerned.

The answer to this puzzle lies in the existence of taxes and other imperfections in the world of the capital market, otherwise absent in economic theory. Taxes change the income preferences of both companies and investors and consequently a rupee of dividends need not result in a corresponding decline in share prices. Though dividends are tax free for shareholders, companies have to shell out 10 percent dividend tax. This means shareholders can receive dividends and still end up positive overall.

A more popular explanation for the corporate practice of dividend pay outs has its roots in the perception that the act signals the management's assessment of future prospects. Paying dividends proves that a firm is able to generate cash rather than just accounting numbers. Besides dividends also have the advantage of simplicity and visibility. In addition, dividend announcements tend to be future oriented as opposed to accounting statements which report past performance. In effect, dividends appear to be the appropriate vehicle for regular, relatively frequent communication of management's assessment of firm's prospects.

Caselet 36

97. In spite of the various benefits of a share buy-back, dividend pay outs will always be popular. Make a comparison of buy-backs vis-á-vis dividends.

98. What are the salient features of the guidelines issued by SEBI with regard to buy-back?

By all accounts, share buy-back programs are extremely popular among American companies. But have the investors benefitted? Evidence in the US shows that the share prices of those companies which announced buy-back went up significantly and consistently outperformed the market vis-á-vis stocks of companies that did not announce any buy-back program. What is so good about buy-backs? Apart from being considered a superior method of disbursing excess cash available with the company as compared to dividends, it is also one of the more effective methods of conveying to the market that the stocks are undervalued. Buy-back also has anti takeover implications. By increasing the threshold value of companies, buy-back make hostile takeovers a costly proposition.

Though buy-back allows promoters to use company funds to enhance their stake, it has its plus points too. With a higher stake, promoters may think twice before indulging in value minimizing transactions. When companies borrow to buy-back shares, the resulting leverage effect would improve the bottomline and the return on net worth.

So what do we finally have? Buy-back, just like any other financial innovation definitely has its own benefits. At the same time, financial innovations are like wild horses. Unless tamed to suit domestic requirements, they tend to run amok leading to disastrous consequences.

Caselet 37

99. Value based management can best be understood as a marriage between a value creation mindset and the management process and systems that are necessary to translate that mindset into action. Explain.

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100. What is a value driver. Elaborate on the role of value drivers in value-based management.

Recent years have seen a plethora of new management approaches for improving organizational performance: total quality management, flat organizations, empowerment, continuous improvement, reengineering, kaizen, team building and so on. Many have succeeded, but quite a few have failed. Often the cause of failure was performance targets that were unclear or not properly aligned with the ultimate goal of creating value. Value-Based Management (VBM) tackles this problem head on. It provides a precise and unambiguous metric value upon which an entire organization can be built.

The thinking behind VBM is simple. The value of a company is determined by its discounted future cash flows. Value is created only when companies invest capital at returns that exceed the cost of that capital. VBM extends these concepts by focusing on how companies use them to make both major strategic and everyday operating decisions. Properly executed, it is an approach to management that aligns a company's overall aspirations, analytical techniques, and management processes to focus management decision making on the key drivers of value.

VBM is very different from the 1960s-style planning systems. It is not a staff-driven exercise. It focuses on better decision making at all levels in an organization. It recognizes that top-down command-and-control structures cannot work well, especially in large multibusiness corporations. Instead, it calls on managers to use value based performance metrics for making better decisions. It entails managing the balance sheet as well as the income statement, and balancing long- and short-term perspectives.

When VBM is implemented well, it brings tremendous benefit. It is like restructuring to achieve maximum value on a continuing basis. It works. It has high impact, often realized in improved economic performance.

Yet value-based management is not without pitfalls. It can become a staff captured exercise that has no effect on operating managers at the front line or on the decisions that they make.

A few years ago, the Chief Planning Officer of a large company gave a preview of a presentation intended for his Chief Financial Officer and Board of Directors. For about two hours he gave details of how each business unit had been valued, complete with cash flow forecasts, cost of capital, separate capital structures and the assumptions underlying the calculations of continuing value. When the time came, the team was given A+ for their valuation skills. Their methodology was impeccable. But they deserved an F for management content.

None of the company's significant strategic or operating issues were on the table. The team had not even talked to any of the operating managers at the group or business unit level. Scarcely relevant to the real decisions makers, their presentation was a staff-capture exercise that would have no real impact on how the company was run. Instead of value-based management, this company simply had value veneering.

Caselet 38

101. More value from the corporate center' How is this possible in the case of an equity carve-out?

102. In an equity carve-out, the changed relationship between the corporate center and the business unit has its effect on human resources as well. Elaborate.

The purpose of a corporate center is to do for the subsidiaries what they cannot do effectively for themselves. Many structures serve this purpose: operating companies, multibusiness companies, holding companies, conglomerates, and even investment firms such as Berkshire Hathaway, all are different ways for a single, central parent to deliver value to its business units. The newcomer to the list is the equity carve out.

Like its predecessors, the carve-out enables a subsidiary to draw on the wisdom, experience and practical assistance of the executive center. But it also offers something new: a degree of independence that appears to foster innovation and growth.

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An equity carve-out is the sale by a public company of a portion of one of its subsidiaries common stock through an initial public offering. Each carved-out subsidiary has its own board, operating CEO, and financial statements, while the parent provides strategic direction and central resources. As in any other corporate structure, the parent can provide executive management skills, industry and government relationships, and employee plans, and perform time-consuming administrative functions, freeing the subsidiary's CEO to concentrate on products and markets.

A study of equity carve outs in the US has shown that carve-outs are an effective way for companies to exploit growth opportunities and increase shareholder value. So what is it about a carve-out that promotes such growth? The answer appears to lie in the changed relationship between the corporate center and the business unit, and the effect this has in three important areas: corporate governance, human resources, and finance.

Caselet 39

103. The irrelevance of capital structure rests on an absence of market imperfections. Explain the effect of taxes, agency costs and bankruptcy costs on the value of a firm.

104. "Insider advantage" has been cited in much of the post-MM literature as one of the reasons that decisions to issue debt or equity can affect the value of a company. Explain.

I have a simple explanation (for the first Modigliani-Miller proposition). It's after the ball game, and the pizza man comes up to Yogi Berra and he says, "Yogi, how do you want me to cut this pizza, into quarters?". Yogi says, "No, cut it into eight pieces, I'm feeling hungry tonight.". Now when I tell that story the usual reaction is, "And you mean to say that they gave you a [Nobel] prize for that?".

– Merton Miller from his testimony in Glendale Federal Bank's lawsuit against the US government, December 1997.

Franco Modigliani and Merton Miller's proposition that a company's value is independent of its capital structure – no matter how you slice it, (published in the June 1958 issue of the American Economic Review) laid out a set of ideas that came to be known at different times as the "bombshell assertions,", the "irrelevance propositions,", or simply M&M. In 30-odd pages, the authors expounded radically new ways of thinking about capital structures and markets – ways that helped win Nobel prizes in economics for Modigliani, a professor at Massachusetts Institute of Technology, and Miller, a professor at University of Chicago Graduate School of Business.

In effect, M&M says don't try to make your shareholders wealthy by adjusting debt levels, because – at least in the somewhat idealized world in which economists operate, and sometimes in practice – it won't work.

Instead, M&M argues, the company's best capital structure is one that supports the operations and investments of business.

"An investment banker has a recap proposal for your company and he dumps on your desk a book with 100 pages of projections about earnings per share impact, return on assets, and all kinds of accounting numbers," explains Jeremy Stein, who teaches corporate finance at MIT's Sloan School of Management. "So you are thinking, Which of these [numbers] is relevant?". What M&M tells you, says Stein, is to disregard the numbers and focus instead on how the recap would change your operating behavior.

Controversial from the beginning, the irrelevance propositions are proving to be anything but irrelevant, still raising hackles in academic circles.

Indeed, an entire general of academics has been hard at work bringing M&M down from the 'frictionless' world of theory to the roll-up-your-sleeves world of empirical research. What impact, these researchers have asked, do things like managerial self interest, insider's knowledge and the possibility of bankruptcy have on the value of a company? How much attention should each be given in the design of capital structure?

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Caselet 40

105. Evidence indicates that increasing shareholder value does not conflict with the long-term interest of other stakeholders. Justify.

106. Managers are less likely to focus on value creation when market prices of shares do not reflect good information. Justify this with reference to an economy with closely held ownership and control.

The fundamental goal of all business is to maximize shareholder value. This statement can be either commonplace or controversial depending on where you are. In the United States, top management is traditionally expected to seek to maximize shareholder value. Failure to do so results in pressure from the Board of Directors and activist shareholders, or even in hostile takeover bids.

Elsewhere in the world, companies make different implicit tradeoffs among their various stakeholders. In continental Europe and Japan, intricate weightings are given to the interests of customers, suppliers, workers, the government, debt providers, equity holders, and society at large. Maximizing shareholder value is often seen as short-sighted, inefficient, simplistic and even antisocial. Proponents of this balanced stakeholders approach cite the high standards of living and rapid economic growth in Europe and Japan and the success of Japanese auto and consumer electronics companies to support their view.

But the evidence against these arguments and in favor of shareholder wealth maximization is mounting. There is greater evidence to show that winning companies have higher productivity, greater increases in shareholder wealth, and greater employment gains than their competitors in the long run. In other words, even in an increasingly competitive world, winning companies provide benefits for all stakeholders. There is no evidence of any conflict between shareholders and employees.

Caselet 41

107. What in your opinion are the reasons for the increasing industrial sickness in the country?

108. Studies have shown that the BIFR's record in reviving sick units has been dismal. Comment on the role of BIFR and financial institutions in this regard.

Recession has never boded well for industry, and this year's general slowdown has claimed its victims in more ways than one. While the malaise of plummeting profits, shrinking market shares and bleeding bottomlines has affected a large number of companies including leading ones, the sharp increase in the number of ailing companies tottering into the BIFR hospital indicates that industrial sickness is gaining epidemic proportions.

After liberalization, there was much hype over India's so-called industrial revival, thanks to the upsurge in production, globalization of industry and so on. But all the hoopla about industrial resurgence revolved around the the performance of a handful of blue-chips, which shot ahead on all profitability parameters. Scant attention was given to reviving the huge and burgeoning set of sick industries. This not only led to a skewed pattern of industrial growth but also locked up crores of rupees and jeopardized the job prospects of thousands of workers employed in these units.

Caselet 42

109. Stock option plans have been used widely by companies in the Information Technology sector. What according to you is the rationale behind this.

110. Stock option plans aligns the personal interests of employee – managers with that of the company. Discuss.

Politicians are sometimes weighed against gold or silver, as a mark of tribute from their followers. Maybe they should consider offering to be weighed against corporate stock options. They would certainly be on to a good thing. Offerings in gold or precious stones equivalent to the weight of even a politician built along the most generous lines would, no doubt, add up to a substantial sum. But it can never quite match in value an offering by way of stock options in, say, Microsoft or IBM, for even a fraction of a politician's mass.

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The size of the stock option pie is truly staggering. One estimate in the US put the value of stock options to employees of the top 100 companies on the NASDAQ at 220 billion dollars – a sum equal to 9 percent of the market capitalization of companies that comprise the NASDAQ-100 stock price index.

Employee stock options may not be as much the rage among promoters and corporate managements in India as they are in the West. But interest in the concept is slowly gathering momentum, and is linked to the recent practice of promoters option out of active day-to-day management control of companies promoted by them. Indian industry today is exposed to a heightened degree of internal and external competition.

Domestic promoters who have got accustomed to wearing the halo of managerial success now find that there is a danger of much of the gloss of managerial capability being taken away from them. Professional management is being presented to the shareholders as responsible for stewarding the affairs of the company, much like the monkey using the cat's paw to test the intensity of the fire. If the professional management does not perform, one set of them can conveniently be replaced by another, and shareholder feelings assuaged. A stock option merely serves to reinforce the illusion of a professional management acting in alliance with the promoter shareholder.

Caselet 43

111. The cost of capital always depends on the risk of the project being analyzed; hence the company cost of capital is irrelevant. Do you agree?

112. GTN is looking to raise funds to finance its exiting activities and proposed expansion. But it is not sure whether to raise debt or equity and the effect of financial leverage on cost of capital. As a financial analyst you feel that there does not exist any relationship between financial leverage and cost of capital. State the assumption based on which the above conclusions is arrived.

GTN Industries Ltd. is a diversified company with three operating divisions:

- The telecom division handles the mobile phone business
- The steel divisions controls the steel tubes and pipes
- The textile division manages the cotton fabric trade

These divisions are highly independent. GTN's financial experts are concerned with applying financial controls and allocating capital between the divisions. Right from the date of incorporation the company is following a conservative policy that can be judged by the high credit ratings of its bonds that yield 6%, just 1% over the government bonds. GTN previous Financial Officer, Mr. Raghunath Reddy, insisted on a required return of 12% for all capital expenditure for all the three divisions. Till the period he was controlling the finance of the company, the hurdle rate never changed irrespective of the changes in the market interest rate and inflations. However the new CFO, Mr. Adarsh Saraf had changed the entire scenario of the GTN financial policies. He decided to set different cost of capital for each division. The new CFO asked his colleagues not to restrict themselves to jut one copybook method but to examine alternative estimates of the hurdle rate. Mr. Raghunath Reddy insisted on the long term historical average as the only forecast of market risk premium. Mr. Saraf argued strongly that alert and modern investors require much lower returns.

Caselet 44

113. In what ways the principal-agent conflict in the mutual fund industry can be minimized?

114. Firm leverage can be increased till the time where the marginal benefits accrued due to the reduction in managerial agency cost and the marginal costs of competitor's aggressiveness strikes a balance. Do you agree?

THE mutual fund industry suffers from a principal-agent problem. The portfolio management fee is a fixed percentage of the assets managed. Since it is not linked to performance, there is no incentive to outperform the market. This may, perhaps, explain why retail investors' direct exposure to the equity market is still higher than their exposure through mutual funds. This may be an unhealthy trend, for professional money managers

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are more skilled in managing portfolio than the average retail investor. If the market sinks, the average retail investor who has direct exposure in stocks may be caught unawares. One way of reducing the principal-agent problem is to link the portfolio management fees to the investors' payoffs. This essentially means that a sizable proportion of the management fees should be linked to funds' long-term performance. Importantly, such a compensation structure should be disclosed in the newsletter for the benefit of the investors. That may, perhaps, bring more retail money into mutual funds. There is a conflict of interest between a principal and his agent. In investment management, the investors are the principals, and the asset management companies (AMCs) their agents. The principal-agent problem arises because investors cannot monitor the actions of the professional money managers who work for the AMCs. Further, the payoff to the AMCs does not typically depend on the actions taken on behalf of the investors. There is, therefore, no incentive for the money managers to act in the best interest of the investors, or so goes the reasoning. The relationship between investors and professional money managers is, therefore, one of mistrust. That SEBI does not permit mutual funds to guarantee returns only compounds the problem.

Caselet 45

115. Discus the uses of VAR.

116. What are the limitations of Value at Risk?

All of life is the management of risk, not its elimination.

— Walter Wriston, former Chairman of Citicorp

The truth may be bitter, but every organization is operating in a world of uncertainty. Everything is prone to change and nothing is certain. In this changing scenario, all the firms are exposed to various kinds of risk – business as well as non-business. Risk is defined as the volatility of unexpected outcomes, generally the value of assets or liabilities of interest. There is no permanent pill to overcome the risks. Since the risks cannot be eliminated, they have to be mitigated. Else they may prove very costly to the organizations. Therefore a mediocre solution for managers would be to manage the risks.

Lately, Risk Management in itself has become an independent function. No organization can let go this function. In the business of managing risks, most adept ones succeed, some of them fail, and some others attempt to create a competitive advantage by judicious exposure to financial risks. Risk management is the process by which various risk exposures are identified, measured and controlled. Once the risk manager has identified the factors contributing to risk, their quantification would enable the manager to know how much he is prone to lose and facilitates him to devise strategies to mitigate the loss.

In the entire risk management process, due importance has to be given to quantification of risk. The traditional standard deviation method of quantifying the risk finds little relevance in this changing world. Today managers are more interested to know precisely the amount of loss they are likely to incur under certain circumstances. This demand by the managers as well as certain other failures owing to the use of derivatives inspired Till Guldimann, head of Global Research at J.P.Morgan in the late 80s to come up with a novel idea to measure the worst expected loss over a given horizon under normal market conditions at a given confidence level and the result is VaR. In short, VaR provides its users with a summary measure of market risk.

Once the risk is identified and quantified can be controlled deploying a number of techniques. Ability to deal with risk differs from manager to manager. No single technique can be prescribed to each and every situation. But every manager should be cautious enough to ensure that he does not regret for any decision he has taken. Even while using the most successful derivative instruments, the managers should not forget that they are capable of leading to losses as well. VaR measures are no panacea for managers. They only give a reliable estimate of risk but do not give means of lessening it. VaR can be viewed as a necessary but not sufficient procedure for controlling risk.

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Caselet 46

117. What are the steps required for the proper implementation of ERM within an organization so that the CFOs can perform their role efficiently?

118. Comment on the hybrid financial instruments that can be used in ERM.

119. Comment on some of the best practices followed by the CFOs

CFOs must have a thorough understanding of the various risks their organizations face. A focus on financial risks alone is incorrect. Indeed, financial risks are the result of a company's strategic and operational decisions. A smart CFO must have a thorough understanding of the company's strategy and its implications. Only then will the CFO be able to come to grips with the risks faced by the company and implement ERM effectively. Enterprise risk management (ERM) is all about the identification and assessment of the risks of the company as a whole and formulation and implementation of a company wide strategy to manage them. At the outset, CFOs must appreciate that ERM combines the best of three different but complementary approaches. The first is to modify the company's operations suitably. The second is to create an all-purpose cushion by reducing debt in the capital structure. The third is to use insurance or financial instruments like derivatives to transfer the risk, at a price, to a third party. The CFO must weigh the different options before implementing a risk mitigation strategy. This calls for a strategic rather than a tactical or transaction oriented approach towards risk management. CFOs must also appreciate that managing risk in an integrated way is always better than doing so in a piece meal fashion. The CFO must consider various factors before choosing between a financial solution, revolving around derivatives or insurance and an organizational solution that calls for a major revamp of operations. Strategic risks invariably need organizational solutions. Such risks are built into the very nature of the business. But, in many other situations, financial solutions such as derivatives or insurance may be more efficient than organizational solutions. One way to resolve this dilemma is to estimate the amount of capital investment to be made to deal with a risk. This can be compared with the costs involved in transferring the risk such as insurance premium or option premium. Financial solutions are often useful when enough data is available to analyse, model and evaluate the event. If this is not the case, operations may have to be reconfigured suitably.

Caselet 47

120. Larsen & Toubro is having a huge export receivable after six months that needs to be hedged. There are various techniques available to hedge a foreign exchange exposure which can be categorized as external hedging techniques. Among the various techniques available you are required to throw light on the hedging through options.

121. Though options carry unlimited profit with a limited downside potential but still it poses risk to both the call and put writer. Explain

FACED with the rupee's appreciation against the dollar, exporters is increasingly beginning to take to options as a hedging tool. Banking sources said initially, only large corporates, such as Reliance and Larsen & Toubro, took to these kinds of sophisticated hedging tools when the Reserve Bank of India allowed options last July. However, smaller exporters have also begun to use these tools. According to the sources, new interest for options now includes garment exporters from Tirupur and New Delhi, wheat exporters from the Northern region and spices and coffee exporters from the South. Exporters have started chasing hedging tools since most of their exports are invoiced in dollars. The rush for option contracts was particularly so because the dollar has broken the Rs.45.30 threshold. Exporters were keen to lock into the current exchange rates since the expectation is that the exchange rate could breach Rs.45.20 as well in the coming months. Traditionally, exporters have left their position open without taking forward covers. This was possible in a regime

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where the rupee depreciated against the dollar. However, over the last two years, the rupee has been appreciating. During this period, it has appreciated by close to 8 per cent, which, in turn, has resulted in exporters incurring losses.

To hedge against these losses, exporters had initially taken forward covers. Mr Ramesh P. Rajah, President of the Coffee Exporters Association, said, "We began hedging our receipts after we took a knock last year." But with the rush of exporters into the forward cover markets, premiums have dropped to rock-bottom levels. At present, forward premiums up to 12 months are barely 0.2 per cent. Two years ago, forward premiums for up to six months were 5 per cent. As a result, he said, "some of the bigger exporters are buying options as a hedging tool."

Caselet 48

122. What are the various stages in the life cycle of a project? Describe them.

123. Now-a-days, option pricing theory is being applied to value real investments. Are there any other applications for the theory?

124. Inappropriate choice of location is considered to be one of the factors responsible for the failure of projects. What, according to you, are the factors to be considered before deciding on the location of the project?

Almost every large and small company in the past year had to change its investment management in a big way so as to survive in this competitive world. Some have had to slow or freeze long-term projects; others have incline up those likely to demonstrate a quicker payoff. That could prevent some potentially money-making projects from getting off the ground. Real option is one of the major mechanisms that a manger may undertake while valuing investment opportunities. Real options provide a useful framework for strategic decision making. These options are the right - but not the obligation - to acquire the gross present value of expected cash flows by making an irreversible investment on or before the date the opportunity ceases to be available. Although this sounds similar to NPV, real options only have value when investment involves an irreversible cost in an uncertain environment. And the beneficial asymmetry between the right and the obligation to invest under these conditions is what generates the option's value. They also serve as an important tool in valuing a project to be abandoned if it is unsuccessful. Further it can value the ability to wait before investing. Real options focus on factors over time that determines the value of investment and cash flows. These are factors about which decisions can be taken at any time over a period. Briefly speaking valuing irreversible investment opportunities under uncertainty using NPV does not take account of managerial options and treats capital assets as passively held. A real options approach can help by valuing these managerial intangibles and preventing mistakes. Real options capture the value of uncertain growth opportunities. Just as a financial option gives its owner the right – but not the obligation – to buy or sell a security at a given price, companies that make strategic investments have the right – but not the obligation--to exploit opportunities in the future.

Caselet 49

125. Discuss the propositions put forward by Modigliani and Miller with regard to capital structure theory.

126. The cost of funds will normally go up if an intermediary is involved. Hence Flankey Petroproducts Ltd decides to raise debt directly from public on an ongoing basis. Discuss the alternative available to the firm.

127. The finance manager believes that financial leverage has an impact on firm value and proposes to use a mix of debt and equity so that the company reaches the optimal capital structure. Do you agree?

Management trainees often raise a question, "What capital structure is right for this business?" This is an important question, as the business environment is overshadowed

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with bankrupt companies that failed because their capital structures were inappropriate. Most often, the capital structures were inappropriate as they had put huge debt on their balance -sheet and did not take into consideration sound projections for the company.

The regulated firm's selection of capital structure is influenced by countervailing incentives: the firm wishes to signal high value to capital markets to boost its market value while also indicating high cost to regulators to induce rate increases. When the firm's investment is large, countervailing incentives lead both high- and low-cost firms to choose the same capital structure in equilibrium, thus decoupling capital structure from private information. When investment is small or medium-sized, the model may admit separating equilibrium in which high-cost firms issue greater equity and low-cost firms rely more on debt financing. We examine the equilibrium price, investment, and capital structure of a regulated firm using a sequential model of regulation. We show that the firm's capital structure has a significant effect on the regulated price. Consequently, the firm chooses its equity and debt strategically to affect the outcome of the regulatory process. In equilibrium, the firm issues a positive amount of debt and the likelihood of bankruptcy is positive. Debt raises the regulated price, thus mitigating regulatory opportunism. However, underinvestment due to lack of regulatory commitment to prices persists in equilibrium.

Caselet 50

128. What are the factors that cause the volatility of call rate in the call money market?

129. Explain diversifiable and non-diversifiable risks of stocks and state the factors responsible for such risks.

The market-to-book ratio is used to measure the market timing opportunities that may be perceived by managers. The findings suggest that unlevered firms tend to be those that raised funds when their valuations were high, as measured by the market-to-book ratio. Levered firms tend to be those that raised funds when their valuations were low. The results are hard to understand with the traditional theories of capital structure. In the corporate finance parlance, the term 'market timing' refers to the practice of issuing shares at prices higher than that spent on repurchasing them. This is an important aspect of the real corporate financial policy. There is sufficient proof to this as inferred in different studies. In one of these surveys equity market prices are treated as more important in nine out of a total of ten factors considered in the decision to issue common stock, and more important than other factors that are considered in the decision to issue convertible debt. Besides equity markets, there are money markets also that provide short term finance to overcome the asset liability mismatch. The commercial banks, non-banking finance companies and mutual funds are the major player in the money market. The call money market is one of the most active markets; it helps the banks and mutual funds to deploy their short term surplus funds for a period of 15 days at max. Call money market helps the commercial banks and financial institutions to meet their fortnightly CRR requirements.

The basic question in determining the capital structure is whether the market timing has a short-term or a long run effect. There is no doubt to the fact that there is a mechanical short run impact. However if the firm goes in for rebalancing the influence of market financing decisions, then the market timing has a long run impact on the capital structure. The results of this paper also lead to the inference that market timing has large, long lasting effects on capital structure. The main conclusion that is arrived is that most of the unlevered firms raised funds when their market valuations were high, as measured by market-to-book ratio, while most of the levered funds raised funds when their market valuations were low. As per the empirical findings, leverage is strongly negatively related to the measure of historical market valuations. There is enough evidence to prove that influence of past market valuations on capital structure has become economically significant and statistically strong.

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The bottom line is that the fluctuations in the market value have very long run effects on capital structure. Continuous and consistent attempts to time the market have become a major cumulative determinant of a firm's capital structure. The main question is whether market-to-book ratio affects capital structure through net equity issues, as market timing implies, or whether market-to-book ratio has persistent effects that help to explain the cross-section of leverage.

Caselet 51

130. With globalization the financial management of corporate India is gaining more importance as all activities in an organization have financial implications. In this aspect discuss the role of financial manager in an organization.

131. There are many decisions which the non-finance managers take that have significant impact on the profitability of the firm. Explain how the finance function interfaces with other functions in any organization.

Influenced by ever-changing equity market valuations and growth challenges, many large corporations are committing themselves to build new enterprises that have the potential to grow much faster than their core businesses. It is natural if you want to establish your business quickly, you shouldn't withhold on funding and other resources. Many senior managers believe that the financial and technical support the parent corporation gives to its start-ups is their main source of competitive advantage. Although this is often the case when companies invest in projects to extend core businesses in familiar or strongly related markets, when they invest in new businesses the opposite may well be true. In fact, putting too many resources on new ventures undermines the discipline they need to grow. Excessive amounts of capital can make the managers of a new venture expand its product range too quickly, invest in too much infrastructure, and delay going to market for too long–all potentially fatal mistakes. On the contrary, successful start-ups, such as Excite (Internet media), Amgen (biotechnology), and Tivoli (network management software), grew and prospered under the constraints of venture capital-style funding. The logic of these constraints, which force new ventures to focus and to limit the degree of risk they impose on their sources of funding, rests in part on the fact that few such fledgling enterprises turn out to be successful. For corporations, the challenge is to ration the financial resources they provide in the early stages and to concentrate on exploiting their non financial resources, such as access to people and partners.

However, the idea that managers who have outside entrepreneurial experience are qualified to lead new ventures is a myth. It is true that people with histories of strong performance in a company's established lines of business are accustomed to substantial support from staff and systems and such managers' performance often suffers when they are forced to work with limited resources in a rapidly changing environment. But most CEOs of successful independent start-ups have backgrounds in large corporations, though the nature of their corporate experience typically differs from that of their fellow managers.

Caselet 52

132. According to MM model once the investment policies are decided, the mangers cannot increase the value of the firm by paying higher dividends. Explain

133. Discuss the key determinants of dividend policy of a firm.

134. State the conditions when Mr. Tom's opinion can be valid and discuss the imperfections which violate his opinion.

Research analysts have often pondered over the determinants of the corporate dividend policy. According to the Miller and Modigliani (M&M) model, dividend policy is irrelevant and it does not have any affect on a firm's share price. It postulates that the firm's free cash flow is paid out as dividend. This is also known as residual theory of dividends. However, in the practical world, there is no evidence to validate the residual theory of dividends. In fact

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according to Lintner, the US firms follow an adaptive process, in which the dividends are set for each period according to the existing dividends and gradually a slow progress is made to achieve the target dividends based on the underlying permanent earnings.

But, if dividends are not a residual, then what actually are they? Fama and French took a look at it and concluded that debt seems to be the likely residual factor in financing decisions. In the M&M model equity is the only financing option. So the dividend is the residual left. But, if the debt is the only residual then there is no role for the dividends in the residual factor, and it can take on any value. That again brings us to the question about what determines the target level of the dividends. One of the earlier suggestions was with regard to taxation. Since dividends are taxed in US as income whereas taxes on capital gains are deferred until incurred and then taxed at lower rates, it is implied that dividend-paying firms have to have a higher rate of return. However, once again there is little evidence to suggest that this is true for; empirical tests have shown that there is little to indicate a connection between the dividend policy of the US firms and the US government taxation policy. M&M then pointed out that dividends have information content, for only good quality firms can be expected to pay high dividends. Therefore, dividends are taken as indicators of the future free cash flows of the firm, causing the stock prices to rise as dividend increases and fall when they are cut.

Caselet 53

135. What would be the signaling effect if Flare Ltd. goes for buy back?

136. Book building process is regarded as the best approach in raising funds through primary markets. You are required to discuss how it can be useful for Flare Ltd. to buy back its shares?

In March 2000, *The Wall Street Journal* proclaimed: "Now stock buy-back have suddenly gotten even more popular. But to the frustration of corporate treasurers, many of the stocks aren't enjoying the expected price pops, despite the presumption that is what a buy-back would do."

Indeed, in nearly every year since 1994, stock buy-back have leap-frogged corporate stock issues by ever-increasing amounts. In fact, the $50 bn of buy-back set in motion in the early part of 2000 was the biggest burst of share-repurchase activity since late 1998. What's more, the total number of shares repurchased in the last six years has far outstripped the total number of new shares issued.

What's behind this growing surge of buy-back? And why aren't they always the adrenaline shot in the arm those companies expected them to be? In March 1999, an electronic poll of 155 FEI members was conducted during a teleconference on share repurchases that was moderated by FEI President Philip B Livingston. These are among the key findings:

1. Thirty-nine percent of the respondents instituted a share repurchase program in order to improve their earnings per share numbers.
2. Twenty-eight percent said their companies were using buy-back as a way to distribute excess cash to shareholders.
3. Twenty-one percent reported that their companies were trying to reduce the cost of employee stock option plans.
4. Twelve percent noted that adjusting capital structure was the main reason for their stock buy-back.

If your company is considering a stock repurchase plan, you might be wondering whether the program really will rev up your earnings per share growth. According to the various studies, companies that got the most bang for their buck from these plans are those that were under-performing their industry averages to begin with. In the study, these were mostly small-cap firms that also were under-leveraged and less profitable than their respective industry peers. As we all know, market analysts are always comparing

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companies to their peer group. Many of these companies are certainly solid but, for any number of reasons, simply not doing quite as well as their overall industry. A stock buy-back program signals to the market that management won't be funneling any more money into markets or product lines that are dead ends. It also demonstrates that the company isn't hunting around for an acquisition, which analysts don't always view favorably.

Caselet 54

137. What will be the impact of share repurchases activity on the shareholder's value, if HLL goes for a repurchase?

138. After India's corporate bigwigs tried their luck with buy back offers, its now the turn of the relatively smaller companies to join the bandwagon. Dou you think buy back of shares is becoming increasingly common among domestic corporates?

It is believed that value is a matter of perception and market is the best judge of a stock's intrinsic value. However, market does, sometimes, behave irrationally. If a company's stock is perceived to be undervalued by the market, should the company management intervene to correct the anomaly, in that case? A company is sitting on a cash pile. It explores various alternative investment avenues but finds nothing suitable. What should it do with the excess cash? A company is facing takeover threat from a hostile raider? How could it protect itself? Is there a way out? Yes, of course. The answer is "share buy-back".

A share buy-back is the process of buying back of a certain percentage of its own floating stocks from the existing shareholders by a company. It is the most popular strategy in the developed markets of the US and Europe to meet challenges arising out of such scenarios. In India, share buy-back was introduced about two years ago. However, it is only recently that the phenomenon has started gaining momentum. Some of the big companies like Reliance Industries, Bajaj Auto, AV Birla group, Tatas, and FMCG major HLL have either entered the fray or planning to do so.

What is driving these companies to go for share buy-back? Are they all driven by similar factors? Importantly, is share buy-back a useful strategy? Yes, it is, provided it is done to serve the long-term interests of the shareholders, in other words, if it leads to shareholder wealth maximization.

If conveyed properly and done in a transparent manner, share buy-back could bolster the confidence of the market in a company and help boost the stock price as well. Moreover, by increasing a company's leverage, this can help it reap bigger tax savings and often lower its cost of capital. But investors need to tread cautiously as buy-back have their drawbacks too. For example, companies might mistakenly believe that, after a repurchase, their core value has increased simply because the share price has risen. Shareholders have to be careful that buy-back are done for valid reasons and are essentially aimed at achieving long-term benefits rather than any short-term gains.

Caselet 55

139. Risk Management has identified four different elements of environmental risk. Explain them.

140. In what ways the political risk can be managed? Elaborate

141. It is often said that implementing ERM is difficult and it requires a suitable organization structure. Justify

Of course, ERM is not a solution. A firm could practice ERM and still get into serious difficulties – for example, a firm might rely on historical correlations between risk factors to assess firm-wide risks, and then make large losses if those correlations suddenly jumped, as sometimes happens during financial crises. If a firm is to get major benefits from ERM, it must therefore practice ERM well: bad ERM is of no use at all, and may even be worse than useless, if it lulls management into a false sense of security. Moreover, good ERM practice requires a certain ability to anticipate unpredictable events – risk managers must

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have some idea of what might appear on their crystal balls, even though they cannot (unless they have very special crystal balls) rely on them to predict future events with certainty. Nor is ERM a free lunch. There is a trade-off between risk and expected return, and a firm that practices risk management usually offsets some risks at the expense of lower expected returns. However, risk management is essential if the firm is to focus on its comparative advantage in risk bearing – if it is to focus effectively on the risks it should be taking and protecting itself against the risks it should not be taking, and ERM is cheaper than piecemeal risk management because it takes account of correlations or interactions between risk factors.

ERM is not easy to implement. It requires good systems of management control and of risk measurement and management. It also requires that the firm have an integrated infrastructure that can be relied upon to give risk managers and senior managers a good picture of the firm's overall risk exposure. These do not develop effortlessly, and firms need to make major investments to get them. However, once these are in place, the firm is well-placed to practice ERM and get the benefits of superior risk management at lower cost. Such firms can then focus on what they are really good at, and firms that practice good ERM will have a competitive edge over rivals that don't practice it.

Caselet 56

142. "CDO is subject to credit, liquidity and interest rate risks and there are other risks that are hidden". Explain the hidden risk that the CDO carries.

143. CDO acts as a mechanism by which illiquid loan can be pooled into marketable securities. In light of this explain the Balance Sheet and Arbitrage CDO.

For millions, trade-off between risk and return is the best attraction that induces them to fancy their chances. Whether it is an individual or an institutional investor, mastering this game is the ultimate goal. Moreover, to master this, they find new investment avenues and new instruments. Right from the stock market trading to trading in forex options, futures and swaps, financial engineering has been behind these investors to come out with the new instruments. Soon after the debacle of long-term capital management, everyone associated with Wall Street went into a shock. However, financial engineering found a new way of leveraged financing, which contains the best risk-return trade-off investors would like to fancy. The newfound choice of millions of investors both institutional and individual has grown very fast in the last two years. The choice is Collateralized Debt Obligations (CDOs). Packed with debt and equity loans, it offers the best risk return profile.

The underlying assets of a CDO make it so, more than anything else. The broad definition is that it is securitization of corporate obligations. The underlying that is securitized can be

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Caselet 57

144. On an average Motorsoft Corporation has Rs.7 lakhs surplus cash per day in its accounts.4Discuss the avenues available where such cash can be deployed to earn profits without any adverse effect on the liquidity?

145. Cash is an idle asset which earns no return to the company. In spite of this fact, Motorsoft is thinking of holding the surplus cash with itself. Briefly explain the motives of holding cash by the companies.

It's no fun being a corporate treasurer these days. The double whammy of a weak economy and tight credit are placing maximum pressure on cash flow, forcing treasurers to take a hard look at how their organizations use working capital. It's a time for tightening up – and in some instances, changing how their companies operate internally. "Treasurers today have a tough job," says Jim Sagner, Senior Managing Partner at Sagner/Marks, a White Plains, NY-based consulting firm that works closely with corporate treasurers. "It's much tougher than it was 15 years ago." Most US companies have seen their earnings whacked by a schizophrenic economy that seems to be growing modestly one moment, and then tottering on the edge of a double-dip recession the next. And, the decline in corporate earnings has shriveled corporate cash flow with the fierceness of a Death Valley sun at high noon. Worse yet, many US banks have retreated from the commercial lending market – depriving treasurers of a key source of capital just when they need it most. Technology companies that rely on venture capital firms to help finance their operations have seen those funds evaporate as well. And the commercial paper market, long an important short-term capital source for big companies, has become harder and more costly to access – sometimes almost prohibitively so.

"Capital is the driest I've seen in years," says Dan Jones, Area-Managing Partner for Dallas/Fort Worth for Tatum CFO Partners, a consortium of chief financial officers that provide consulting services to middle market companies. "Banks don't have an appetite for lending right now."

While companies will always be subject to the ups and downs of the business cycle, the reluctance of large commercial banks to make unsecured loans at favorable rates and terms may be a more permanent change. To be sure, asset quality problems throughout the industry are a big reason why banks have turned off the credit spigot. When banks get into trouble by lending too aggressively – as they did in the late 1990s, during the waning days of the previous economic expansion – their first reaction is often to rein in their lending officers. But there are systemic factors that also explain why banks are more reluctant to provide thinly priced working capital loans to corporations, beginning with their recognition that credit-only relationships don't provide the kind of financial returns that are apt to make Wall Street Happy.

Caselet 58

146. One of the prime reasons for performing SCBA is to avoid complete dichotomy between project choice and national planning. The prime focus of SCBA is to evaluate a project in terms of social costs and benefits which generally vary from the monetary costs and benefits of the project. Discuss the reasons for discrepancy between monetary costs and benefits on the one hand and social costs and benefits on the other.

147. A company is analyzing its strategic capabilities as a prelude to additional capital investments. As part of the exercise it wants to perform value chain analysis. Explain how it can be performed.

Irving Fisher and John Keynes were, without doubt, giants among economists. Fisher, in his book, *The Theory of Interest,* introduced the concept of "the rate of return over cost". This is the market-determined rate of interest where the net present values (NPV) of two projects are identical. In Keynes' book, *The General Theory of Employment Interest and Money,* he advanced the concept of the "marginal efficiency of capital". This is the interest rate that sets the NPV of a project to zero. Today, it is known as the Internal Rate of Return (IRR).

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There is a strong link between these two concepts. Fisher's rate of return over cost is the internal rate of return of the marginal cash flows of the two projects. In essence, Fisher compared a new project with an existing project, using the example of a farmer contemplating forestry as an optional use of the land. Keynes' IRR is the rate of return over cost where the project is compared with its opportunity cost derived from the market. Put this way, the two theories are almost identical. In both cases, the objective yardstick used to gauge the relative merits of the two projects – the discount rate – is exogenously derived from the market. Fisher compared a new project with an existing project, Keynes a new project with the market (which is easy to conceive as an existing project). These original and insightful thoughts live on today in most management accounting texts. They are manifest in the competing merits of the NPV and IRR methods. These techniques are discussed, to a varying degrees, in all management accounting texts when addressing capital budgeting. They are often known as the discounted cash flow methods since they rely on the concept of discounting. Discounting acknowledges the time preference rate of money; that is to say, a dollar today is worth more than a dollar tomorrow. It is generally well recognized that the two methods can create conflicting signals in the ranking of two independent projects.

Caselet 59

148. Highlight the factors that have fueled the growth of mezzanine financing in India.

149. In current economic scenario of uncertainty, companies that are healthy and capital-hungry are moving openly for extra capital. Justify

"These days, mezzanine finance is often the factor that influences whether or not a deal closes," says Tim Shoyer, Fleet Securities managing director of high-yield and mezzanine debt. "As more cash-flow loans are being restructured, often there's a gap between the new asset-based deal and the amount financed previously on a cash-flow basis. Mezzanine fills that gap. It's been a big trend in the last 18 to 24 months." Mezzanine lending has been around for more than two decades. In the 1980's, the business was dominated by insurance companies and savings and loan associations. By the 1990's, limited partnerships (LPs) had entered the arena. Today, investors include pension funds, hedge funds, leveraged public funds, LPs and insurance companies, as well as banks that have established stand-alone mezzanine efforts. "During the mid-90's, it was common for banks to function as principal purchasers," says Shoyer, "but today, most of them are working as placement agents." In other words, the placement agent shows a deal to a wide variety of investors and creates a competitive auction environment, much like an underwriter in an investment banking transaction. "The auction environment is important to the client because it ensures the company gets the best deal available in the marketplace. The biggest benefit mezzanine debt provides is reducing the amount of equity required in the transaction, says Shoyer. Mezzanine investors are looking for an 18 to 20 percent IRR (internal rate of return) compared to 25 to 35 percent for equity investors, so it's more cost effective.

While mezzanine debt is more expensive than bank debt, it is not as rigid. Generally, it shares the same covenant package as a bank deal, but the measurement characteristics are looser. For instance, if the maximum leverage of EBITDA on a bank deal is three and a half times, a mezzanine deal would be closer to four, Shoyer says. Regardless of the exit event, experts agree that now is a great time to invest in this asset class. Lincoln Partners' Kahn believes that companies that are constrained by traditional bank debt increasingly will turn to mezzanine lenders for junior capital. "Over the next 12 to 18 months, there's tremendous opportunity for mezzanine to fund a company's growth and working capital needs," says Kahn. Fleet Securities' Shoyer concurs. "By tapping into this liquid source of capital, middle-market companies can make the strategic investments required to take their business to the next level."

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Part V: Caselets (Answers)

Caselet 1

1. Strategic concept refers to the central theme from which an organization develops its strategic plans. Earlier, the concept of strategic planning was visible in Home Appliance Corporation only in the preparation of budget for the next year. The failure to develop strategies to face competition costed it the leadership position in the industry. But at a later stage, when the corporation identified the overall trend towards acquisition and diversification, the management adopted this strategy and emerged as a successful player in the industry.

Generally strategic management passes through the following four phases.

Phase 1: Managers initiate serious planning when they are requested to propose the next year's budget. Projects are proposed on the basis of very little analysis, with most information coming from within the firm. Sales force provides a small amount of environmental information. Such simplistic operational planning only pretends to be strategic management.

Phase 2: As annual budgets become less useful at stimulating long-term planning, managers attempt to propose five-year plans. In addition to internal information they also process external information on ad hoc basis, and extrapolate it to five years. The process consumes more time, and managers tend to compete for funds.

Phase 3: In this phase, planning is taken out of the hands of lower level managers and entrusted to in a planning staff whose task is to develop strategic plans for the organization. Top down planning approach is adopted and the implementation is left to lower level managers.

Phase 4: When top-level approach fails, management selects people from different levels of organization to create a task group in strategic planning.

2. There was a transition to strategic management in Home Appliance Corporation from a mere budget oriented planning to an overall growth and diversification oriented focus. In the earlier days, the founder of the corporation RE Klein made an impact on the company's philosophy of management. This was a period when there was no competition and the corporation made it to the leader's position effortlessly. But the scene became awful with the entry of a new player with its automatic range of washers. This was the time when it realized the importance of espousing new strategies for its survival.

However, during the tenure of Daniel Walsh, the CEO of the company, a team was formed to look after the annual budget preparation. He was always seeking change, never content with the existing status of strategy implication to keep doing what the company had done earlier. Daniel wanted to change the strategy and also to diversify the company's volume and profitability, to make it successful. During 1990, the company showed signs of globalization, which was the first strategic move, by broadening the product line and purchasing 'Hoover ltd.,' in 1995.

3. A firm's top management, Board of Directors, and planning staff tend to be most involved in and have the most influence on its strategic management process. Top managers like the CEOs, COOs, VPs and EVPs are involved in formulating the strategic decisions for an organization. The CEO is usually responsible and accountable for the success of the strategic management process. The CEO generally designs a cross-functional strategic management process that involves members from many different organizational areas and levels. In addition to the CEO, organizations enlist production specialists, marketing personnel, finance experts, and division managers to identify strategic measures and make strategic decisions. The Board of Directors elected by the stockholders, exercise ultimate authority and is responsible for the welfare of the organization. A recent study indicates that board involvement in strategic management enhanced financial performance of a company.

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Caselet 2

4. Strategic leadership refers to the ability to articulate a strategic vision for the company, or a part of the company, and to motivate others to buy that vision.

The important strategic leadership characteristics include:

a. Vision, eloquence, and consistency,

b. Commitment,

c. Being well informed,

d. Willingness to delegate and empower, and

e. Astute use of power.

One of the key tasks of leadership is to give the organization a sense of direction. Strong leaders seem to have a vision of where the organization should go. Moreover, they are relevant enough to communicate this vision to others within the organization in terms that can energize people, and they consistently articulate their vision until it becomes part of the culture organization.

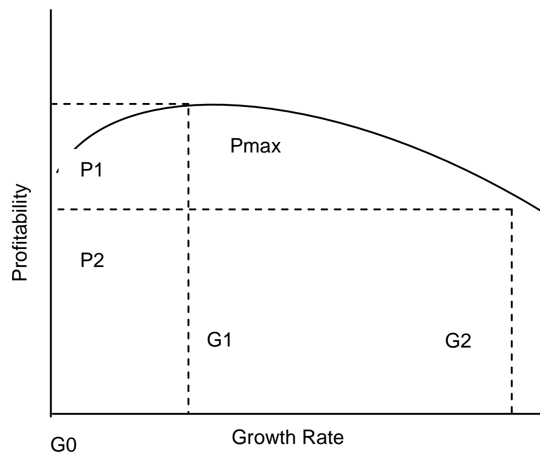
A strong leader demonstrates commitment to his or her particular vision, often leading by example. Good leaders do not operate in a vacuum, rather they develop a network of formal and informal sources that keep them well informed about what is going on within their company. Good leaders are skilled delegators. They recognize that unless they delegate, they can quickly become overloaded with responsibilities. They also recognize that empowering subordinates to make decisions is a good motivational tool.

Edward Wrapp has noted that good leaders tend to be very astute in their use of power. By this he means, good leaders play the power game with skill, preferring to build consensus for their ideas rather than use their authority to force ideas through.

Pfeiffer articulated a similar vision of politically astute manager who gets things done in organizations by the intelligent use of power.

The CEO of the group, Mr. George Samuel was a highly experienced and qualified professional. He carried a lot of better performances in the past to his credit. The qualities of his strategic leadership were discernible in his approaches particularly when he forced the heads of each of the allied groups' businesses to do three things, namely, to enter in the foreign markets, making selected niche questions to round out a business's product line and to develop new products to boost the earning's growth. The CEO's style of management included monitoring the managers in all-day meetings regarding the strategies they adopted, surprise visits to the business groups and a rigorous approach towards under performing managers. Over all the leadership style was tough, demanding, and relentless.

5. A company that does not grow is probably missing out on some profitability opportunities. This can be explained with the help of a diagram.



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A growth rate of G0 is not consistent with maximizing profitability (P1 < Pmax). A moderate growth rate of G1 on the other hand, does allow a company to maximize profits, producing profits equal to Pmax. Achieving a growth rate in excess of G1 however, requires diversification into areas that the company knows little about. Consequently, it can only be achieved by sacrificing profitability. That is, past G1 the investment required to finance further growth does not produce an adequate return, and the company's profitability declines. Yet G2 may be the growth rate favored by an 'empire building' CEO, for it will increase his or her power, status and income. At this growth rate, profits are only equal to P2. Because Pmax > P2, a company growing at this rate is clearly not maximizing its profitability or the wealth of its stockholders. However, a growth rate of G2 may be consistent with attaining managerial goals of power, status and income.

George Samuel aimed at a growth rate of G1 by incrementing sales by 9% annually, which also incremented productivity by 6%. Any growth over and above G1 increases profitability only through entering into other business (diversification). However, current expertise needs to be put in practice in the new diversified field to retain profitability. Thus, the strategy needs to be of 'related diversification' to make use of the know how and skill of human resources, without compromizing on profitability by entering into a new venture (unrelated diversification).

6. Strategic planning is a process by which managers choose a set of activities that may take the company towards the desired objective. Strategic planning process includes the following steps.

a. Selection of the corporate mission and major corporate goals;

b. Analysis of organization's external competitive environment to identify opportunity and threats;

c. Analysis of internal environment to know strengths and weakness;

d. Selection of strategies that build on organizational strengths and correct its weakness in order to take advantage of external opportunities and counter external threats;

e. Strategy implementation;

f. Mission sets out why and what it should do;

g. Goals specify what the organization hopes to fulfill in the medium- to long-term.

h. External analysis includes opportunity and threats in operating environment, and also three inter related environments, i.e. industry, national and wider macro environment. Analyzing industry environment requires an assessment of the competitive position of the formal organization and its major rivals, as well as the stage of industry development. National environment analysis includes whether the policies are conducive to survive and go global.

Macroenvironment analysis includes macroeconomic, social, government, legal, international, and technological factors that may affect the organization.

i. SWOT exercise to choose strategy that suits the organization, which may be at a

- Functional level (functional level strategy);
- Business level (cost leadership, focus, and differentiation);

ii. Global Strategy (International Markets);

iii. Corporate Level Strategy (Integration, mergers, acquisitions, differentiation);

iv. Implement and attain the feedback to control the strategy.

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Caselet 3

7. Andrew, the CEO of Sears, Cliff and company was responsible for the company's success. He was the reason behind its financial turnaround and internal restructuring. With an intention to change the company into a competitive and moderately priced departmental store, he introduced many strategically significant steps like:

- Emphasis on selling apparel which was the main source of profit generation.
- Investment of $5 billion for renovating the stores and for building more spacious hardware stores. He shifted furniture into separate emporiums.
- Unprofitable businesses were either sold or closed and were separated from the company's strategy.
- New management team was created.
- Initiation of new merchandizing plan.
- Closure of loss-making catalogue business.
- Emphasis on training to offer best customer service (offering sundry deliveries, etc.).

8. Any strategic planning process becomes effective only when it is implemented properly. Sears, Cliff and Co. implemented the following as per their planning process.

- A convenient place to shop,
- A compelling place to invest which was measured by revenue growth, operating margins, asset utilization, etc.
- A place to work, which was influenced by the attitude towards job and the company.
- The company increased its marketing budget to $1 billion by nine percent to create awareness among its customers towards the changes in the company.
- There was an increase in the number of brands it offered nationally.
- The strategic management plan at Sears, Cliff and Co was affected with a surge in reorganization costs. Positive communication was absent among the top-level management. The company experienced a financial loss which ultimately deteriorated the business situation.

9. Using the strategic management approach, all members at all levels of the firm interact in planning and implementing the strategic decisions. As a result, the behavioral aspects of the strategic management are similar to those of a participative decision-making approach. Therefore, the accurate assessment of the impact of strategy formulation on organizational performance requires not only financial evaluation, but also non-financial evaluation criteria. The non-financial evaluation criteria are concerned with measures of behavior based effects. In the process, promoting positive behavioral consequences also enables the organization to achieve its financial goals. However, regardless of the profitability of the strategic plans followed by a firm, several behavioral effects of strategic management improve its welfare. These can be broadly classified as:

Prevention of Problems: Strategy formulation activities enhance the organization's ability to prevent problem creation. Supervisors, who encourage subordinates' attention to planning, are in turn aided in monitoring and forecasting responsibilities by subordinates since they are aware of the needs of strategic planning.

Decisions Drawn from Best Available Alternatives: Group based strategic decisions are likely to be taken from the best available alternatives. The strategic management process results in better decisions being chosen because group interaction generates a greater variety of strategic alternatives. The alternatives are also of better quality since forecasts based on the specialized perceptions of group members improve the screening of options.

Heightens Employee Motivation: The involvement of employees in strategy formulation improves their understanding of the productivity-reward relationship in every strategic plan. This heightens their motivation to strive harder for better results.

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Reduction in Gaps and Overlaps among Activities: Gaps and overlaps in activities among individuals and groups are reduced as participation in strategy formulation identifies such gaps and overlaps in the first instance and also classifies the differences in the roles of each individual member.

Resistance to Change Minimized: The participants in strategy formulation are more pleased with their own decisions than with authoritarian decisions. the greater awareness of the parameters that limit the available options makes them more likely to accept the decisions, thus minimizing or reducing the resistance to change.

Financial Benefits: Most for-profit businesses consider their owners to be one of the most important stakeholder groups. They also assume that owners of a for-profit business own it for the profit it offers. This profit has been traditionally measured through the study of financial ratios called ratio analysis. These are divided into four generic types.

Profitability Ratios: State a firm's overall economic performance.

Liquidity Ratios: Measure a firm's capacity to meet its short-term financial obligations.

Leverage Ratios: Indicate a firm's financial risk.

Activity Ratios: Reflect a firm's efficiency in resources utilization.

Strategic planning highlights these financial benefits for each alternative or option chosen to optimize the returns in tune with the non-financial benefits of the firm.

Caselet 4

10. Planning is inevitable in any type of organization. It is understood to be a bridge that narrows down the distance between the present and the future. Planning enables the management to understand the requirements of the market and process accordingly. This would reduce the degree of uncertainty and risk while making major strategic decision.

The importance of planning under uncertainty in an organization is as follows:

- **Determine the future destination of an organization:** The objective of an organization is determined in the initial stage of planning. It co-ordinates the activities for accomplishing the objectives.
- **Planning makes activities of employee's meaningful:** A clear understanding of the objectives helps the employees in knowing how their work is related to organizational goals and enables them to direct their effort to make the contribution more valuable.
- **Planning economizes operations:** Activities are planned to reduce inefficiencies and wastages which leads to economy in operations. It improves the performance of other managerial functions like organizing, staffing, directing and controlling by making the task of managing more effective.
- **Reduce risk of uncertainty:** The uncertainties associated with future are minimized by forecasting the requirements of the organization. Generally, managers attempt to predict the future to identify potential dangers and to initiate action to reduce the adverse effects.
- **Planning discovers new ideas and opportunities:** Planning involves the use of analytical, creative and innovative abilities, which may explore new ideas and generate opportunities for a profitable existence of the organization.
- **Planning facilitates coordination:** Planning in a corporate environment provides guidelines and lays down parameters for different departments. It is also possible to co-ordinate activities at various levels in the organization.
- **Facilitate efficient control:** Control pre-supposes the existence of planning. Without planning, control has little meaning. The objectives serve as a base for control. Actual results are compared with objectives, which are also a standard of performance. Deviations are sorted out and necessary remedial measures are taken to improve the results.
- **Planning provides directions:** The objectives laid down in planning become guiding posts for directing and mobilizing the activities of the employees.

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- **Planning to cope with the changing environment:** Planning improves the capability of an organization to cope with the rapidly changing environment. Without proper planning efforts, the uncertainty associated with the future environment cannot be handled and managed properly. Keeping in view the degree of probability of occurrence of future events, managers develop alternative plans.

The main reason for Cramer's success was its ability to plan for the uncertain times. At Cramer, the planning process generated a series of "what if " scenarios which compelled general managers at all levels of the corporation to think strategically about the environment in which they did business. The ability to plan for uncertain times was more apparent during the early 1980s, when the company successfully predicted the price movements in the future. Moreover, the company was able to cut its exploration costs by pioneering advanced exploration technologies, massive investments in cost-efficient refining facilities, etc.

11. Cramer always believed in low cost strategies for attaining better profitability. Instead of adopting a scenario based planning, it acted in simulated conditions expecting low market prices. The company was adopting various strategies to face any consequences if the market price fell below the normal price.

Cramer initiated efforts to cut the exploration costs by pioneering advanced technologies, investing heavily in cost efficient refining facilities and also through a process of weeding out the least profitable service stations. These were some of the strategies adopted by the company to decrease cost and ensure a profitable return. All these strategies were proved to be successful when the company sustained effectively at the onset of a price cut.

12. The evaluation and control, process ensures that the company is achieving what it set out to accomplish. It compares performance with desired results and provides necessary feedback to evaluate results and take corrective actions as needed. The evaluation and control process is explained as below:

- **Determine what to measure:** The top level management should specify what implementation processes and results will be monitored and evaluated. The processes and result must be capable of being measured in reasonable objectives and in a consistent manner.
- **Establish standard of performance:** Standards used to measure performances are a detailed expression of strategic objectives. They are measures of acceptable performance results. Standards can be set not only for final outputs, but also for intermediary stages of production outputs.
- **Measures of actual performance:** Measurement can be made at pre-determined times.
- **Compare actual performance with the standard:** If actual performance results are within the desired tolerance range, the measurement process stops here.
- **Corrective action:** If performance results are within the desired tolerance range, no corrective action is required.
- **Take corrective actions:** If actual results fall outside the desired tolerance range, actions must be taken to correct the deviation.

Caselet 5

13. A strategy reflects a company's awareness of how, when and where it should compete, against whom it should compete, and for what purpose and reason it should compete. The traditional structure organizing the study of strategic management into three major parts of analysis, formulation and implementation highlights the importance of making strategic decisions. There are several subtle, but important differences between strategic management and various management functions like operations, human resources, marketing, accounting, finance, research and development and so on. These dimensions are listed below for a better understanding of strategic decisions.

Strategic management integrates various functions: Excellence in a wide range of functional specialities is considered as an essential prerequisite for success in today's

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highly competitive marketplace. But, this alone will not be sufficient in tomorrow's global marketplace. There needs to be a guiding force that integrates the efforts of these specialists throughout the organization. Strategic management is central to capitalizing on functional expertise and integrating all functions to a suitably broad strategy for the organization.

Strategic management is oriented towards achieving organization-wide goals: Most effective corporate managers view and understand their organization's aims very clearly. However, functional specialists, who limit their outlook to their individual functional areas, run the risk of achieving a local maximum while missing out the global optimum. In short, they may work best in a particular functional area, but not for the entire business. Corporate managers must therefore become involved in the organization's overall strategic management process to understand the differences between the needs of a single functional area and overall contribution of their function in achieving organization-wide goals.

Strategic management considers a broad range of stakeholders: Organizations must meet the needs of various stakeholders such as customers, suppliers, employees, owners' managers, the government and public at large. Corporate managers must understand that their decisions affect the various stakeholders involved. Only then can the organization can truly flourish. But functional specialists tend to focus their services on individual stakeholders, rather than balancing the needs of all the organization's stakeholders. For instance, sales managers may focus their services on customers while human resource managers may pay more attention to their employees. The purchasing managers may pay utmost attention to suppliers and production managers to product output and quality. However, the effective manager takes a strategic management perspective and cumulatively considers all stakeholder groups so that reasonable tradeoffs can be made to optimize the achievement of objectives.

Strategic management entails multiple time horizons: Managers cannot ignore the need to maintain the long run viability of their organizations. They must also be aware of the short-run ramifications of anything they do. Functional managers tend to focus on short run issues alone. But they can broaden their time frame perspectives by positioning their functional discipline to make the best contribution both over the short and long run.

Strategic management is concerned with both efficiency and effectiveness: Managers who take a narrow view of their responsibilities often end up concentrating a majority of their efforts on improving the efficiency of their own functional area, while neglecting the organization's overall operations. The difference between efficiency and effectiveness is sometimes explained as doing things right and doing the right things respectively. By working hard to do things right, managers may forget to look up from their work occasionally to do the right things that will be effective in moving their organization toward its ultimate objectives. The strategic perspective, however, encourages a balanced emphasis on both these dimensions of managerial work.

14. The type of mergers that are most beneficial to both acquiring and target firms are largely a strategic matter. Of course, the ultimate form a combination actually takes depends upon a complex process of balancing a set of trade-offs through negotiations between parties. The following results of mergers constitute the list of possible benefits that could accrue to one party or the other. A proposed merger would be justified by the strategic need for one or some combination of these factors.

Synergy

Synergy in a merger can result in the ability to spread fixed costs over a larger number of units produced. The combined entity may be able to do away with one of its duplicate accounting, personnel, or other staff departments, consolidate a line department, or even share a facility. A popular choice is to have both sales forces sell both product lines and thereby increase the ratio of sales per salesperson. Thus, the combined entity may be more efficient than either of the separate firms, and that is the definition of synergy. If synergy is established, future after-tax earnings and dividends should be higher than for either party alone. It is here that stockholders benefit from the synergy of a merger.

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Tax Savings

Prior to the Tax Reform Act of 1986, some mergers took place to take advantage of the seller's tax-loss carry forward. A profitable firm that acquired another firm with accumulated losses could reduce its tax liability by applying the losses against taxable income.

This reason for merging was outside the realm of strategic benefits, except when there was an inherent possibility for synergy resulting in an increase in the market value of equity.

The 1986 tax change affected mergers and acquisitions by requiring that the combination must not be for tax avoidance purposes. That is, tax-loss carryovers must have a business or strategic justification. There are also other limitations of the treatment of tax-loss carry forwards too detailed for our purposes. Further, the new law repealed the preferential rate for corporate capital gains, a minimum tax was applied to corporate earnings, and greenmail payments were deemed non-deductible. All in all, TRA 86 created a tax environment less favorable to mergers and acquisitions.

Acquisition of Resources

When market access, production capabilities, patent rights, physical assets, or other strategically important resources cannot be obtained otherwise, they may be forthcoming by merging with a firm that has them. However, these resources would have to be critically important and not obtainable through a simple purchase for such a merger to be justified.

Increased Debt Capacity

Merger with a firm that has little or no debt, especially by an exchange of stock, can increase the combined entity's debt/equity ratio. Thus, its borrowing capacity would increase.

Advantages over Internal Growth

Mergers can provide several advantages over internal growth. Circumstances where any of these advantages are critically important strategically, may serve as sufficient reasons to seek a merger partner. First, a merger can be a faster way than internal expansion for a buyer or seller to enter a new market or introduce a new product line. The company could merge with a firm already serving the desired market or producing the needed product line. Second, employment costs for activities such as training, relocating, and hiring are sometimes less with mergers than with internal expansion. Third, when expansion involves a new building, merger with a firm that already has a facility can substantially bypass costly regulatory delays typical of construction projects. Zoning laws, environmental impact statements, and licensing requirements can prolong a building project indefinitely. Fourth, when interest rates are high and stock prices low (so that a new security offering would be unfavorable), a stock merger is an attractive alternative to raising new expansion capital. Rather than sell undervalued shares, the firm may prefer to finance an expansion merger by swapping its stock for other low-priced stock. Finally, cash-rich undervalued firms can provide liquidity to a buyer in a stock merger. Very often takeover bids are precipitated by the proposed buyer attempting to acquire a cash-heavy seller by exchanging stock.

Short-Term Earnings

In addition to enhancing future earnings and dividend streams, a merger can also change Earnings Per Share (EPS) in the short-term. Either an increase or a decrease in EPS can result from a merger. An increase occurs when the buyer has a higher price/earnings ratio (P/E = Market price per share/EPS) than the seller and if additional fractional share premiums (fractions of shares above a one-for-one exchange offered by the buyer to the seller's stockholders) are less than the ratio of the seller's EPS to the buyer's EPS.

When the seller's P/E ratio is higher than the buyer's and the market value of the buyer's offer is greater than or equal to the market value of the seller's shares, then the buyer's EPS will be reduced by the merger.

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Risk Reduction

Bolten and Conn explained that merger can result in a reduction of business risk, financial risk, and marketability risk. Business risk is the extent to which a firm's strategy does not fit its environment. In other words, business risk is a subjective assessment of the firm's chances at success. Mergers can reduce business risk and consequently the rate of return required by investors. This happens, for example, if cyclical sales are levelled, sales are less dependent on one customer, or important expertise is added by a merger, thus stabilizing fluctuating profit flows. Financial risk can also be reduced by a merger. Uncertainty about ability to pay dividends or bond payments causes investors to demand a higher return. This is the case when the firm's debt/equity ratio is high. A merger can reduce a high debt/equity ratio for the buyer if he merges with a seller with a low debt/equity ratio. Marketability risk is an assessment of the ease with which a firm's securities can be sold at the market price. It is a function of the number of stockholders, size of the outstanding issue, and daily average trading volume. Marketability risk declines with increases in these factors.

Thus, in a stock exchange merger, the marketability risk of the buyer's shares declines because the number of stockholders increases, the size of the outstanding issue increases, and the average number of shares purchased daily tends to rise. It follows that investors would seek out the stock of firms with declining marketability risk and the market price would rise.

These three risk categories can be very important strategic factors at one time or another to a given business. But each one can be reduced by internal changes as well as by a merger. The key difference is in the rapidity with which it is necessary, in a particular case, to effect a reduction in business risk, financial risk, or marketability risk. When time is critical, merger may be necessary.

15. The competitive forces which include threat to entry, potential competition rivalry, bargaining powers of buyers, suppliers, suppliers and threat from substitute products play a vital role in affecting the industry's environment. These forces can create threats and opportunities for the firm. Based on the information gathered, the firm should identify its strengths and weaknesses and mould itself accordingly to exploit the opportunities created by these forces.

Designing Opportunistic Strategies

The designing of business strategies involves a systematic approach which is multifaceted, complex and requires assessment in depth. This process is multifaceted because it involves the interactive influences of both remote and operating environments. The strategic decision which is to be prepared must be systematic and comprehensive. The process is complex because the environmental forces are very difficult to be controlled, especially external factors. These can fluctuate at any time and hence become uncontrollable in nature. Finally, most of the strategies are developed by gathering relevant information on the environment and assessing it in depth. Limited objectivity will not help the management accurately predict future events in the competitive external environments. Designing a strategy to optimize opportunities is a very complicated task. When developing the firm's plans, strategic managers should emphasize four major design recommendations based on the multifaceted, complex and subjective nature of corporate strategy formulation. These include issue selection, data collection, conducting environmental impact studies and planning for flexibility.

Issue Selection

The issues that are most likely to be critical to the success of the strategy have to be determined initially. This issue identification will help to focus and prioritize data collection efforts. In a recent study that involved more than 200 company executives, the respondents were asked to identify key planning issues in terms of their increasing importance to strategic success. The issues that were selected were competitive domestic trends, customer or end user preferences and technological trends. These three factors were considered to be most important for effective strategy formulation. By knowing the competitors' trends the firm can modify its strategy. Since the customer preferences change repeatedly, they should be monitored by the management constantly to enable it to meet them. Technology also plays a major role in providing a product of superior quality to the

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customers in time. So, all these factors play a vital role in the formulation of an effective strategy.

Data Collection

It is imperative for managers to gather more information through forecasting to design appropriate strategies. The information can be gathered from government publications, discussing competitive conditions with sales managers and clients, reading business magazines, and serving on community councils and committees. The data collected in this manner may not be valid and is often difficult to document and verify. Therefore, public sources would be beneficial for collecting systematic data which is pertinent in nature. Such data are readily available, inexpensive and comparatively reliable. The sources of public data include annual reports, business literature indexes, business periodicals and reference services, government publications, trade publications, stock broker reports and many others. All these sources will be useful for examining the general environmental trends. Managers must carefully select data from this information source when constructing a strategic data base. When selecting or generating data for managerial base, the factors such as manageability, accessibility, variability, relevance, importance and cost must also be considered.

Impact Studies

After the data is collected, managers should undertake impact studies to determine the overall consequences of implementing available alternative strategies. In the process, the environmental data gets transformed by the firm into situation specific environmental information. The impact study must involve the assessment of probable effects on the firm's strengths and weaknesses, operating environment, competitive position and likelihood of achieving corporate objectives, grand strategies and mission. Businesses attempt to develop objective estimates, whenever they find it possible, along with the impact studies (which are generally considered to be subjective and intuitive). In order to increase the objectivity of the data analysis, firms increasingly employ techniques like exponential smoothing, time trends and adaptive forecasting.

Flexibility

Incorporation of flexibility is the next important consideration when designing strategies. Since it is difficult to forecast environmental conditions (because they are uncertain), decision makers strive for the optimal level of flexibility to enhance their chances of profitability.

Several approaches can be suggested to increase such flexibility.

The strategy must be stated in general terms so that those implementing it will have some discretion in terms of their unique situations.

The strategies must be treated as rules with exceptions so that an aspect of a strategy can be violated if such action can be justified.

The options must be kept open.

While flexibility in a strategic plan will lessen the benefits of the plan by increasing costs, shortening planning and action horizons, and increasing internal uncertainty. An overly rigid stance in support of a particular strategy can be devastating to a firm faced with unexpected environmental turbulence.

The competitive forces which include threat to entry, potential competition rivalry, bargaining powers of buyers, suppliers, suppliers and threat from substitute products play a vital role in affecting the industry's environment. These forces can create threats and opportunities for the firm. Based on the information gathered, the firm should identify its strengths and weaknesses and mould itself accordingly to exploit the opportunities created by these forces.

Caselet 6

16. Mattel had lost a big opportunity by losing out on innovation. It had too much of confidence on its established brand and its brand extension strategy. Mattel was right to focus on established and enduring brands, which it had developed through extensive

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investment. But by emphasizing the established brand over innovation, it lost the new block buster and opportunity to cash the changing consumer's choices and tastes. Mattel has lost the opportunity of earning revenues in video games business as its foray into the scene lacked creativity and innovation.

17. Mattel was successful with its brand extension strategy to a large extent. It had successfully increased the sale revenue in just 7 years by adopting the brand extension strategy.

18. Mattel was one of the widely established and branded toy makers in the world. The toy industry was facing lack of creativity and innovation and Mattel was not in a position to take risk by banking on new innovative and creative toys. May be for this reason, for Mattel banked on its extended branded toys over innovation.

Caselet 7

19. Microsoft was slow to react to the changes in the technology front and accordingly anticipate the future of Internet and World Wide Web. It had also failed to visualize the impact of Java programming language and its affect on its own windows operating system. The invention of Java had created an impression among the net users that the windows operating system was very expensive. Sun Microsystems was able to successfully promote its Java by making it indifferent to windows. Any user who used Netscape navigator just needed one Java interpreter to access the information and could avoid purchasing costly software, which was otherwise required.

20. Netscape was more successful than what Microsoft's expectations. Microsoft was forced to give away its own web browser and web server software for free. Microsoft had no other option but to adopt this strategy as Netscape and Java together had threatened the very existence of windows operating system and its own web browsing kit, along with its future software products. It also adopted a strategy to get the license from Sun Microsystems to use Java interpreters, but shied away from developing a counterpart to Java. It also had announced an alliance with AOL to push through its own browsing kit.

Caselet 8

21. The products that are developed by 3M are not innovative but are modified. So, the new products do not create new market, but result in a better share of the same market. Another reason is, the company is engaged with large number of products simultaneously, and the time taken by the R&D is also not justified. The company also failed in coming out with the final product from its prototype in the limited period. So, the company was not in a position to take the first mover advantage. 3M should selectively innovate the products and capture the market as fast as possible by commercializing them.

22. The success of Rust Soap Pads developed by 3M is mainly attributed to the implementation of the 'pacing program' activity. The activity focuses on commercializing the products within a short period of time. The concept was different from the company's earlier strategy wherein it focussed on a large number of products.

The introduction was the fastest in the company's history. The experts were on alert to encounter the various developmental problems.

23. Normally a typical organization expects more and more revenues from the new products as the market expands highly for them, but this is not true in all the cases.

The organization either skims prices or adopts the penetration strategy when a new product is introduced into the market. Once the product is accepted by the market, the 'growth' stage commences and the product will be in a position to generate more and more revenue.

In the case of consumer goods, the market expands at a high rate which might give the organization more revenue.

But the above situation might not hold well in case of industrial goods whose acceptance will be relatively slow. Finally, it can be said that any organization can expect more and more revenue from the new products once they are accepted by the market.

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Caselet 9

24. The significant sales of personal computers created the demand for dynamic random access memories. Many of the PC users switched to graphics – based software which increased the memory component of PCs (from 2MB to 12 MB). DRAMS were also used for several other applications in telecommunications equipment and cellular phone handsets. The demand for the telecommunication equipment also stood high. The demand of DRAMS rose because of low less supply also. Because of the high fixed costs involved, many semiconductor companies were reluctant to undertake new investment. Thus, the demand for DRAMS increased heavily.

25. A dramatic increase in the prices of DRAMS resulted in their surging global demand and constrained supply during the 1993-1995 period. As Micron Technology of Boise, Idaho was one of the two US firms that remained in the DRAMs market, the company benefited a lot. Micron's gross profit margin for 1995 stood at 55%, which was rare for a DRAM company.

26. Because of the sudden slowdown in the growth rate of personal computer sales, the DRAM market was also affected. Since the demand of DRAMs mainly arises because of the demand in the PC market, their sales were low. The PC manufacturer had anticipated lot many orders considering the fall of demand for PCs. The prices of DRAM also fell from $14 per MB to $7 per MB. This in turn adversely affected the profit margins for DRAM companies. As many of the players entered the market in the years 1994 and 1995, the supply was high and in turn, the demand was less after 1995.

Caselet 10

27. The Japanese beer industry is totally under the control of four players. They spend heavily on advertising and promotions. The resulting product differentiation and brand identification have certainly become the barriers for a new entrant to operate. Again, Brewers in Japan must have a license from the Ministry of Finance (MoF) which issues the license to any brewer who produces more than 2 millions liters annually. This limit was recently reduced to 60,000 liters and is no more a major barrier for the new entrants. The close tie between distributors and manufacturers is also a big barrier for the new entrant. Because of all these factors, the situation was not favorable for the new entrants in the Japanese beer industry.

28. The owners of the restaurants are very loyal to the big brewers and reluctant to take on a competing brand that might alienate their main suppliers. Hence, they want to sell only those brands for which they are the main distributors. This leads to the non-existence of ideal market conditions. Sometimes, the owners might not place their competitive brand and so the situation forces the customers to use the brand available in the particular restaurant. So, the customer's are not provided with their choice. If this condition continues, it is likely that the distributor's choice becomes more important than customer's choice.

29. As a part of economic liberalization of Japan in 1994, the Ministry of Finance reduced the production threshold required to gain a license from 2 million liters to 60,000 liters. This allowed the microbreweries to enter the market. More regulatory changes have allowed for the establishment of large new discount stores in Japan. Unlike the traditional small retailers, large discount retailers are motivated by price and profit than by loyalties to an established supplier. They are proving increasingly willing to sell the beer of foreign companies and microbrewers, in addition to the major four brands of Japan.

Caselet 11

30. The practice of Unilever was against its public interest and also against contracts with the P&G. Thus, P&G was forced to go to the public regarding the flaws in the Omo Power detergent. Actually, both P&G, and Unilever had a contract to follow the industry standards. As Unilever went against the business practice, P&G adhering much to its policy of promoting or condemning competitors, took the opportunity to bring the practice to public notice. So, P&G's idea to go to the public to safe guard consumer interest can be considered as a market driven regulating act.

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31. The strategy followed by Unilever in launching and promoting Omo power should be strongly criticized. As both Unilever and P&G had come to an agreement to have common technical assistance, Unilever, launched Omo power against their understanding. The public was also misled by Unilever's promotion of Omo Power as the ultimate, most powerful detergent. This was a deceitful practice of Unilever as it did not reveal the real technicalities involved in manufacturing Omo power. So, the strategy followed by Unilever should be strongly criticized.

Caselet 12

32. The rise of Health Maintenance Organizations (HMOs) and the introduction of "me-too" drugs by certain drug companies to compete with patented drugs are the two factors that have helped the powerful buyers to limit the ability of pharmaceutical companies to raise drug prices. HMOs were started in an attempt to control health care costs. A large number of employers subscribed to HMOs to provide their employees with health care coverage as they find it cheaper than the conventional mode of health insurance. To reduce the cost, HMOs negotiate directly with pharmaceutical companies on behalf of all their doctors for attractive prices on key drugs. This results in the slow down in the rate of increase in drug prices. "Me-too" drugs are those that are chemically different from other existing products but provide the same medical effects. As the companies started introducing these drugs, there was an excess supply in the market. The result was the slow down in the rise in drug prices.

33. Because of the introduction of 'me-too' drugs, generics which are closely to the patent product and offer the same medical benefits and the emergence of new buyer groups like HMOs, there was an intense competition in the health care industry. The companies were thus forced to reduce the prices of the medical drugs. The prevailing intense competition in the health care industry forced the companies to be more consumer supportive. The consumer also gets opportunity to decide which drug to use.

Caselet 13

34. Certain companies faced the problem of inappropriate brand name when they entered the foreign market. The name was difficult to pronounce, offensive, funny, meaningless, or already co-opted by someone else. The company would be forced to develop a new brand name for the same product when it was introduced in other countries. Using different brand names for the same product comes at a high cost, however. The company has to prepare different labels, packaging, and advertising, as is evident by ten different brand names in ten European countries for one of Unilever's product. Multi-brand strategy helps to attain 'differentiation' among small segments, and offers wider scope for value added activities. However, distinctive cost advantage is lost out due to incremental costs incurred on different branding strategy. The trend is towards a 'borderless world'. In Europe inter-European trade impediments like custom duties, border delays are rapidly diminishing. Companies are eager to launch Euro brands. P&G launched its detergent Ariel as a Euro Brand Unilever is now seeking to market its various detergent brands – All, Omo, Persil, Skip, and Via under fewer labels.

35. A company must try to identify the specific ways it can differentiate its produce to obtain a competitive advantage. Differentiation is the act of designing a set of meaningful differences to distinguish between the company's offering from competitor's offerings. Differentiation of physical products takes place along a continuum. At one extreme we find highly standardized products that allow little variation. At the other extreme are products capable of high differentiation. Differentiation is usually very expensive. A firm must often incur cost to be unique because uniqueness needs that it performs value activities better than its competitors. Some form of differentiation is clearly more expensive than others. With superior co-ordination of linked value activities the differentiation may not add much to the cost. Similarly, differentiating through more product features is likely to be more expensive than differentiating through varied but more desired features. The satisfaction of the consumers lies in the firms' ability to raise buyers' performance by constantly meeting their needs. Buyer value is vital which determines competitive advantage position of firms.

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Differentiation at the 'perceived level' need not have back end differentiation, i.e. production differentiation makes little sense, when buyer value chains seek difference at a perceived level rather than on quality, features, durability, reliability aspects. Thus, Levers' stand of dual production has little justification, from the strategic point of view. Strategically, a single bottle for both the products (brands) is a welcome variation.

36. Many strategic plans establish 'cost leadership' or 'cost reduction' as goals. Cost advantage is the outcome of a firm's lower cumulative cost of performing value activities than its competitors. Economies of scale result from the ability to perform activities efficiently at a large volume, or from the ability to pay-off gradually the cost of intangibles such as advertising and R&D over a greater sales volume. Standardization alone provides greater economy of scale compared to multi-branding strategy of Lever to reach different countries with customized brands. The positive sign of consolidation with standardization resulted in the Euro Brand, which emerged out of diminishing trade barriers among European countries. Thus, the crossover from Euro Brands to global brands to meet a single world market, undoubtedly leads to cost effectiveness.

Caselet 14

37. Nokia's success in the cellular telephone equipment industry is largely attributed to the historical, geographical and political climate of Finland. This is not a country which possesses any thing extraordinary in terms of technology and related innovations. The region is sparsely populated and inhospitably cold and this was one of the major reasons which made Finland a pioneer in the industry, because the cost of laying down a traditional wire line telephone service was higher. All those factors which made traditional mode difficult thus fuelled the growth of cellular equipment industry. The people who drive through the artic winter and the owners of remote northern houses felt the immense importance of a cellular phone. The cost of procuring a cellular telephone was also cheaper compared to the traditional line. The absence of a national telephone monopoly in Finland also contributed to the success of Nokia. Above all, the Finnish company's low cost manufacturing structure also attributed to its success.

38. As Nokia is in the business of supplying basic components to the telecommunications equipment, it has an advantageous cost structure. When Nokia wanted to shift itself to cellular telecommunications industry, all the required telecommunications equipment was readily available. Nokia started switching to digital technology five years ahead than the rest of the world. Since customers are much cost conscious, Nokia which has the lowest cost structure of any cellular phone equipment manufacturer in the world, has emerged as the leader. The profits and profitability of Nokia also went up. So, the strategy adopted by Nokia to take the advantage of the first mover through its prediction of digital technology became successful.

Caselet 15

39. The operations function, also called the 'production function' is one of the three primary functions within a business, the other two being finance and marketing. In a typical warehouse business, the operations function employs a greater number of people and uses the greatest portion of the firm's controllable assets. The operations refer to the function in either manufacturing or non-manufacturing settings. Manufacturing operations perform some physical or chemical process to convert some tangible raw materials into tangible products. All other operations that do not actually make goods can be called non-manufacturing or service operations. Non-manufacturing operations may be standard services or custom services. Some non-manufacturing operations deal primarily with tangible outputs, even though these operations do not manufacture the items. These types of operations, such as wholesale distributors (REDNER), can utilize many of the same materials, management principles and techniques that a manufacturing operation might use. The vital ideas of materials handling are also important in some operations that deal with tangible items. The material management principle involved, is obviously of supply chain management to gain greater efficiencies.

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40. Strategy decisions at the top management level and within the operations affect how the operations function contributes to the competitive effectiveness of a company. One broad strategy decision that is important in guiding and co-ordinating the action of operations is related to positioning. Positioning establishes the extent to which the production system will emphasize certain characteristics in order to achieve the greatest competitive advantage. Positioning might be visualized as selecting a particular spot within the pyramid. A company seeking distinctive competence can cover a large percentage of its pyramid than its competitors and leave less space for a competitor to develop competency. Redner aims at 'low-price positioning strategy' (cost efficiency) which may be gained by low over head costs, special purpose equipment and facilities, high utilization of capability, close control of materials, high productivity and low wage rates. All these operations are applicable to Redner services, and to gain advantage it should begin at the product design phase.

41. Regardless of how desirable it may sound, no product (tangible or intangible) can simultaneously be lowest in cost, highest in quality, and instantly available in abundance at numerous, convenient locations. Steven Wheel Wright recommends that a firm explicitly establish relative priorities for the four performance characteristics – cost efficiency, quality, dependability and flexibility.

Cost efficiency: A company that emphasizes cost efficiency will keep its capital, labor, and other operating costs low relative to those of other similar companies.

Quality: A company that emphasizes quality will consistently strive to provide a level of quality that is significantly superior to those of its competitors, even if it has to pay extra to do so.

Dependability: A company that stress dependability can be relied on to have its goods available for customers to deliver its goods or services on schedule.

Flexibility: A company that emphasizes flexibility will work to respond quickly to changes in product design, product mix, or production volume.

Thus, the operational mission statement to be developed for Redner should project all these qualities. Redner tries to compete on cost efficiency, quality and product availability. But projection of all these features in the mission statement will not allow it to focus successfully on a single competitive advantage platform. As a comprehensive mission statement fails to gain advantage in terms of customer's perceived value of the firm, Redner's operational mission statement should focus on cost efficiency which was the main reason for its low price positioning strategy.

Caselet 16

42. Intel has been able to acquire and hold on to the great staggering market share because of its symbiotic relationship with IBM and Microsoft and also the competencies that its rivals lack. Intel was able to generate more and more powerful microprocessors with in a short span. This aspect gave it high brand image about its a magnificent micro engineering and software capabilities. Its symbiotic relationship with IBM and Microsoft was very much helpful particularly in marketing and promoting its products. Intel was also successful in introducing better technical product before its competitors'. Since, Intel is a world-class manufacturing company of microprocessors, it entails substantial fixed costs, but relatively small ongoing production costs. Intel was thus able to offer the product at a lower price. Intel's huge economies of scale provided distinctive cost competitive advantage, which has become a big hurdle to its competitors.

43. The technical core competencies that Intel has over its nearest rival is that it can produce large amount of units relatively at a lower cost, has high technical expertise, and calibre in designing a product. The symbiotic relationship with IBM and Microsoft in promoting the product has also given it a high technical brand image as it was accepted as the best available product for the big PC players in the world.

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44. Intel designed 'Intel – Inside' campaign to create 'pull through' demand for its micro processors . It did so by building brand loyalty for Intel processors among the end users of computers by stressing the superior quality. But, this strategy did not work out when a US mathematician revealed a flaw in the Pentium Processor that led to a small error in the calculation of certain complex numbers. Intel argued that the flaw was irrelevant to most users. Because of the above reason, intel's strategy did not succeed and it was forced to offer a free replacement for any Pentium processor that carried the fault.

Caselet 17

45. Nissan and Toyota make extensive use of self-managing work teams. Each team was given the responsibility to perform major assembly task. The teams are also set challenging productivity and quality goals. Since the performance of each team was encouraged and rewarded through incentives, the labor has shown deep interest in executing high quality, efficient assembling. But, the same was held back by a long history of adversarial labor relations at these companies which made it difficult for the management and labor to improve the labor productivity. To overcome this situation, the companies should motivate employee's through proper training and by explaining the labor competency of the competitors. The ideas of the labor should also be welcomed to probably encourage them to the work better.

46. Since the assembling process used by Nissan and Toyota is relatively less complex, their productivity is not comparable with other companies. The labor cannot be just praised, as they are good at a particular assembling process. The labor should be quite adaptable as in case of other companies. So, we cannot say that the labor at Nissan and Toyota is more efficient and productive than other companies.

47. When the entire process of assembling is fully standardized, labor productivity plays a vital role in determining the overall efficiency of an organization. In general, every company will have its own type of assembling techniques, because of which the labor productivities have become incomparable. In case of Chrysler, labor productivity is not a very important aspect, but its superior design capabilities have become important. Different allocation of cost techniques also creates lot of confusion to judge whether a company's labor productivity is high or low.

Caselet 18

48. The first step toward achieving the objective is through strategic management process, the process by which managers choose a set of strategies for the enterprise. The strategy is framed keeping in mind the strengths and weaknesses. To a certain extent, this emphasis on a rational

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The marketing strategy that a company adopts can have a major impact on the efficiency and cost structure of an enterprise. Marketing strategy refers to the position that a company takes with regard to pricing, promotion, advertising, product design, and distribution. It can play a major role in boosting a company's efficiency. Aggressive pricing, promotions and advertising – all of which are the task of the marketing function – can facilitate a gain in a low cost position.

50. The distinctive competencies of an organization arise from two complementary sources – resources and capabilities. The financial, physical, human, technological, and organizational resources of the company can be divided into tangible resources like land, buildings, plant, and equipment and intangible resources like brand names, reputation, patents, and technological or marketing know-how. To give rise to a distinctive competency, a company's resources must be both unique and valuable. A unique resource is one that no other company has. Once this unique feature is lost, the company losses its competitive advantage. So a failing company is one where its profit rate is substantially lower than the average profit rate of its competitors. Failure implies something more drastic. Failing companies typically earn low or negative profits.

Poor positioning strategy is another reason why the new product fails leading to decline in the sales volume. Positioning strategy is the position a company adopts for a product on four main dimensions of marketing i.e., price, distribution, promotion and advertising. Here, Pfizer's Zoloft has gained more market share at the cost of Prozac. Zoloft rose to 33.5 percent of the market in 1995 up from little more than a percent in 1992. Indeed it is an alarming situation for Prozac.

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Caselet 19

51. The five force model coined by Michael E Porter can be used to analyze the swatch mobile industry's strength, weakness, opportunity and threats. The five forces to be discussed are the barriers to entry, intensity of competition, bargaining power of buyers, bargaining power of suppliers and the threat of substitution. The strength of these forces differs from industry to industry. The swatch mobile industry is a small mass market segment in the automobile industry. The relative impact of these forces is listed below.

Barriers to entry – High

Huge investments

Longer gestation period

Established economies of scale by competitor

High switching costs from consumer's, thus low volumes

Low access to distribution (Prime purpose of joining hands with Mercedes Benz is to gain the power of channel members)

Relatively high retaliation from competitors expected.

Intensity of competition – High

Low industry growth, huge fixed costs

Intermittent over capacity

Highly oligopolistic in nature

Diversity of competitors

Brand identity of existing players.

Bargaining Power of buyers- High

High switching costs

Wide choice of products

Low incentives are all contributing factors for increasing bargaining power of buyers.

Bargaining power of suppliers – Low

Volumes are important for suppliers, as they are operating on a low margin

Companies need to assign the work to one supplier to gain required economy scale

Threat of backward integration of firms.

Threat of substitutes – Low

High switching costs from customer point of view

Low propensity.

52. **Positioning strategy** – Swatch mobile, keeping in mind the intense competition and the variants which try to fulfill the gaps of market, deliberately aimed to place the 'Swatch mobile' a small car as affordable, durable, and stylish. The USP of the product is aimed to position it as 'environmentally as friendly'. This positioning is distinct and provides a new platform with special needs, safety and two seaters. Hayek heightens the expectation of consumers by maintaining a gap between announcement (during Olympics) and its actual introduction in the market.

Pricing strategy – Hayek emphasizes to sell on low price yet retain the perceived image. Swatch mobile was adopted 'value pricing strategy' where it charged fairly low price for a high quality offering. The Mercedes Benz image can force 'Swatch mobile' to have 'perceived value pricing'. However, keeping in mind the long-term objectives, a value-pricing strategy has adopted.

53. The product which is aimed at the middle segment, and focuses on special needs, lower cost and high image, makes the competitors more vulnerable to enter. It is relatively difficult to get immediate perceived value of Benz. Image itself may act like a high entry barrier. It is difficult to copy the technology and to beat its cost leadership competitive advantage. Thus, it is difficult for the competitor to gain sustained advantage, as was the case with 'Swatch mobile'. However, the potential threat may be from TOYOTA which has already proved itself with LEXUS. Toyota could have priced Lexus, given its extraordinary quality, much closer to the Mercedes prices. However, it adopted 'value pricing'. Ford Escort – can also compete with 'swatch mobile' as their economy and safety profile match. However, the environmental friendly technology makes swatch mobile gain instant leverage from the market. With government implications, (environment) policy decisions in favor, the strategic marketing move may prove more lucrative for Swatch mobile.

Caselet 20

54. Toys 'R' Us adopted cost leadership and market penetration strategies for attaining a stupendous growth.

a. **Cost leadership strategies**

Toys 'R' Us followed the strategy of cost-leadership seeing significant competitive advantages. In order to lower its costs, it followed efficient materials management techniques.

b. **Market penetration strategy**

As a part of the strategy Toys 'R' Us sought to penetrate deeper by developing a nation wide chain of retail outlets. Thus, the reach of the product increased.

55. The following were the non-price competitive moves made by the company.

a. **Promotion of wide range:** Toys 'R' Us's strength lay in the wide range of products which its competitors lacked. Therefore, it promoted this as a 'differentiating' factor to gain competitive advantage.

b. **Improve customer service:** The customer service played significant importance for a retail store. In order to improve its competitive position, it tried to increase the level of customers service.

c. **Low price, high quality:** It sought to make products which were priced low but were high in quality.

56. Toys 'R' Us followed the 'put-out' pricing strategy. This is a strategy where a firm/ company prices its product's very competitively so as to eliminate its weaker competitors. This is also known as the penetration pricing strategy.

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Caselet 21

57. Strengths

- The distinctive strengths of RYKA include,
- Small size of the organization – RYKA as a niche market player has more advantages, evident by its sales.
- Distinct technical superiority of their 'patented' nitrogen molding clear-rubber bouncing balls – which is well perceived by all channel members.
- Good styling of the product, subsequent brand image associated with it.
- Companies access to good distribution networks that are satisfied with RYKA product.
- Goodwill mainly due to the 'foundation sponsorship' (donations of profits to the tune of 7%).
- Shoes made for women by women also give gender 'favoritism'.
- Strong endorsement by Hollywood trainer, Jake steinfield.

Weakness

- Minor quality oriented problems
- Management capabilities
- Facilities
- Being a small company, lack of adequate finances
- Risk of single segment operation.

Opportunities

- Extending product to other demographic segments of women
- Improved relations of suppliers and buyers.

Threats

- Potential chances of MNC entry into the segment
- Increased bargaining power of key buyers or suppliers (Low switching costs)
- Difficult to sustain single product or segment.

58. Organization strategy formulation should not aim at protecting the existing market (defensive) or gaining cost reduction, and innovative competitive advantage. Such strategic moves are appropriate to relatively big companies, which cater to more than one market segment. For RYKA, a niche player, the significant factor to be considered among the SWOT factors is the opportunities available for the company. This factor has a major significance as there is a threat of MNC invasion into the market. The major opportunity for RYKA is the success it can attain by extending its product to other demographic segments of women. Even though the company can attain a distinct identification by maintaining a segment, the growth path may not be satisfactory due to the increased competition. Thus, the significant factor to be considered is the opportunities existing in the market and RYKA should extend its product to other segments to gain from this opportunity.

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Caselet 22

59. SWOT is a strategic planning tool that forces management to assess an organization's strengths and weaknesses, environmental opportunities and threats.

Strengths: Business concept, content, organizational support from the parent, obsolescence proof, adaptability.

Weakness: Choice of medium, cost of reception box, narrow target segment.

Opportunities: FM receiver (economical), few competitors and huge market potential.

Threats: Television, web, cable and other media.

60. Indigo Radio adopts differentiating strategy. It differentiates its brand by creating a niche for itself. It seeks to represent itself more than a brand as a entire genre through selling

content rich with creativity and novelty to appeal to discerning, entertainment positive people.

61. The major factors which can influence the success of Indigo Radio are

a. Acceptance of the concept.

b. Content and the creativity mode of delivery to give sustained competitive advantage.

c. Keeping costs low to give distinct cost leadership advantage.

Caselet 23

62. Compaq followed the 'differentiation' strategy in achieving competitive advantage and thereby dominated the PC market. In order to differentiate its products, Compaq emphasized on the technical aspects of engineering and the research side of PC business. The aim was to produce high-end PC's incorporating latest technology.

63. Compaq distributed its PC's through sophisticated dealer network to distribute, sell and service its products which were targeted at the premium segment. Dell focussed on the marketing and distribution end of PC business and followed the direct sales model of businesses, thereby eliminating intermediaries. This resulted in cost cutting which allowed Dell to price its PC's low. Compaq had to change its strategy as computers were increasingly being used as commodities. In addition, due to the increase in competition and advertising technology, the prices were also falling. Added to that, computers started to become a household requirement instead of being a luxury item.

In a country like India, a majority of the market is dominated by grey markets. This is because the price-sensitivity of the people is high. Therefore, if Compaq is to gain significant inroads, it may follow the direct sale model which will keep the prices low and thus may be accepted by customers as an attractive alternative.

Caselet 24

64. Coletti and a small group of managers were assigned the role of saving 'Mustang'. The task was to develop a new redesigned model of 'Mustang', that is compatible and can withstand competition within a short time. The existing culture and organization structure was modified to facilitate ease in product development. Conventional hierarchical approval system was replaced with individual or team decision, i.e. without the consent even the team could go ahead and redesign. Much financial liberty was also rendered, persuading department heads to cede control to their sub-ordinates. The redesign phase also gained VETO power over certain decisions. Engineers were grouped under 'chunk teams'. They disposed standard bidding procedure, cut costs by designing computer aided 'virtual models' rather than 'dummy cars'. All such cost reduction enabled it to price the product 'relatively advantageous' to customers.

65. The successful completion of Mustang 'redesign' in a short span of time with distinct cost reduction advantage (25 percent less time, 30 percent less money) were passed on to the customer, by 'value' based pricing strategy. This accomplishment by the 'Mustang Project' facilitates a new orientation towards formulating a strategy.

66. Based on short-or long-term objectives, Ford can adopt

- Distinctive structural changes to bring in desired outcome as and when strategy formulation activity is undertaken.
- Cultural changes, autonomy of decision-making, decentralization of power, accountability with accomplishment.
- Ample financial decision-making power by assigning cost and revenue center of project.
- Do away conventional process and bring in new activities to reduce costs. For example, simulation reduced the cost of actual construction of model cars. Similarly, bidding process is avoided. Thus, strategy implementation keeping in mind the above value added activity can further enhance efficiency.

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Caselet 25

67. Organizational structure is a major priority in implementing a carefully formulated strategy. If structure and strategy are not closely coordinated, then the result will probably be inefficiency, misdirection and fragmented efforts. All activities, responsibilities and interrelationships need to be organized in a manner that is consistent with the strategy chosen, else the structure is left to evolve on its own. The need for an organizational structure becomes apparent as a business evolves. The organizational structure is relatively simple in a small firm where one person manages the current operations and plans for the future. As the magnitude of business activity increases, the essential need to subdivide activities, assign responsibilities and provide for the integration and coordination of the new organizational parameter arises. These organizational parameters provide a structure that provides a formal means of decentralizing and centralizing which is consistent with the organizational and control needs of the strategy.

Diversity and size create unique structural needs for a firm. However, structure is not the only means for getting 'organized' to implement a strategy. Reward systems, planning procedures, and information and budgetary systems also should be employed. These elements operate interdependently with the formal organizational culture to shape the way things are done. But it is through structure that strategists attempt to balance internal efficiency and overall effectiveness within a broader environment. Therefore, structure is not an end in itself but rather a means to an end.

68. There are three basic determinants of organizational culture. First, the influence of the business environment in general and the industry in particular. For instance, companies in industries characterized by rapid technological change, such as software, electronic and computer companies, normally have cultures that strongly value innovation.

Second, founders, leaders and managers bring a pattern of assumptions with them when they join the organization. These assumptions often depend on their own experiences in the culture of the national, regional, ethnic, religious, occupational and professional communities to which they belong.

Third, the actual experience that people in the organization have had in working out solutions to cope with the basic problems moulds their shared assumptions. For instance, two companies may each value cooperation and internal competition, but one company may emphasize cooperation more in decision-making and resource allocation, while internal competition may predominate in the other. The cultures of these two companies consequently are quite different even though some of their basic assumptions about cooperation and internal competition are the same.

Taken together, these three principle sources suggest that the content of culture derive from a combination of prior assumptions and new learning experiences.

Aspects of Culture

Not all cultures produce equally powerful effects. Some cultures are stronger than others.

Strength of culture: The strength of a culture influences the intensity by which organizational members comply with it as they go about their daily activities. The three specific features of cultures that determine its strength are *thickness*, *extent of sharing* and *clarity of ordering*.

There are a number of important shared assumptions that vary from one organization to another.

Thick cultures have many shared assumptions whereas *thin* cultures have a few. Moreover, cultures with many layers of important shared beliefs and values have a stronger influence on organizational behavior. Generally, thinner cultures have a weaker influence on organizational life. For instance, many global corporations like IBM, GM, GE, and Microsoft have a sense of thick cultures made-up of numerous shared beliefs and values, like respect for the individuals, encouragement of constructive rebellion and doing the right thing at all times. Let us look at the shared assumptions aspect a little deeper than it appears on the surface. Some important assumptions are more widely shared than others are. Few are completely shared in the sense that every member of the organization would

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have to internalize them. Cultures with more widely shared beliefs and values have a more pervasive impact since more people are guided by them.

One aspect of culture which assumes predominance over the others is that the shared beliefs and values in many organizational cultures are clearly ordered. Their relative importance and their relation to each other are fairly unambiguous. In less ordered cultures, relative priorities and interrelationships are not very clear. The cultures, where there is a clear order of shared assumptions, have a more pronounced effect on organizational behavior because members of the organization are sure of values that should prevail in cases of conflicting interest.

The content of a culture would determine the *direction* of influence of such culture on the organizational behavior. The *intensity* of a culture that affects the behavior depends on a culture's strength.

Strong cultures are also more resistant to change. This represents a major asset or liability depending on the culture's compatibility with the needs of the organization's chosen strategy.

69. Uniqueness does not lead to differentiation unless the firm's product gives value to the buyer. A successful differentiator puts his efforts in creating a value for buyers by providing them with a high quality product that yields a price premium in excess of the extra cost.

Buyer's value chain determines exactly that which is valuable to the buyer. Just as a firm, the buyers also possess the value chains consisting of activities they perform. A firm's product or service is a purchased input to its buyer's value chain. For example, steel is a raw material that is typically cut, bent, machined and converted into the buyer's production process where it is valuable to the buyer as its end product. The buyer's value chain determines the manner in which the firm's products are actually used and the way in which the buyer's activities are affected by the firm. These determine the buyer's requirements and support buyer value and differentiation. Individual consumers also possess value chains just like buyer's value chains. The sequence of activities performed by a household and its members in which the product or the service fits is represented by a consumer's value chain. To understand how a product fits into a household value chain it is usually needed to identify those activities in which a product is directly or indirectly involved; typically not all the activities a household performs. For example, the purpose of television is to provide entertainment to various members of the household. It serves as a source of entertainment during some periods of the day and serves as a background noise during other periods of day. Traveller's checks are brought at once in number and are used occasionally in the course of vacation and the checks which are unutilized can be saved for future trips. Therefore, the buyer's commercial, institutional or industrial value chain reflects its strategy and approach to implementation where as the household's value chain reflects its member's habits and needs.

Caselet 26

70. The 3 distinct but related steps which constitute a special type of organizational control are measuring organizational performance, comparing performance to goals and standards, and taking necessary actions.

Step 1

The organizational performance is to be measured before carrying out the strategic management process. Strategic audit is one of the tools used to measure the organizational performance of any firm. Is an examination and evaluation of an organization operation affected by strategic management process? Such an audit may be very comprehensive, emphasizing all facets of a strategic management process, or narrowly focussed, emphasizing only a single part of the process, such as environmental analysis. Cross-functional team managers carry out strategic audits.

No single method can be used for performing strategic audit, qualitative and quantitative methods are broadly used for performing strategic audit.

A strategic audit is conducted in three phases,

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Diagnosis to identify how, where, and in what priority in-depth analysis need to be made; focused analysis, and generation and testing of recommendations.

Phase One – Reviewing key documents like strategic plan, business or operational plan, organizational arrangements, review of financial, market compared to determine internal and external prospective.

Phase Two – Testing the hypothesis, formulating conclusions as to weaknesses in strategy formulation, implementation deficiencies, or interactions between the two.

Phase Three – Develop alternative solutions to problems and ways of capitalizing on opportunities. Develop specific recommendations to produce integrated measurable and time-phased action plan to improve strategic results. Quantitative methods like ROI, Z-score, and stakeholders' audits are used.

Step 2

After measuring or organizational performance, managers must compare them with two established benchmarks – goals and standards. Goals are simply the output of an earlier set organizational strategic management process. Standards include profitability, market position, productivity, product leadership, personal development, employee attitude, public responsibility standards.

Step 3

In most situations, corrective action is not necessary if the organization is reaching its goals and standards. However, management must take up challenging course of actions. In the context of 'Benetton' the 3 steps like –

- Measuring organizational performance with conventional wisdom;
- By handling only those activities, which it can, do well and retain 'quality'; and
- Outsourcing the other services,

Step two of comparison is carried at Benetton as is evident by their high profit margin even in slack seasons. Step 3 of corrective action is in terms of stream lining production unit, where 80% of clothing production is done in Europe.

71. It is understandable that in implementing strategy all forms of organizational structures are not equally effective.

- Growth can also influence restructuring.
- Eventually when firms diversify into related or unrelated products or markets, structural change is necessary.
- For competing effectively at different stages, organizations require different structures.
- In case of Benetton modified functional structure is employed. Effective co-ordination of the separate functional units is the strategic challenge in the functional structure.

The problem of Benetton is that as the organization grows in terms of volumes, conventional functional structure cannot cope with strategy implementation and effective control cannot be attained.

Divisional organization structure, assigning different divisions and making them profit centers will increase accountability with human resource requirement.

72. Top managers have an important role in making sure that strategic control is successful. Upper level managers must design and implement the strategic control process to encourage appropriate strategic control behavior within the organization through organizational culture that supports strategic control with the aid of necessary information. The most important alternative to make strategic control process more effective is to have reliable, timely information on hand.

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Information – strategic control

Reliable, timely and valid information is the lifeblood of successful strategic control. Formal systems like MISs, MDSSs, are essential. MIS a formal, computer assisted organizational function designed to provide managers with information to take decisions, closely related to MIS, is the Decision support systems. Managers make use of MDSS to arrive at decisions. That facilitate effective strategic control. At Benetton, systemization in production is one such welcome variation.

Caselet 27

73. The various steps that can be taken are:

a. Increase burger size.

b. Introduce new and improved burgers.

c. Broaden the menus to include products line chicken dishes, pizza, salads etc.

d. Attractive packages for whole-meal offerings e.g. 'Value meal' of McDonald.

e. Customize menu to suit local tastes.

74. The burger giant followed the strategy of market penetration in its attempt to find newer customers. As a part of this strategy, it spent a lot of resources in building the new restaurants in new locations (For example, retail stores etc.).

In addition to this, the burger giant also extended its business operations to the global level through opening new restaurants in different countries.

Caselet 28

75. Every firm is a collection of activities that are performed to design, produce, market, deliver and support its product. In competitive terms value is the amount buyers are willing to pay for what a firm provides them. Value is measured by total revenue, a reflection of the price a firm product commands and the units it can sell.

Value activities can be divided into two broad types,

– Primary activities and

– Support activities.

Primary activities are the activities involved in the physical creation of the product (In Insurance sector the product is service which is intangible) and its sale and transfer to the buyer as well as after sale assistance. In any firm, primary activities can be divided into five generic categories such as inbound logistics, operations, outbound logistics, marketing and sales and service.

Support activities support the primary activity and each other by providing purchased inputs technology, human resources, and various firm wide functions.

Firm infrastructure is not associated with particular primary activities but supports the entire chain. Value activities are therefore the discrete building blocks of competitive advantage. How each activity is performed determines the cost relative to competitors and also the contribution to buyer needs and hence differentiation. Within each category of primary and support activities, there are three activity types that play a different role in competitive advantage.

Direct: Activities directly involved in creating value for the buyer, such as assembly, parts making, sales force operations, advertising, product design, recruiting, etc.

Indirect: Activities that make it possible to perform direct activities on a continuous basis, such as maintenance, scheduling, operation of facilities, R&D, vendor record keeping, etc.

Quality assurance: Related to quality aspects.

Insurance sector offers "security" as the product, which is intangible. The very nature of service wherein the role of primary activities which can add value to the service relatively has less scope, however marketing and sales, service activities try to give a tangible shape to the product in adding value through "marketing communication strategy", speedy settlements of claims (post sell service) etc.

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Products of insurance are complimentary in nature and are also in bundling mode.

Complimentary products offer full range than leaving some to be supplied by others. Most of the firms offer many insurance services however some are prominent in specific segments due to their good marketing abilities in those segments. LIC offers 61 schemes each of them compliment the other if they are properly arranged and made into a bundle, which can cater, and may become more appealing to the buyer segment. The choice and selection of these complimentary products and their bundling will determine competitive advantage over other firms in the industry.

76. In any industry whether it is domestic or international, the rules of competition are embodied in five competitive forces – entry of new competitors, threat of substitutes, bargaining power of buyers, bargaining power of suppliers and rivalry among existing competitors. The collective strength of these five forces determine the ability of firms in an industry to earn, and determine industry profitability as they influence the prices, costs and required investment of firms in an industry. If the five competitive forces and their structural determinants were solely a function of intrinsic industry characteristics then competitive strategy would rest heavily on picking the right industry and understanding the five forces better than competitors. If a firm can shape structure, it can fundamentally change industry attractiveness for better or for worse.

Strategies that change industry structure can be a double edged sword because a firm can destroy industry structure and profitability as readily as it can improve it. (A new insurance product design that undercuts entry barriers or increase the volatility of rivalry, for example, may undermine the long run profitability of an industry, though the initiator may enjoy higher profits temporarily or a sustained period of price cutting (premium reduction) can undermine differentiation.

Insurance Industry-Five Force Model Analysis

- Entry barriers-Low

  The services can be copied and easily imitated due to the low proprietary learning curve.

  No patent protection.

  Bundling, complimentary products are innumerable.

  Low cost of the product or service design.

  Pro government policies like deregulation of insurance industry in our country will automatically open ways for many MNCs.

- Bargaining power of suppliers: Low

  Relative absence of intermediaries

  Potential threat of allied group of companies entering into the segment to offer insurance products (Banks, Financial institutions etc.)

- Bargaining power of buyers: High

  Buyers' information levels are high.

  Though switching costs are relatively stable however once hooked up, he remains a loyal buyer to sustain the policy.

Initial service buying decision is complex, price sensitive (premium).

- Threat of substitution: High

  Buyers' propensity to substitution is high.

  Since several institutions can also render similar or perhaps more beneficial services the threat for substitution is more.

- Intensity of rivalry: High

  Deregulation resulted in both general as well as captive insurance and in specific insurance segments. Competitions increased many firms on their own or with complimentary service with other firms in the form of JV are operating in the market.

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77. Competitive scope can have a powerful impact on competitive advantage, because it shapes the configuration and economics of the value chain. Four dimensions of scope affect the value chain of a firm – segment scope, vertical scope, geographic scope and the industry scope.

Segment scope: Differences in the needs or value chains required to serve different product or buyer segments can lead to a competitive advantage of focusing. For example, the value chain required to serve corporate firms (captive insurance) is different from that required to serve small business or individuals.

Vertical scope: This defines the division of activities between firm and channel buyers. It is the activities that a firm can perform internally and also what value activities a firm performs or purchases externally.

In insurance industry, product design, communication strategy, target segment selections, etc., are internal activities (Pre-sale). However, inspection activities are outsourced from specific qualified professionals. (Doctors, engineers).

Geographic scope: Geographic scope may allow a firm to share or co-ordinate value activities used to serve different geographic areas. Insurance sector depends on the vulnerability of geographic boundaries. Potential risks associated with people, products or services in each segment, social obligations, concerns are met with different products or bundle of packaged services which allow differentiation and distinctive competitive advantage.

Industry scope: Achieved through coalitions. Coalitions are long-term agreements among firms that go beyond normal market transactions but fall short of outright mergers. Example of coalitions is joint ventures.

Coalitions are ways of broadening scope without broadening the firm to share activities.

Caselet 29

78. A marketing strategy makes a competitive differential advantage, derived from the characteristics of a product, superior to competitive products. Competitive differential advantage is the most important reason for product success and should be considered in any product strategy analysis. Technology developments provide needed competitive differential advantage, example cassette machines could record programs and disc players could not. At the brand level it is difficult to maintain competitive differential advantage based on technology alone, as technology can be copied within no time, as is evident by Panasonic vs Sony. One important source of sustainable competitive differential advantage is product symbolism.

Product symbolism: is what the product means to consumers and what consumers experience in purchasing and using it. Product symbolism and appropriate brand image can actually be more important than technological superiority. For example, IBM PCs were rated as slow in terms of processing speed, poor layout for keyboard were the drawbacks. However, the PCs are sold due to the 'IBM' image, i.e., IBM meant computers to many consumers.

For Boston Beer the competitive differential advantages include quality, reduced shipping time, more appealing and hearty and advanced brewing process.

The sustainable competitive differential advantages include well built brand image (Samuel Adams Patriotism), persuasive personal selling, redefined point of sale marketing, table tents feature, more than Boston Beer logo.

79. The environment includes:

International, National and Regional Markets – The key strategic aspect of managing international environment is the problem of communication. The first hazard may be language, followed by problems of differences in culture, law and national attitudes. Boston Beer successfully tackled foreign brands owning to the specific 'patriotic' attitude of consumers.

National Markets: The national environments need to be considered to study variations in local customs and geographical distances in terms of the costs of distribution. Though Boston Beer operations are within the country (48 states) the quality standards of international brands affect Boston Beer.

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Regional Markets: The key advantage for the regional business is to thoroughly understand local conditions, as well as market differentiators and distribution channels, owning to smaller size compared to international operators. Boston Beer can concentrate much regionally to improve market share.

Demographics: Population, their age, sex, preferences, specific needs of age groups influence product performance of Boston Beer.

Major market for light beer consists of men in their thirties who are eager to stay healthy and trim. In this market profile, both sex and age are demographic variables and concern about health and weight are psychographics variables.

80. The price premium from differentiation is a function of value of differentiation and its sustainability. A differentiated competitor will be abandoned by buyers if the premium gets too high. Unless a firm shares some of the value created with the buyer in the form of a more reasonable price, it may tempt the buyer to integrate backward.

The appropriate price premium is a function not only of a firm's extent of differentiation, but also of its overall relative cost position. If a firm does not keep its costs in proximity to competitors, the price premium may grow beyond sustainable levels even if it maintains differentiation.

Caselet 30

81. Strategy, at all levels is important for an organization to keep its competence level. So, the strategy should be framed in such a way to attract customer groups. The plan of action that strategic mangers adopt for using a company's resources and distinctive competencies should gain a competitive advantage over its rivals in a market or industry. This can be maintained by customer satisfaction. Customer's needs are desires, wants, or cravings that can be satisfied by means of the characteristics of a product or service. In order to satisfy customer needs of different customers, companies tend to differentiate their product to create a competitive advantage. All companies must differentiate their products to a certain degree in order to attract customers and satisfy some minimal level of needs. However, some companies differentiate their products to a much greater degree than others, and this difference can give them a competitive edge. But, in this case, Ford went beyond that level and forgot the other influencing factors which tilt the customers towards a particular product. Ford, with frequent switching styles increased product costs. So, restyling of cars is not all that decisive after a certain extent.

82. Companies in an industry can pursue many different kinds of business-level strategies that differ from each other with respect to choice of product, market segment, product quality, technological leadership, pricing policy, etc. As a result within most industries, strategic groups emerge, each of which are composed of companies pursuing the same generic strategy. The concept of strategic groups has a number of implications for business –level strategy. First, a company's immediate competitors are those companies pursuing the same strategy in its strategic group. Consumers tend to view the products of such enterprises as being direct substitutes for each other. Thus, a major threat to a company's profitability may arise primarily from within its own strategic group, not necessarily from the other companies in the industry pursuing different generic business-level strategies. So, the companies have a different standing with respect to competitive forces. Therefore, the basic strategy adopted by Ford is quite good but emphasis should be given to cost factor also.

83. A company's goal in pursuing a cost leadership strategy is to outperform competitiors by doing everything it can to produce goods or services at a cost lower than its competitors. Two advantages accrue from a cost – leadership strategy. First, because of its lower-costs, the cost leader is able to charge a lower price than its competitors yet make the same level of profit. If companies in the industry charge similar prices for their products, the cost leader still makes a higher profit than its competitors because of its lower costs. Second, if rivalry within the industry increases and companies start to compete on price, the cost leader will be able to withstand competition better than the other companies because of its lower costs. For both these reasons, cost leaders are likely to earn above –average profits. Achieving a low cost position may also require that the company develop skills in flexible manufacturing and adopt efficient materials – management techniques. In a way cost is directly related to sales. So, in one way it can be quite successful to boost sales.

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Caselet 31

84. The reasons for the decline were:

a. *Low competitive strength:* Nissan could not keep up with the quality and design of its competitors.

b. *Lack of innovation and new product development:* Nissan did not develop new designs of cars to suit the changing market conditions. It did not focus on being innovative.

c. *Faulty pricing strategy:* Nissan products did not have competitive advantages on the 'Differentiation' Parameter. Added to this, it could not become a cost leader either, owing to which its prices were almost on par with those of its competitors.

85. The following are the steps taken by Nissan to revise its US business.

a. *New manager:* It appointed a new person as VP and GM and gave wide authority.

b. *Focus on cost leadership strategies:* Nissan decided that to gain competitive advantages, it would focus on cost leadership strategy. As a part of the strategy, it focussed on keeping its cost low. Its engineers were instructed to aim for a car that would be cheap to produce but comparable in quality to its competitor. It deliberately restricted the number of models so as to keep the costs low.

c. *Entry into mid-size car segment:* Nissan introduced a new mid-sized car in two models. Because of the cost-leadership strategy it could keep the costs low and price it lower than its competitors.

d. *Concentrated marketing budget:* Nissan concentrated most on its marketing budget for Altima (mid sized car) and Quest.

e. *Focus on volumes:* Nissan also focussed more on building volumes and thus increased sales revenues.

86. The disadvantages of the low-cost strategy are given under:

a. *Benefits may be short-lived:* A 'low-cost' strategy may have short-term benefits. In the long-term, a product cannot sell just on the basis of low cost.

b. *Fall in quality:* A focus on cutting cost can impact the quality and it may suffer.

c. *Lack of variety:* In order to be able to produce at low cost, Nissan deliberately restricted number of models which could have an adverse impact as customers seeking variety may oppose the move.

Caselet 32

87. Amex followed the differentiation strategy in gaining competitive advantage. It positioned its credit cards as a premium product by requiring a high income to possess the same.

In doing so, its possession conferred 'status' and gave the holders a feeling of exclusivity and uniqueness. To supplement the above offers, the company offered quality service also.

The reasons for the success are:

a. *Wider network:* The rival companies established wider network of location where the card would be used more than Amex.

b. *Card for everyone:* Amex ensured that a credit card was to be confined to premium segment. Instead, master and visa concentrated on widening the market by providing the card to others too. The yearly fee payable by customers was low and this increased their demand.

c. *Alliances with Banks:* Master card and visa also established good alliances with banks which helped a great deal in widening its reach.

d. *Incentives:* The rival companies also offered various incentives on using the card for example, accumulation of miles towards the purchase of airline tickets.

88. a. *Reduction in costs:* Amex focussed on reducing its costs. In order to ensure the name, it took measures like laying of excess employees.

b. *Increase/wider network:* In order to make the card acceptable at more outlets, it lowered the fees to be paid by merchants and also forged alliances.

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c. *Incentives:* It provided new incentive schemes to its holders.

d. *Relaying norms to possession:* In order to widen the market, Amex released the norms for possession of the same, thereby allowing not just the elite to own the card.

e. *Restoring the differentiated appeal:* It also tried to restore the differentiated appeal through advertisements and other promotion tools. As a part of this, it even changed its advertising agency with little success.

Caselet 33

89. The reasons for the decline of Campbell during 1980's were.

a. *Bad management:* The managers/top-executives of the company failed to manage it properly.

b. *Lack of innovation and adaptability:* Campbell seemed content on maintaining *status quo* instead of innovating and keeping abreast of changes in environment.

c. *Increased competition:* Increased product offerings by competitors overwhelmed Campbell offerings.

d. *Increase in costs:* The cost of operations of Campbell rose while its sales volume remained stagnant, thus squeezing its growth.

90. a. *Cost-cutting strategy:* The following steps were taken to control and reduce costs.

– Closing of in efficient plants

– Laying off of surplus workforce

– Diverting unprofitable business.

b. *Hold-and-maintain:* He took a relatively defensive strategy of maintaining hold-and-maintain position which was intended to redeploy its resources thereby giving it strength to maintain its market share.

91. A hold-and-maintain strategy is basically aimed at maintaining the present market share. It should be used when a company is not in a position to invest or increase its market share, which may be because of the financial crunch in the company.

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Caselet 34

92. From the beginning, Shell had given utmost importance to strategic planning. It had always encouraged its managers to think ahead futuristically. It always anticipated various happenings and was ready to face any sort of situation. It was never complacent in terms of planning. It evaluated various alternatives. It had an answer to any kind of event that was a result of various factors in the global arena.

When the whole industry was expecting an increase in the oil prices and working in that direction, shell alone questioned itself, "what happens if there is a decline in the oil prices".

When the oil prices decreased in realty, it did not get a shock. It could manage the situation well without any loss. Thus, it gained an edge against its competitors.

93. **Strategic planning is all pervasive:** It is not restricted to only specific parts of an organization. A CEO of a company, especially ofan organization like Shell, which operates in a most uncertain environment, should be able to gauge the various possibilities and plan ahead to react accordingly.

He should be able to think futuristically, and take appropriate decisions. He should have an answer to every imminent situation ahead. Since the oil company operates in an environment with very few players, the CEO of the company should be vary cautious while taking any decision because, anything that goes wrong would cost the firm dearly. Therefore, the CEO of any company should not wait till a situation arises, but plan strategically in such a way that he would not be facing a crisis at any point of time.

94. Yes, Shell follows a futuristic planning process. It definitely thinks ahead and is ready to face any sort of development in an uncertain environment. It follows a principle that it should never face a crisis situation. It does not wait till crisis befalls it.

It anticipates a crisis ahead and plans accordingly. Because it planned strategically keeping the future in mind, the company made profits when the other firms in the industry suffered losses. Therefore, the mode followed by Shell is unique.

Caselet 35

95. According to Modigliani and Miller, the dividend pay out is an irrelevant factor in the market valuation of firms. They assert that the value of shares is solely determined by real considerations i.e., the earning power of the firm and its investment policy. The distribution of earnings in the form of dividends has no bearing on the valuation of the firm. The proportion in which the earnings are split between dividends and retained earnings has no effect on the wealth of shareholders.

This hypothesis of MM are based on the assumptions of perfect capital markets, rational behavior of investors, symmetric market rationally, no taxes and perfect certainty as to the future investment program and future profits of all firms.

96. Most dividend theories imply that dividend pay outs have information content about future earnings of the firm. This act signals the management's assessment of future business prospects. By demonstrating its profitability in this manner, the firm can differentiate itself from less profitable firms. Further, the management then has an incentive to perform well enough to maintain its dividend and avoid the adverse consequences of a dividend cut.

Secondly, dividend announcements do convey more information than other alternative announcements. Dividend announcements are backed by hard cash. The firm must generate internally or convince the capital market unequivocally.

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Caselet 36

97. Dividends and buy-backs are just two ways of distributing cash to the shareholders. However, they differ mainly on two aspects.

One is from the taxation point of view. If companies distribute cash as dividends, they have to pay a dividend tax of ten percent. On the other hand, if cash is distributed through buy-back, while the companies do not pay any tax, the individual investor suffers capital gains tax of 20 percent (assuming it to be a long-term capital gain). So investors in general would prefer to receive cash through dividends rather than through the buy-back route. Companies on the other hand would prefer buy-backs to minimize their tax outgo.

More than the tax effect, it is the information effect that has been cited often to differentiate between dividends and buy-backs. Dividends appear to be the appropriate vehicle for regular, relatively frequent communication of management's ongoing assessment of a firm's prospects. On the other hand, repurchases are more suited for episodic signaling with the timing to be left to the discretion of the management.

Dividends are basically habit forming and consequently very sensitive. Similarly, an increase or decrease in the quantum of dividends also needs to be administered by the company with caution as it might lead to unnecessary changes in market's perception about future prospects. In view of this, buy-back seems to be a more convenient means of distributing cash at any point of time.

98. Some of the salient features of the buy-back norms are:

- Norms relating to buy-back will be applicable to equity shares of a company listed on a stock exchange.

A company may buy-back its shares by any one of the following methods:

a. From the existing shareholders on a proportionate basis through the tender offer.

b. From open market through

    i. Book-building process

    ii. Stock exchange.

c. From odd-lot holders

- A company shall not buy-back its shares from any person through negotiated deals, whether on or of the stock exchange or through spot transactions or through any private arrangement.
- Any person or an insider shall not deal in securities of the company on the basis of unpublished information relating to buy-back of shares.

- A company intending to buy-back its shares should first get shareholder approval by means of a special resolution at the annual general meeting or the Extraordinary general meeting.
- Post buy-back, the shares should be extinguished within 7 days of their receipt.
- SEBI rules do not allow companies to issue fresh shares for 24 months after a buy-back.
- Post buy-back, the debt equity ratio should not be more than 2:1.
- Buy-back must be funded from free and share premium reserves or proceeds from previous issues.
- The process of buy-back has to be completed within 12 months.
- Buy-back is exempt from the takeover code, if there is no change in management after the purchase.
- Appointment of a merchant banker is mandatory in case of a buy-back.

The offer for buy-back shall remain open to the shareholders for a period not less than fifteen days and not exceeding thirty days.

Caselet 37

99. A value creation mindset implies that senior managers are aware that their ultimate financial objective is maximizing value; It also means that managers have clear rules for deciding when other objectives (such as employment or environmental goals) outweigh this imperative; and that they have a solid analytical understanding of which performance variables drive the value of the company. For instance, they must know, whether more value is created by increasing revenue growth or by improving margins, and they must ensure that their strategy focuses resources and attention on the right option.

In addition to developing a value-based mindset, it is also essential that managers establish processes that help putting this mindset into action in the daily activities of the company. Line managers must embrace value-based thinking as an improved way of making decisions. And for VBM to be successful, it must eventually involve every decision maker in the company.

There are four essential management processes that collectively govern the adoption of VBM. *First,* a company or business unit develops a strategy to maximize value. *Second,* this strategy is translated into short- and long-term performance targets defined in terms of the key value drivers. *Third,* action plans and budgets are developed to define the steps that will be taken over the next year or so to achieve these targets. *Finally,* performance measurement and incentive systems are put in place to monitor performance against targets and to encourage employees to meet their goals.

These four processes are linked across the company at the corporate, business-unit, and functional levels. Clearly, strategies and performance targets must be consistent right through the organization if it is to achieve its value creation goals.

100. A value driver is any variable that affects the value of the company. Value drivers can be useful if they are organized in such a way so that managers can identify which have the greatest impact on value and assign responsibility for them to individuals who can help the organization meet its targets.

Value drivers must be defined at a level of detail consistent with the decision variables that are directly under the control of line management. Generic value drivers, such as sales growth, operating margins, and capital turns, might apply to most business units, but they lack specificity and cannot be used well at the grass roots level. Value drivers can be useful at three levels: Generic, where operating margins and invested capital are combined to compute ROIC; business unit, where variables such as customer mix are particularly relevant; and grass roots, where value drivers are precisely defined and tied to specific decisions that front-line managers have under their control.

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Caselet 38

101. It is a well known fact that in the quest for intra-company synergies, many corporate centers often suboptimize the plans of individual business units. Carve-outs prevent these abuses. *Firstly,* a carve-out enables a subsidiary to draw on the wisdom, experience and practical assistance of the executive center. *Secondly,* most of the agreements between parent and subsidiary are communicated to the subsidiary's shareholders through the offering prospectus. In case it is felt that any of the services offered by the parent is not worth the benefits, then the subsidiary's board has the independence to renegotiate the agreement or bring the services in house.

The corporate center is, therefore, forced explicitly to add value by answering to an outside constituency of shareholders. A transaction that is not in the economic interests of the subsidiary can be rejected (even if the transaction is between the parent and the subsidiary or between the subsidiary or another business unit).

Business units that are 100 percent-owned are the sole responsibility of their parents, and are thus the subject of countless corporate reviews, meetings, and reports. Carve-outs, however, are under the direct scrutiny of investors and analysts who constantly measure them against other companies. Such attention, can serve as a means of monitoring (and improving) performance.

102. One of the most difficult tasks faced by corporate boards is: Linking pay and business unit performance. And very rarely do they provide the kind of incentives that encourage outstanding performance. In carve-outs, however, corporate boards can use the market to align pay closely to performance, awarding managers stock in their own carved-out units rather than cash bonuses and/or parent company stock.

Hence, carve outs lead to increased entrepreneurialism, which benefits the parent company, the subsidiary, and top managers alike.

Further, the prospect of higher compensation is a key motivation for executives in carved-out subsidiaries. With carve-outs, companies have a once-in-a-lifetime opportunity to develop a new executive and board compensation program. They can clearly indicate to investors, executives, and other employees that performance, ownership, risk, and reward are bound together.

The carve-out structure also responds to the psychological need of high-performing executives to be autonomous. Business unit leaders are no longer small players in a billion-dollar company, they are CEOs.

Companies sometimes lose their most talented people because they cannot offer them enough independence. Carve outs help in talent retention.

Carve-outs also help in succession planning. Subsidiary carve-outs serve as breeding grounds for candidates who might succeed senior executives in the parent company. Subsidiary CEOs get the chance to prove their business acumen and ability to work with their own Board of Directors.

Caselet 39

103. Miller and Modigliani in their hypothesis assumed that corporates did not have to pay taxes. However, thanks to the tax deductability of interest payments, tax benefits of debt has an influence on the value of the firm. This tax shield implies that companies using more debt would be paying less taxes resulting in an increase in the value of the firm. The availability of tax deduction is a primary consideration when making a decision as to whether to issue debt or equity.

Another imperfection which affects the value of a firm is the presence of agency costs. Conflicts may arise between managers and shareholders as well as between shareholders and debt holders. Jensen, together with William Meckling, published extensive research to show the positive effect that debt can have on company value. According to Jensen, a company's operating and investment decisions, and therefore its cash flows, are not independent of its debt-equity ratio.

The capital structure of the firm is also affected by the presence of bankruptcy costs. Bankruptcy

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costs refers to the additional costs to shareholders of paying lawyers, accountants, and brokers as a company moves through bankruptcy. The risk of incurring these costs, is a significant factor in financing decisions. There is an argument over how big these costs are, but it is clear that there are some, and that is a reason for avoiding high debt ratios.

104. Another reason that capital structure matters in the real world is the presence of information asymmetries. This implies that investors may be suspicious of equity offerings considering the fact that managers may not be willing or able to tell all they know. For example, internal accruals do not have any element of undervaluation and in case of debt the undervaluation will be less severe. Therefore, firms use equity financing only as a last resort.

While investor suspicion can affect the value of a company's securities, so can "information problem". Many investors just do not have the resources to get to know small companies. As a result, these companies have to pay a higher price for financing.

Caselet 40

105. Empirical evidence indicates that increasing shareholder value does not conflict with the long-term interests of other stakeholders. The evidence is clear: Winning companies create greater value for all stakeholders customers, labor, the government (via taxes), and suppliers of capital. Other reasons, more conceptual in nature, but equally compelling, also support a system that emphasizes shareholder value.

Not all stakeholders need to have complete information about a company in order to make decisions for their own benefit. When employees decide on a wage claim, for example, they do not need, nor do they seek, a full picture of all the other claims on their company. But this is not the case with equity holders, who are the residual claimants on a companys cash flows. Shareholders take the greatest risk, but even more important, they are the only group to need full details of all other claims by all other stakeholders before they can make good decisions on their own behalf.

Consumers, for example, need to know only the attributes and price of a product or service in order to make their decision. Whether a particular auto maker is profitable or not is irrelevant when they buy a new car. Shareholders are at the opposite extreme. Before making their claim, they must know prices and sales volumes; the cost of goods sold, including labor, materials and energy costs; interest costs on debt; and taxes in short, they must have complete information about the company.

All claimants benefit when shareholders use their information and decision-making authority to maximize the value of their own residual claim. Equity holders have the strongest incentive to manage the labor and capital resources of the business so as to succeed in long-term competition with other companies. Though their actions are constrained by their contracts with both labor and providers of debt, the other stakeholders grant them authority to organize scarce resources. All claimants benefit when shareholders use their information and their decision-making authority to maximize the value of their own residual claim. In other words, shareholders maximize the value of all other claims in attempting to maximize their own. This alignment of information and incentives within the equity claim is what makes the modern corporation the best competitive mechanism there is.

106. Managers are less likely to focus on value creation when market prices of shares do not reflect good information. First, the demand for publicly available information is much lower where capital is closely held. When little information is available, capital markets are usually less efficient, and consequently capital is less likely to flow quickly toward new productive uses.

Second, in such an environment, managers are less likely to focus on value creation a long-term performance metric because market prices of shares are less likely to reflect good information. Therefore, the market price of equity is commonly disregarded as the best indicator of management performance.

Economies with concentrated ownership and control appear to inhibit management focus on shareholder value creation. Not only are market prices unlikely to reflect good information; there is also no strong incentive to seek value creation opportunities.

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Caselet 41

107. Some of the reasons for the increasing industrial sickness in the country are: Unsatisfactory methods of preparing project proposals; absence of effective labor participation; imprudent Government policies; and absence of resource centers for mid-course correction when units begin to show symptoms of sickness such as default on repayment of dues, inventory pile ups and underutilization of capacity.

However, according to studies the major cause of industrial sickness appears to be bad management and sadly there are hardly any deterrents to bad management.

108. The performance of BIFR has been dismal and the reasons for this are: Firstly, BIFR is only a recommendatory body which lacks teeth to enforce rehabilitation schemes. It does not have a free hand to decide on the cases quickly.

The legal system is complicated and several references are required to be made before it can proceed with the case. Inordinate delays in disposing of cases only aggravates sickness. Another problem with BIFR is that because of the legal and other constraints, most of the time it had been attempting to restructure or rehabilitate companies that are beyond redemption.

In most cases revival becomes virtually impossible because of the way SICA defines sickness _ "when accumulated losses have wiped out the entire net worth of a company". Moreover, even when BIFR recommends winding up of a company, there is no follow up action because of opposition from labor unions and political parties.

Rehabilitation is possible if sickness is reported at its incipient stage and not at the terminal stage. All over the world, bankruptcy is defined in terms of debt default. The Banks and FIs in India are required to treat their loans as NPAs when there is a debt default of 180 days. It is, therefore, time to redefine industrial sickness on the basis of default in repayment rather than in terms of erosion of net worth.

Caselet 42

109. Stock option plans are widely used by companies in the IT sector. For most companies in this sector, it has been a struggle all the way to retain software professionals within the organization, as many of them find a ready market in the US.

But offering a higher salary to retain them is not a feasible option. The projects are invariably under-capitalized during the gestation period when revenues have not started flowing in. Even if funding is not a problem, the viability of operations lie primarily in the employment of cheap labor. Hence, payment of wages at anywhere near international rates would wipe out the arbitrage opportunity underpinning the project in the first place.

The arrangement has, in effect, converted the employees into venture capital investors. Of course, there is a difference. Unlike conventional venture capital investors, who pick up a stake in cash, the stock-option holding employees provide the capital by their own toil. If the project fails to take off, the consequent loss of investment value for such employees is no less than that for any conventional venture capital investor.

110. The system of remunerating employees through stock options has been justified the ground that this arrangement aligns the personal interests of employee-managers with that of the company. For the employee can easily observe that whatever benefits the company will, in turn, benefit him in the form of higher stock valuation obtained under a stock option plan.

In such a scheme of things, the profit element for the employee that is inherent in a stock option plan is simply a consideration payable by shareholders to the employee-managers for an incremental value-enhancing effort on their part. That extra endeavor on the part of employees, implicit in a stock option scheme, results in some additional value accruing collectively, to the shareholders.

But the process of accretion of extra value comes at a price, namely surrendering a portion of such incremental value. It is paid out not in terms of actual cash but in the form of a discount/free offer of shares in the company to such employee- managers. The shareholder is, thus, basically seeking that residual value. In the event, the company is nothing more than an aggregation of its shareholders in the limited context of employee stock option plans.

In other words, the veil surrounding shareholder-employee relationships is being lifted, for this purpose.

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Caselet 43

111. Generally firms use their own cost of capital as a discount rate for evaluating specific investment projects. But in most cases such an approach may be inappropriate. GTN is already a diversified company with different divisions and if it further plans new projects may have a higher project risk than the existing mature projects. For instance if GTN looks for entry into the pharma business then it might invite more risk than the existing projects. This may be the case when the project is in its early years and incurs a lot of R&D expenditures. On the other hand a project may be less risky than the firm's existing projects which may be due to a lower cost of capital for the project than that experienced by the firm. But as a matter of fact, a firm's market value is determined by both its existing projects and on the expectations of how a firm can develop new profitable projects. As stated earlier a firm's value is seen from the angle of how it can go on in developing newer projects. This is more commonly referred to as growth opportunities or growth options. Growth options have an implicit leverage that leads to an increase in the beta, thus they contain a fair amount of systematic risk in them. So it can be said that that the individual projects can differ in their risks from the firm as a whole because they lack the growth options that are inherent in the firm's stock prices.

112. The conclusion that the financial leverage does not affect the cost of capital is based on the following assumptions made by Miller and Modigliani:

i. Capital markets are perfect. Information is costless and readily available to all investors. There are no transaction costs, and all securities are infinitely divisible.

ii. Investors are assumed to be rational and behave accordingly, i.e. choose a combination of risk and return that is most advantageous to them.

iii. The average expected future operating earnings of a firm are subjected by random variables. It is assumed that the expected probability distribution values of all the investors are the same. The MM theory implies that the expected probability distribution values of expected operating earnings for all future periods are the same as present operating earnings.

iv. Firms can be grouped into "equivalent return" classes on the basis of their business risks. All firms falling into one class have the same degree of business risk.

v. There is no corporate or personal income tax.

The possible criticism for the above conclusions is as follows:

Taxation and Capital Structure

The irrelevance of capital structure rests on the absence of market imperfections. Though debt and equity are two different parts there is something called conservation of value, wherein the sum of parts is always the same. However, in the face of imperfections in the capital markets, the capital structure of a firm may affect the valuation, i.e. the firm's valuations and cost of capital may change with changes in its capital structure.

Corporate Taxes

Presence of taxes is one of the major imperfections. Debt Financing is advantageous when taxes are applicable to corporate income. The reason is that the dividends and retained earnings are not deductible for tax purposes, whereas interest on debt is a tax-deductible expense. Hence, the combined income of stockholders and debt holders is greater when debt capital is used. Other things being equal, greater the leverage, greater is the value of the firm. This implies that the optimal strategy of a firm should be to maximize the degree of leverage in its capital structure.

Corporate Taxes and Personal Taxes

When personal taxes are considered along with corporate taxes and investors pay the same rate of personal taxes on debt returns as well as stock returns, the advantage of corporate tax in favor of debt capital remains intact.

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Bankruptcy Costs

Existence of bankruptcy costs is another important imperfection affecting the capital structure. Capital Market when perfect, has no costs associated with bankruptcy. Assets of a bankrupt firm can be sold at their economic values and legal and administrative expenses are not present. However, in the real world, there are costs associated with bankruptcy. Under distress conditions, assets are sold at a significant discount below their economic values. Moreover, costs like legal and administrative costs associated with bankruptcy proceedings are high. Finally, an impending bankruptcy entails significant costs in the form of sharply impaired operational efficiency. The probability of bankruptcy for a levered firm is higher than for an unlevered firm, other things being equal. Beyond a threshold level, the probability of bankruptcy increases at an increasing rate as the debt-equity ratio increases. This means that the expected cost of bankruptcy increases when the debt-equity ratio increases. Investors expect a higher rate of return from a firm which is faced with the prospect of bankruptcy, as bankruptcy costs represent a loss that cannot be diversified away.

Agency Costs

Whenever creditors are approached by a firm to obtain debt capital, they impose certain restrictions on the firm in the form of some protective covenants incorporated in the loan contract. They could be in the form of obtaining prior approval of the creditors for matters relating to key managerial appointments, maintenance of current ratio above a certain level, restriction on the rate of dividend during the currency of the loan, constraints on the additional issue of capital, limitation on further investments, etc. The above said restrictions generally entail legal and enforcement costs which also impairs the operating efficiency of the firm. All these costs referred to as monitoring costs or agency costs, detract from the value of the firm. Monitoring costs are a function of the level of debt in the capital structure. When the amount of debt is considerably less, then the creditors may limit their monitoring activity. But if the level of debt is high, then they may insist on continuous monitoring which entails substantial costs.

Caselet 44

113. The important factor is that the management fees should be linked to the long-term performance of the fund. This ensures that the money managers deliver consistent returns to the investors. A compensation based on the excess return ensures that the money manager uses his skill to beat the benchmark. To use a jargon, the money manager should be compensated for generating portfolio alpha. Otherwise, an investor can well take exposure in an index fund, which carries lower management fees. At present, diversified funds benchmark their performance against the S&P CNX Nifty or the BSE Sensex. Such market indices do not serve the purpose because the actual portfolio characteristics are quite different from the benchmarks. True benchmarks for this purpose would be a normal portfolio that captures the investment style of the portfolio manager. Of course, professional money managers may complain that most investors are concerned about short-term performance. Studies have indeed shown that investors tend to buy funds that are winners and sell funds that are losers. The point is that this compensation structure suits all funds. Money managers who manage portfolio with a long-term investment horizon will be compensated for their long-term performance.

The principal-agent problem can be minimised only if the management fee is also performance linked. Importantly, such a fee structure should be disclosed in the newsletter, as that would instill some confidence among investors. Perhaps, then, more retail money may flow into mutual funds.

114. Boltom and Scharfsteen in 1990, in their theoretical model of industry equilibrium has raised the argument that an individual firm, operating in a competitive industry is required to tailor its financial policies as per its desired competitive position in the product market, keeping in mind of the firm's capital structure decisions, the papers reminds us of Jensen's free cash flow argument as stated in 1986. This argument states that the firm's board should compel the issue of debit so as to soak up free cash flow and there by frustrate the managements incentives to over in vest. But it is to be also kept in mind, that within the

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context of competitive industry, a firm becomes more vulnerable towards those market strategies that are aggressive in nature. This vulnerability may be the result of the increase in leverage. The ultimate result of this leads to the increase of the firm's risk towards failure. So, one has to remember that the firm should increase leverage till the time where the marginal benefits accrued due to the reduction in managerial agency cost and the marginal costs of competitor's aggressiveness strikes a balance.

Caselet 45

115. Initially, Value at Risk was used as an information tool to communicate to the management a feeling of the exposure to changes in the market prices or rates. After market risk started being implemented in the actual risk control structure, VaR is being used to calculate and measure the risk adjusted performance and compensation, in addition to remaining a very powerful management information system as far as the risks of investment are concerned. Value at Risk is also important in identifying the effects caused by substantial future movements to the value of the portfolio. Based on the measurement made by VaR, the portfolio manager can compare it with the maximum acceptable risk and take appropriate measures either by using derivatives to hedge the position or by changing the portfolio components to reduce the risk in Trading Risk Management. Position limits can also be established as a function of risk and a comparison of the positions and risk in different markets can be made on a common scale in Investment Management. Firms with market risk measurement systems which apply portfolio diversification theory can lower their project risks. In 1995, 10 major central banks realized the use of VaR in order to assess the capital adequacy ratio for market risk and started their own in-house VaR modeling. Of course, now this has become a regular practice with most central banks in developed countries. As discussed above, VaR can be used in ALM to estimate the changes in the net interest income and economic value of portfolio equity. In addition, VaR can be used in Corporate Applications to measure the risk of foreign exchange exposures, interest rate changes, effectiveness of hedging and derivatives portfolio, management of credit risks of each counterparty, evaluation of complex transactions to be undertaken and investment management in overall.

116. Since decades VaR is considered an efficient risk management device. Once the risk is identified and quantified, it can be controlled deploying a number of techniques. However some risk managers succeed and some fail in doing so, as the ability to deal with risk differs from manager to manager and the techniques used may not be absolutely fool proof. In light of these, let us highlight the limitations of VAR:

1. It cannot measure risk accurately in extreme market conditions, because it is difficult to model risk under such conditions. Suppose that the correlation between the US$ and the French Franc falls from 90% to 30%, VaR analysis will not immediately recognize this. It will perhaps take 50 or more days before sufficient daily price data is collected to reveal that the correlation has shifted.
2. It focuses on a single arbitrary point. Also, it relies on simplified assumptions which may not be applicable to complex situations like options pricing.
3. It uses many models with a wide variety of assumptions and methods of calculation, producing different results under different models.
4. It is basically a statistical measure and not a managerial one.
5. There is no theory to show that VaR is the appropriate measure upon which to build optimal decision rules.
6. It cannot capture model risks, thus requiring the use of model reserves also.
7. Volatility also keeps varying with time and is not stable.
8. Prices may not respond in a linear fashion to changes in the market variables, resulting in erroneous measurement by VaR.
9. The distribution may not be normal distribution in all the given circumstances.
10. Correlations may not be stable in all the given circusmtances.

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11. Riskmetrics™ is not able to fully capture spread risks, option risks and yield curve changes, resulting in inaccuracy in the risk measurement.
12. It is based on the past data which may not always prove true in future.
13. Intra-day positions are not considered in VaR, which usually takes only the closing position into consideration.

Caselet 46

117. Enterprise risk management is all about the identification and assessment of the risks of the company as a whole and formulation and implementation of a company wide strategy to manage them. Board level backing is certainly a key requirement. A basic appreciation of risk management must be embedded within the organizational culture. We also need a champion like the Chief Financial Officer. The CFO must be good at mathematical modeling. He must have a good appreciation of statistical techniques, but he must also be good at intuitive thinking in situations where risks cannot be quantified. Good information systems must precede any major ERM initiative. Systems, processes and culture all have a great impact on the process of implementing ERM.

118. Hybrid financial instruments are becoming increasingly popular in ERM as insurance and finance are converging. This is not surprising. In the first place they should never have been separate. For example, an insurance policy is nothing but a call option for the buyer. If things go wrong, the buyer can exercise it. The premium is the option price. In return for a small fee, the seller of the insurance policy is exposed to unlimited downside risk. Clearly, insurance and derivative instruments are far more similar than is commonly perceived. By integrating insurance and finance products, more innovative comprehensive and efficient ways of handling risk is possible. Hybrid instruments combining features of different instruments are thus becoming popular.

119. While different organizations have pioneered different practices, let us focus on just a couple of them. Royal Bank of Canada also has a sophisticated approach to managing liquidity risk. It breaks liquidity risk into three components. Structural, Tactical, and Contingency. Structural refers to asset liability mismatch. Tactical refers to day to day funding requirements. Contingency refers to general market disruptions or adverse economic developments.

Commerzbank of Germany has developed very sophisticated risk management models. This bank follows the practice of breaking down credit risk losses into categories – expected and unexpected. The expected losses are called standard risk costs and the unexpected losses are referred to as credit value at risk. Commerzbank monitors market-liquidity risk with the aid of the liquidity VAR that is based on historical simulation. This liquidity VAR is defined as the possible loss during the period in which a portfolio is being entirely liquidated in terms of risk, at a given confidence level. Unlike the one-day VAR, it takes into account the period needed to square the specific positions in terms of risk, which means to sell, cover or hedge them by means of the relevant transactions. In quantifying such risk, Commerzbank takes into consideration the market liquidity of the underlying transactions by means of portfolio-specific selling or squaring strategies. These strategies indicate the percentage of a portfolio which, if necessary, can be squared in terms of risk and in how many days.

Caselet 47

120. Larsen & Toubro being one of the major players in the Indian cement industry has a strong and highly skilled manpower that has helped the company to attain this position in the cement industry. The finance division of L&T may consider hedging through options because it is much more beneficial than hedging through futures or forwards. This is because in an option contract, the loss is limited whereas the profit is unlimited. Since the firm has the right to buy or sell the foreign currency but not the obligation, it can let the option expire by not exercising its right in case the exchange rates move in its favor, thereby making the profits it would not have made had it hedged through forwards or futures. In this case the firm is having a receivable, so the company can buy a put option. In the case of a payable, it can buy a call option.

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121. The writer of an option faces the risk of being assigned an exercise. The implications of this risk for call writers and put writers are as follows:

i. The call writer who has written a call on a stock which he does not own (naked call writer) will end up incurring losses proportional to the increase in the price of the asset above the exercise price because he has to buy the asset from the market at the higher price and deliver it at the lower (exercise) price.

ii. The put writer must have adequate financial capacity and liquidity to buy the stock at the exercise price. This risk of being assigned an exercise is more significant for the writer of an American option because he can be assigned an exercise at any time during the life of the option.

iii. The writer of the covered call foregoes the opportunity to benefit from an increase in the value of the underlying asset above the option premium, but continues to bear the risk of a decline in the value of the underlying interest.

iv. Transaction involving buying or writing of multiple options (like straddles and strangles) and transactions involving buying/writing options in combination with Short/Long positions in the underlying stocks presents additional risks to the investor. The investor attempting such transactions must understand that there is a possibility of incurring losses on both sides of the combination transaction and an increased risk exposure can result when one side of the trade is exercised or liquidated while the other side remains outstanding.

Caselet 48

122. Almost every large and small company is changing its investment strategy to survive in this competitive world. Some have had to slow or freeze long-term projects; others have incline up those likely to demonstrate a quicker payoff. That could prevent some potentially money-making projects from getting off the ground. The life of a project, like that of any organization, can be divided into phases. These phases correspond with changes in the levels of activity or effort put into the project and the uncertainty regarding the final outcome of the project and is not just of academic interest. Studying them and the actions to be performed by the managers in each of the phases will help in managing the life cycle of a project better. There are broadly, four phases in the life of a project:

Phase i : Conception and Selection

Phase ii : Planning and Scheduling

Phase iii : Implementation, Monitoring and Control

Phase iv : Evaluation and Termination.

The level of activity, in any project, starts at a low level and then rises slowly. At the conception and selection phase, before it is decided whether or not something is a worthwhile idea or which of the several alternative ideas should be proceeded with, the activity is naturally low and is confined to conducting feasibility studies, estimating revenues and costs, etc. In this phase the amount spent is also low, as also the number of people working on it (we can also say the time spent on the project). Until this phase is complete generally, the firm does not stop bothering about the cost, though there may be pressures to complete the appraisals quickly, so that the firm can get ahead of its rivals in implementing the project. The functions to be performed by the project manager (if one is appointed by the time) or the team working on the project are:

i. Identifying a need for a project.

ii. Establishing goals to be achieved by the project.

iii. Estimation of the amount that the firm will have to commit for the project.

iv. Presenting the project idea or various alternative ideas to the management and get their approval.

Once selection of the project and its approval by the management are through, the project enters the second phase. This phase is preparatory to the actual implementation of the project. Planning how to implement the project and scheduling how the implementation

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should be carried out are done in this phase. Planning includes deciding on what are the activities to be undertaken for implementing the project, while scheduling is fixing time-frames for the activities. The level of activity and also the project cost rise rapidly during this phase. The number of people assigned to the project also increases manifold. The functions to be carried out in this phase are:

i. Set up a technical team to decide on how the project can be implemented.

ii. Plan for the requirements of personnel, finance, materials, etc.

iii. Prepare a schedule keeping in view the date given by the client (if the project is being undertaken for a client) or the management (if it is as in-house project), and the required buffer time to meet unexpected events or mishaps.

At this time, generally, the project staff tends to be more concerned with the performance than with the schedule or costs. The next phase is the actual implementation of the project, and monitoring and controlling the implementation. The project cost reaches its peak during this stage, as also the level of activity (or the man-hours spent on the project). The project manager is highly concerned about the costs and does not bother much about the schedule at the beginning. Concentration on the performance also continues. The major functions that are to be carried out in this phase are:

i. Procuring materials.

ii. Building and testing the tools.

iii. Developing support systems.

iv. Producing the system that is aimed at.

v. Verifying whether its performance is up to the laid down standard.

vi. Making modifications to either bring the performance to the required level or to suit the changes suggested by the client or the management.

Towards the end of this phase, the focus of the project manager generally changes to meeting the schedule than cost and/or performance. The fourth, and the final phase is to evaluate what has been done, and hand it over to either the client or the in-house operational staff. This marks the end of the project, from the project management angle. In this phase, the activity levels decline steeply, and reach zero. The additional inputs of other resources are also small. This phase is often completed in a hurry, as the deadline will be nearing. The entire concentration of all the staff and the managers will be focused on handing over on time than on costs or performance. The functions that are carried out in this stage are:

i. Training operational staff.

ii. Transfer of materials.

iii. Transferring the responsibilities.

iv. Release surplus resources that remain after use.

v. Release the project staff for the next assignment.

123. Abandonment Analysis

Sometimes, it may be better economically to abandon a project well before the useful life. The value of the project as on the date of abandonment can be compared to the exercise price, the value that can be realized either by sale or alternative use will be the stock price and the option to abandon can be valued as a put option.

Timing Decisions

Consider a project which requires an investment of Rs.180 crore. If project is set up immediately, it gives inflows with a present value of Rs.200 crore. If postponed by a year, the present value of cash flows may change to Rs.270 crore or Rs.180 crore. The probability of changing to Rs.270 crore is 35 percent and for Rs.180 crore it is 65 percent. The project can be viewed as a call option with an exercise price of Rs.180 crore. If exercised immediately, its pay off is Rs.200 crore, and a year later, it is Rs. (270 x 0.35 + 180 x 0.65 = 211.50) crore. It is, therefore, beneficial not to exercise the option

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immediately. It should be remembered that the analysis is based on the assumption that the present value of cash flows is comparable in its movements to the stock prices and that the company will have the necessary funds to invest after three years. Another serious conceptual defect arises from the method of arriving at the value of the option. The derivation was based on the fact that holding the stock (or the underlying asset) and borrowing a suitable amount can provide the same pay-off as a call option. In such a situation, if the pay-offs from the two are not equal, possibilities of arbitrage arise. There should exist as good a market for real assets as for stocks, to avoid arbitrage opportunities which do not. In fact, many assets are difficult to trade in. The application can, however, be justified from a different angle. Assume that for each capital investment project; there exists a traded option with the same risk characteristics, that is, the same volatility and exercise period. If we know how the traded option is valued by the market, we can value the capital investment option as well. It is not necessary that such an option should exist. If we can value a hypothetical option with the same characteristics, our job is done.

124. Inputs/Market plant location is closely linked with the strategic decisions of the firm. The firm should first decide on whether it should be located closer to the target market or close to the raw materials and other inputs, or whether it should be located around the same place where all its competitors are located. If the location is proximate to the target market, cost of transporting the inputs may be high. But if the location is close to raw materials, but away from the target market, though savings may be made in transportation costs, the time lag in responding to the demands from the customers will increase. To reduce the time lag, the firm may have to open outlets closer to the market, which will again push up the costs. The firm should, therefore, identify whether it is most efficient in organizing transporting raw materials cheaply, or in running retail outlets and should base its location on the costs involved. But, not all firms get a chance to choose a location. For example, a fire fighting service can only choose from where its operations can be controlled – it cannot choose the actual place of service. In contrast, manufacturing firms can choose their location - where to process each stage and where to sell.

Even at the risk of overemphasizing, it must be said that there are basically two aspects that are effected by the location: costs and competitiveness. Purchasing industrial land takes up a substantial part of the project outlay. And it permanently affects the costs of transporting inputs, finished products and men. If an expensive site is purchased, it takes up a lot more money than warranted and results in the project outlay being higher, and as a consequence, the profit to be made by the venture will also have to be higher, thus affecting competitiveness. But, if an unsuitable site is purchased because it is cheap, the transportation costs will be higher, thus depressing the profits. A bad location decision can seal the fate of a project at the very beginning. A growing firm will face the location decision with some frequency -- it may first operate from rented premises, then acquire small premises and then, as business expands further, go for a bigger building of its own. It is necessary to take the right decision each time the location is changed, if the growth should continue. The next logical question, after understanding the importance of a location decision, is how best to choose a site. There are five basic factors to be considered while selecting a project site:

i. Location of markets.

ii. Transportation costs.

iii. Availability of labor.

iv. Availability of infrastructure.

v. Intangible factors.

Location of Markets: For some activities which are basically service oriented, it is essential to be as close as possible to the market. Even for manufacturing ventures, being closer to the target market saves costs of transporting finished goods. But, this is applicable only if the market is concentrated in or around a defined area. If the market is spread out over a large area, like the market for a consumer product such as soaps, location of the plant is not so important, unless only a part of the total market is targeted. If a firm is operating in an industry in which locating close to the target market is essential, then the firm will also

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have to set up its operations alongside the competitors if there are any. The success of such a firm, surrounded by competitors, depends on the effectiveness of the firm's unique selling proposition (USP). If the firm is unable to design a USP, it will be better advised to avoid the market and choose another in which the competitors are few and demand is adequate.

Transportation Costs: Transportation costs not only vary depending on the distance, but also based on the location. That is, for the same distance, shipping costs will vary depending on the port used. And, while choosing a location, the firm should compare the input transportation costs with the output transportation costs. For firms where inputs are bulky, it may be better to locate near the raw materials (material oriented location), if the cost of transporting them is less than the cost of transporting the end product, such as in mining.

Availability of Labor: Apart from transportation costs, labor costs also play a crucial role in location decisions. Availability of trained and disciplined manpower at competitive rates should also be considered while deciding the project site.

Availability of Infrastructure: Availability of infrastructure facilities such as road and railway lines, telecommunications and power is also a key factor in determining the plant site. If the proposed site is too far off from the existing road and railway line, the firm may have to spend heavily in laying the same, or wait till they are laid by the government.

Intangible Factors: There are many rules and regulations made by the central and state governments on the location of industries. There are many concessions available to industries set up in certain notified areas. Availing such concessions can save a substantial amount of the project cost. An equally important intangible factor is environmental pollution. While choosing project site, care must be taken to see that there is adequate possibility of releasing hazardous chemical, say, large waste land, river, etc. If neither is there around or if the wastes are so hazardous that they cannot be dumped on land or into rivers or released into the air, effluent treatment plants should be set up. The necessity of effluent treatment plants should be decided based on whether any human population or ecological balance will be seriously effected due to the effluents, if they are released without treatment. And, irrespective of pollution, the attitudes of people towards industries and their work culture should be studied well. If the people are hostile to industries and/or have bad work culture, it is very difficult to get a good labor force in that area. Last, but not the least, plans for future expansion should be kept in mind while selecting the site. If a site is chosen in an area which is already crammed, there will be no scope for acquiring more land in future to expand.

Caselet 49

125. Capital structure decisions are highly complex in nature. It is very difficult to arrive at a proper mix of capital structure as lot of qualitative and quantitative factors are to be analyzed. Even if nothing is wrong with the capital structure, and somehow the company fails to deliver its business then the various finance people in and out of the company, starts digging out problem with the capital mix. If the debt portion is high, they claim that due to high interest burden the firm is not able to perform. And if the debt portion is low, it is often said that the company should have employed more debt, its cost being low. Let us discuss the propositions laid out by MM to take appropriate capital structure decisions.

The MM Propositions

Proposition I: The market valuation of a firm is independent of its capital structure and is determined by capitalizing its expected return at the rate appropriate to its risk class. In other words, the value of the firm is computed by discounting the future stream of operating income at the capitalization rate for that specific risk class. This implies that the cost of capital for a firm is equal to the capitalization rate of a pure equity stream of its risk class. Thus the cost of capital of a firm is independent of its capital structure.

Proposition II: The expected yield on common stock (cost of equity) is equal to the sum of the capitalization rate for a pure equity stream of that specific class and the premium based on the financial risk. The risk premium is a function of the leverage applied (debt-equity ratio) and the spread between the capitalization rate (cost of capital) and the cost of debt.

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ke = ko + (ko - kd) x D/E

Where,

D -- Market value of debt

E -- Market value of equity

The implication of this proposition is that the cost of equity will be equal to the cost of capital in an all equity firm. As the company starts introducing cheaper debt in its capital structure to reduce the cost of capital the financial risk of the firm increases. Due to increase in the financial risk, the equity holders demand higher returns which push up the cost of equity. Thus the benefits obtained by the use of cheaper debt are exactly offset due to the rise in the cost of equity. Thus the cost of capital remains a constant irrespective of the financing mix.

Proposition III: The investment and financing decisions of a firm are independent of each other. A firm should exploit an investment opportunity, if and only if, the rate of return on the investment is greater than the cost of capital. Thus the cut-off point for investment by the firm should in all cases be the capitalization rate for that class. Regardless of the financing mix, the marginal cost of capital will be equal to the average cost of capital. This is because as per Proposition I, the average cost of capital is equal to the capitalization rate which is a constant for a given firm. As the average cost of capital remains a constant, the marginal cost of capital will always be equal to the average cost of capital irrespective of the mode of financing.

126. In this era of companies going bankrupt due to the inappropriate capital structure, it is good to see Flankey Petro with a confident capital mix. Let us discuss the other alternative available to it.

Public Deposits, (also called Fixed Deposits) are non-finance, manufacturing firms to finance their current assets on an ongoing basis from the public.

Salient Features

A company cannot raise more than 10% of its paid-up share capital and free reserves. However, for the purpose of calculating the maximum amount a company can raise from the public, the 'capital redemption reserve' is treated as part of the free reserves and share premium account is treated as part of the paid-up share capital. Thus this helps a company raise more money even within the 10% limit. The government companies can accept deposits up to 35% of their paid-up share capital and free reserves. The maximum maturity period allowed for public deposits is three years while the minimum permitted maturity period is six months, and in some cases it is three months.

Advantages to the company

i. The procedure involved is fairly simple, the issue expenses are minimal and underwriting is not needed.

ii. Unlike bank finance, no security is needed in the form of hypothecation or pledge, for public deposits.

iii. The after-tax cost of public deposits is much less than that of bank borrowing.

iv. No restrictive covenants in respect of dividend payments, appointment of senior executives, etc.

Disadvantages

i. The scope of mobilization of public deposits is somewhat limited.

ii. Debt servicing becomes difficult since the maximum maturity period is limited to three years.

127. **Note:** The candidates are required to give their opinion on the view of the Finance Manager of Optima Company. They can either defend that there exists relationship between leverage and firm value and discuss the net income approach and traditional approach or that the value of the firm is independent of the leverage and discuss the net operating

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income approach and the Modigliani approach. For the answers to be comprehensive both the views are considered below.

I. As believed by the finance manager, the financial leverage has impact on the value of the firm. There are two approaches to state the same -- (i) Net income approach and (ii) Traditional approach. These two approaches are based on the following assumptions:

i. There is no income tax -- personal or corporate.

ii. There is 100% dividend pay-out, i.e. all earnings are paid as dividends.

iii. Investors have identical expectations of probability distributions of net operating income.

iv. The net operating income is not expected to grow or decline over time.

v. A firm can change its capital structure almost instantaneously without incurring transaction costs.

Based on the above assumptions, the net income approach states that the cost of equity and cost of debt remain constant when degree of financial leverage varies making the cost of capital which is the weighted cost of debt and equity change with the change in the level of debt. Traditional approach states that there is an optimal capital structure, i.e. at a level of debt the value of the firm is maximum. According to this approach, the cost of debt capital remains more or less constant up to a certain degree of leverage but rises thereafter at an increasing rate and cost of equity remains more or less constant or rises only gradually up to a certain degree of leverage and rises sharply thereafter with effect that the cost of capital decreases up to a certain point, remains more or less constant for moderate increases in leverage and rises beyond a certain point. The limitations of both the views are the assumptions (as stated above) on which they are based.

II. The belief of the finance manager that the financial leverage has an impact on the capital structure is not correct. There are two approaches which state the same –

   i. Net operating income approach and

   ii. Modigliani approach.

The assumptions on which net operating income approach is based are as follows:

i. There are no taxes.

ii. There are no transaction costs.

iii. 100% earnings are paid-out, to the shareholders.

iv. There is no growth in the net operating income.

v. The investors have identical expectations of probability distribution of net operating income.

Based on the above, the net operating income states that the cost of debt and cost of capital remain constant for all degrees of leverage and cost of equity is given as a function of cost of debt, cost of capital and degree of financial leverage. The critical assumption of the approach is that the market capitalizes the value of the firm as a whole and it is independent of the distribution between debt and equity. According to this, the market value of the firm is dependent on its net operating income and business risk and is independent of the financial risk. As more and more cheaper debt funds are utilized, firm becomes risky and equity investors of the firm raise their required rate of return in response to the increase in degree of financial leverage. Modigliani approach also states the same as above that the value of the firm is independent of the financial leverage. It is also based on the same assumptions like perfect capital markets, no taxation, similar probability distribution of net operating income, rational behavior of investors and all firms having same degree of business risk will fall into one class. Based on the above assumptions, the value of the firm is independent of the debt-equity ratio and is equal to its expected operating incomes discounted at the rate appropriate to its risk class and cost of equity would be a function of the discount rate to which the firm belongs, cost of debt and debt-equity ratio. The limitations of both the above approaches are the assumptions on which they are based i.e. no taxation, no transaction costs, etc.

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Caselet 50

128. The call money rates fluctuate from time to time reflecting the seasonal variations in fund requirements. Call rates climb high during busy seasons in relation to those in slack seasons. These seasonal variations were high due to a limited number of lenders and many borrowers. The entry of financial institutions and money market mutual funds into the call market has reduced the demand supply gap and these fluctuations gradually came down in recent years. Though the seasonal fluctuations were reduced to considerable extent, there are still wide variations in the call rates. The extreme volatility of the call rate can be attributed to the following factors such as:

i. The overextension of loans by banks, in excess of their own resources, makes the banks depend on the call market. They use the call market as a source of funds for meeting structural disequilibria in their sources and uses of funds.

ii. The withdrawal of funds to meet business requirements by institutional lenders and to pay advance tax by the corporate sector lead to steep increase in call money rates in the market.

iii. The banks invest funds in Government securities, units of UTI, public sector bonds in order to maximize the earnings from their funds management. But with no buyers in the market, these instruments tend to become illiquid which accentuates the liquidity crises in the call market, pushing up the call rates significantly high. Thus, liquidity crisis or illiquidity in the money markets also contributes to the volatility in the market.

129. Non-diversifiable risk is that part of total that is related to the general economy or the stock market as a whole (such as interest rate inflation risk, etc.) and hence cannot be eliminated by diversification. Non-diversifiable risk is referred to as market risk or systematic risk. Diversifiable risk, on the other hand, is that of total risk that is specific to the company industry and hence can be eliminated diversification. Diversifiable risk is also called unsystematic risk or specific risk. Some of the factors that give rise to diversifiable and non-diversifiable risk are as follows:

Non-Diversifiable or Market Risk Factors

- Major changes in tax rates
- War and other calamities
- An increase or decrease in inflation rates
- A change in economic policy
- Industrial recession
- An increase in international oil prices, etc.

Diversifiable or Specific Risk Factors

i. Company strike

ii. Bankruptcy of a major supplier

iii. Death of a key company officer

iv. Unexpected entry of new competitor into the market, etc.

Caselet 9

130. The basic functions of the Finance Manager in any organization are:

Mobilization of Funds for the Firm

The Finance Manager has to plan for and mobilize the required funds from various sources when they are required and at an acceptable cost. This decision is called the Financing Decision. For this purpose he would be liaising with banks and financial institutions. He also deals with merchant banking agencies for procuring funds from the public through issue of shares, debentures and inviting the public to subscribe to its fixed deposits. As a result of globalization, the organization gets access to the various kinds of financial markets

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worldwide. In such a situation, the Finance Manager must be able to evaluate the cost of funds from all available sources and enable the firm to mobilize funds at the lowest cost.

Deployment of Funds

There are always many competing needs for the allocation of funds. In consultation with the managers of various departments such as production, marketing, personnel, R & D and the top management, the Finance Manager decides on the manner of deployment of funds in various assets such as land, buildings, machinery, materials, etc. In a globalized environment, international developments may throw up new business opportunities or diminish the prospects of existing investments. Hence, the finance manager must be able to evaluate the ultimate impact of such developments and take necessary actions so that the organization is able to cope with the changes while maintaining its profitability.

Control over the Use of Funds

After deciding on projects and proposals in which the funds are to be invested and after procuring them, the Finance Manager has to continuously monitor the use of funds in order to ensure that procurement and deployment of funds proceeds according to the plan. This task of the Finance Manager is called Financial Control. The Finance Manager sends frequent reports to the Managing Director. These reports contain information in the form of facts and figures regarding the extent to which procurement and deployment of funds is proceeding according to the plan.

Risk-Return Trade-off

While making the decisions regarding investment and financing, the Finance Manager seeks to achieve the right balance between risk and return. If the firm borrows heavily to finance its operations, then the surpluses generated out of operations would be utilized to 'Service the Debt' in the form of interest and principal payments. The surplus or profit available to the owners would be reduced because of the heavy 'Debt-servicing'. If things do not work out as planned and the firm is unable to meet its obligations, the company is even exposed to the risk of insolvency. Similarly, the various investment opportunities have a certain amount of risk associated with the return and also the time when the return would materialize. The finance manager has to decide whether the opportunity is worth more than its cost and whether the additional burden of debt can be safely borne.

131. One common factor among all managers is that they use resources and since resources are obtained in exchange for money, they are in effect making the investment decision and in the process of ensuring that the investment is effectively utilized they are also performing the control function.

Marketing Finance Interface

There are many decisions which the Marketing Manager takes which have a significant impact on the profitability of the firm. For example, he should have a clear understanding of the impact the credit extended to the customers on the profits of the company. Otherwise in his eagerness to meet the sales targets he is liable to extend liberal terms of credit which is likely to put the profit plans out of gear. Similarly, he should weigh the benefits of keeping a large inventory of finished goods in anticipation of sales against the costs of maintaining that inventory. Other key decisions of the Marketing Manager which have financial implications are pricing, product promotion and advertisement, choice of product mix and distribution policy.

Production Finance Interface

In any manufacturing firm, the Production Manager controls a major part of the investment in the form of equipment, materials and men. He should so organize his department that the equipments under his control are used most productively, the inventory of work-in-process or unfinished goods and stores and spares is optimized and the idle time and work stoppages are minimized. If the production manager can achieve this, he would be holding the cost of the output under control and thereby help in maximizing profits. He has to appreciate the fact that whereas the price at which the output can be sold is largely determined by factors external to the firm like competition, government regulations, etc. the cost of production is more amenable to his control. Similarly, he would have to make

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decisions regarding make or buy, buy or lease, etc. for which he has to evaluate the financial implications before arriving at a decision.

Top Management Finance Interface

The top management, which is interested in ensuring that the firm's long-term goals are met, finds it convenient to use the financial statements as a means for keeping itself informed of the overall effectiveness of the organization. We have so far briefly reviewed the interface of finance with the non-finance functional disciplines like production, marketing, etc. Besides these, the finance function also has a strong linkage with the functions of the top management. Strategic planning and management control are two important functions of the top management. Finance function provides the basic inputs needed for undertaking these activities.

Caselet 52

132. According to the Miller and Modigliani (M&M) model, dividend policy is irrelevant and it does not have any affect on a firm's share price. The substance of the MM approach is that the dividend payments have no impact either on the valuation of the firm or the wealth of the shareholders. When a firm declares dividends it foregoes retained earnings to the extent of the dividend amount. As the investment needs of a firm are taken as a constant, the firm finances the amount of retained earnings foregone, by issuing new shares. MM asserts that the sum of discounted value of the shares after the financing and the amount of dividends paid is exactly equal to the market value of the share before the payment of dividends. In other words the fall in the stock price offsets the amount of dividends received. There is no change in the overall wealth of the shareholders. The shareholders are therefore, indifferent between dividend payments and retained earnings. Further, while the market price of each share may decline, the number of shares outstanding increases due to the fresh issue of equity. Therefore, the market capitalization of the firm remains constant. Hence dividend policy of a firm is irrelevant.

133. Since dividends are taxed in US as income whereas taxes on capital gains are deferred until incurred and then taxed at lower rates, it is implied that dividend-paying firms have to have a higher rate of return. M&M then pointed out that dividends have information content, for only good quality firms can be expected to pay high dividends. Therefore, dividends are taken as indicators of the future free cash flows of the firm. The key determinants of dividend policy are:

Liquidity: Traditional theories have postulated that a dividend decision is solely a function of the earnings of the firm. While earnings are important determinant for the dividend decision, the role of liquidity cannot be ignored. Dividend pay out entails cash outflow for the firm. Hence the quantum of dividends proposed to be distributed critically depends on the liquidity position of the firm. In practice, firms often face cash crunch in spite of having good earnings. Such firms may not be in a position to declare dividends despite their profitability.

Investment Opportunities: Another key determinant to the dividend decision is the requirement of capital by the firm. Normally firms tend to have low pay out if profitable investment opportunities exist and conversely firms tend to resort to high pay-outs if profitable investment opportunities are lacking. Generally, firms operating in industries which are in the nascent and growth phases of the product life cycle are characterized by high dependence on retained earnings. On the other hand, firms operating in industries which are in the maturity and decline stages normally distribute a larger proportion of their earnings as dividends.

Access to Finance: A company which has easy access to external sources of finance can afford to be more liberal in its dividend pay out. The dividend policy of such firms is relatively independent of its financing decisions. Firms having little or no access to external financing have rather limited flexibility in their dividend decisions.

Floatation Costs: Issue of securities to raise capital in lieu of retained earnings involve floatation costs. These costs include fees payable to the merchant bankers, underwriting commission, brokerage, listing fees, marketing expenses, etc. Moreover smaller the size of the issue, higher will be the floatation costs as a percentage of amounts mobilized. Further

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there are indirect flotation costs in the form of under pricing. Normally issue of shares is made at a discount to the prevailing market price. The cost of external financing has an influence on the dividend policy.

Corporate Control: Further issue of shares (unless done through rights issue) results in dilution of the stake of the existing shareholders. On the other hand, reliance on retained earnings has no impact on the controlling interest. Hence companies vulnerable to hostile takeovers prefer retained earnings rather than fresh issue of securities. In practice, this strategy can be a double edged sword. The niggardly pay out policy of the company may result in low market valuation of the company vis-à-vis its intrinsic value. Consequently the company becomes a more attractive target and is in the danger of being acquired.

Investor Preferences: The preference of the shareholders has a strong influence on the dividend policy of the firm. A firm tends to have a high pay-out ratio if the shareholders have a strong preference towards current dividends. On the other hand, a firm resorts to retained earnings if the shareholders exhibit a clear tilt towards capital gains.

Restrictive Covenants: The protective covenants in bond indentures or loan agreements often include restrictions pertaining to distribution of earnings. These conditions are incorporated to preserve the ability of the issuer/borrower to service the debt. These covenants limit the flexibility of the company in determining its dividend policy.

Taxes: The incidence of taxation on the firm and the shareholders has a bearing on the dividend policy. India levies a 10% tax on the amount of distributed profits. This tax is a strong fiscal disincentive on dividend distribution. These dividends are totally tax-free in the hands of the shareholders. The capital gains (long-term) are taxed at 20%.

Dividend Stability: The earnings of a firm may fluctuate wildly between various time periods. Most firms do not like to have an erratic dividend pay-out in line with their varying earnings. They try to maintain stability in their dividend policy. Stability does not mean that the dividends do not vary over a period of time. It only indicates that the previous dividends have a positive correlation with the current dividends. In the long run, the dividends have to be invariably adjusted to synchronize with the earnings. However, the short-term volatility in earnings need not be fully reflected in dividends.

134. The first assumption is the existence of a perfect market in which all investors are rational. In perfect market condition there is an easy access to information and the flotation and transaction costs do not exist. The securities are infinitely divisible and hence no single investor is large enough to influence the share value. Secondly, it is assumed that there are no taxes implying that there are no differential tax rates for the dividend income and the capital gains. The third assumption is a constant investment policy of the firm, which will not change the risk complexion nor the rate of return even in cases where the investments are funded by the retained earnings. Finally, it was also assumed that the investors are able to forecast the future earnings, the dividends and the share value of the firm with certainty. Based on these assumptions, it can be stated that the market value of the share is not affected by the dividend policy. However, few assumptions have been critically viewed as below:

Tax Effect: This assumption cannot be true, since in the real world the tax rate for the dividend income is higher than the tax rate applicable to the capital gains.

Flotation Costs: The proceeds which the firm gets from the issue of securities will be net off the issue expenses. The total issue expenses which include the underwriting expenses, brokerage, other marketing costs will be around 10-15% of the total issue (in India). With the costs of mobilizing capital from the primary market being high, these costs cannot be ignored.

Transaction Costs: This is an unrealistic assumption, since investors do have to incur certain transaction costs like the brokerage expenses while they dispose their shares. Thus, if the investors are to equate the capital gains to the dividend income, they should sell off the shares at a higher price. In addition to this the inconvenience and the uncertainty involved in the share price movements make the investors prefer current income by way of dividends to plough back profits.

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Market Conditions: Sometimes the market conditions do effect the investment decisions of the firm. For instance, though a firm has profitable investment opportunities, the bad market condition may not allow it to mobilize the funds. In such cases the firms will have to depend on the retained earnings and have a low dividend pay-out ratio. In still other cases there may be certain sub-standard investment opportunities in which the firm will invest just because there is an easy access to funds from the market.

Under Pricing of Shares: If the company has to raise funds from the market it will have to sell the shares to the new shareholders at a price, which is less than the prevailing market price. Thus, with the shares being under priced, the firm will have to sell more shares to replace the dividend amount. These criticisms and the preference for current income, uncertain market conditions, presence of transaction and flotation costs, under pricing, etc. highlight the shortcomings of the dividend irrelevance policy. Thus, the dividend policy of a company does have an effect on its share value.

Caselet 53

135. The price of the Flare Ltd. after the tender offer period remains above the pre-tender offer. Theories like the dividend or personal taxation hypothesis, leverage hypothesis etc analyze this increase in the value of the share repurchase program. The Information and Signaling Theory is one of them. The announcement by a company that it would be engaged in a share repurchase program provides the information or a signal to the investor. When the announcement is made it may be taken as the acknowledgement that the company is not having any profitable investments in hand, hence is using the cash to by back its own hare. On the other hand the announcement can also be interpreted as that the stock in the market are undervalued. In such a case investing in its own stock is the best margin for the company.

136. The Reverse Book Building is a mechanism provided for capturing the sell orders on online basis from the share holders through respective Book Running Lead Managers (BRLMs) which can be used by companies intending to delist its shares through buy back process. The company offers to buy back shares from the share holders through this route because it helps in efficient price discovery. It is a mechanism where, during the period for which the Reverse Book Building is open, offers are collected from the share holders at various prices, which are above or equal to the floor price. The buy back price is determined at the cut off price that is arrived at after the offer closing date.

Caselet 54

137. The very nature of share repurchases answers this basic question. Share repurchases result in decrease in the number of shares outstanding. Smaller numbers of outstanding shares not only increase the relative percentage ownership of the remaining shareholders, but also increase the percentage claim on the company's profits. In other words, buying back shares increases the Earnings Per Share (EPS) assuming that net income is stable. If HLL can manage to increase earnings at the same time when it is buying back shares, the growth in EPS is compounded. Another reason why share buybacks tend to increase shareholder value is the equilibrium between supply and demand for any given stock. If demand remains constant and the supply (number of shares outstanding) decreases, prices in a free market tend to rise. This is simple economics. Reducing excess cash can also have a dramatic affect on some important efficiency metrics that many investors look at. Assuming that HLL's net income remains constant over time, share buy backs also tend to increase both a company's Return on Assets (ROA) and Return on Equity (ROE). This can be expressed as

Return on Assets = Net Income/Average Assets

Since cash is certainly a part of any company's assets, it again makes sense that reducing assets by spending money to buyback shares would increase the ROA, all other things remaining constant. Substituting "Equity" for "Assets" in the above equation also shows why share buy backs tend to increase ROE with steady profits.

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138. Buyback of shares is becoming increasingly common among domestic corporates due to the attractive low valuations on the exchanges. The year 2001 has seen an increasing flow of buyback announcements, especially from small and medium-sized companies. The most recent examples are Tube Investments of India (TII), D-Link India, Finolex Industries, SRF Polymers and Chordia Food. Of the companies making buyback announcements recently only Bombay Dyeing is well-known.

Till date this fiscal, more than 50 companies, both domestic and MNC, have either completed or are in the process of effecting buybacks. The amount ploughed into these buybacks exceeds Rs.3,600 crore. This could cross Rs.4,500 crore by the close of the year 2002 an amount that could be far in excess of the total greenfield investments in 2001-02. The total investment in modernization and capacity additions by India Inc. this year would probably just about add up to this amount

Caselet 13

139. Risk managers have identified four different elements of environment risk.

- Probability of occurrence of an adverse event such as an accident,
- Probability distribution of the total costs if the event occurs,
- Allocation of the responsibility if an accident occurs,
- Certainty of the assessment.

In other words, four different tasks have to be performed by management while managing environmental risks. They must minimize the probability of occurrence of the adverse event. They must cut losses when an accident occurs. They should be able to shift responsibility to other parties to the extent possible, when the event occurs. They must obtain more information to make the risk assessment methodology as robust as possible. Managers have to use the right mix of risk reduction, risk shifting and information acquisition to put in place an appropriate environmental strategy.

For many organizations, managing environmental issues means avoiding the costs associated with accidents, catastrophes and other environmental mishaps. The simplest way of managing environmental risk is to buy an insurance policy. This measure shifts risk to the insurance company. The approach makes sense if the company is confident that the premium being paid is small compared to the huge risks involved. A second approach relies on maintenance of disaster management cells that can respond quickly when an accident occurs. A third approach involves clear guidelines, including dos and don'ts for the operating units in the form of various documents and manuals. A fourth mechanism is to link promotions of managers with their contribution to risk management. Behavioral issues need to be carefully examined so that environmental risk is managed systematically. For example, reward systems normally favor mangers who reduce costs or increase profits. Consequently, there may be a tendency to under invest in environmental performance improvement measures. Inbuilt mechanisms are necessary to check such undesirable tendencies. Environmental problems should be analyzed as business problems. A rigorous analysis is necessary to understand which investments generate value for shareholders. It is not desirable to do just the bare minimum to stay on the right side of the law nor is it correct to pour huge amounts of money into environmental projects, in the name of discharging social responsibility. Managers should also look at better environmental performance as an opportunity rather than as a threat. Many companies allow environmental issues to be handled by lawyers and consultants who tend to focus on compliance rather than innovation. To correct this situation, environmental strategies must become the direct concern of general management and environmental impact should be incorporated in the overall process of improving productivity and competitiveness. Managers should go beyond currently regulated areas and also understand the opportunity cost of underutilized resources.

140. ERM is not easy to implement. It requires good systems of management control and of risk measurement and management. A corporate hose faces number of risk, one among them is the political risk. In modern corporate history, the large oil companies, which faced political risk as they expanded their operations across the world, first mastered the art of

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political risk management. They found themselves helpless when political upheavals took place, like the communist takeover of the oil fields in the Caspian Sea, expropriation in Mexico and the growth of nationalism in Venezuela, Saudi Arabia and Iran. The initial reaction of these oil companies was to enlist the support of their governments and demand retaliatory measures. Gradually however, they realized the need to be more proactive and to reduce their dependence on government support. Multinationals in other industries also realized the importance of dealing with political risk in a systematic and structured way. Companies like Ford, General Electric and Unilever developed in-house capabilities for political risk analysis. Early attempts by MNCs to manage political risk consisted largely of sending senior executives to different countries on what came to be known as "grand tours" to strengthen ties with the local political leadership. After making an assessment of the political situation over several days or even weeks, the executives would return home to file their reports. The main drawback with this technique was that the executives were unable to understand the hard realities that lay below the surface. Also, many of their conclusions were highly subjective. The drawbacks with the Grand Tours approach became evident when the Cuban revolution took place in 1959. Fidel Castro's communist regime nationalized all foreign investments. Most US firms were taken unawares and few had taken insurance covers. US firms lost an estimated $1.5 billion following the Cuban revolution. Gradually, MNCs realized that in spite of their efforts to manage political risk, they were being viewed with hostility by many Third World governments. The risk was highest in resource intensive industries and in countries where revolutionary regimes had seized power. To strengthen their capabilities in managing political risk, many MNCs began to take the help of experts, including former diplomats, consultants, academics, journalists and government officials. Some were recruited on a full-time basis, while others were invited from time-to- time to examine the risk profiles of countries they were familiar with. This method came to be known as the "old hands" method.

Over time, however, the limitations of these methods became evident. Managers began to view them more as academic exercises. Also, by the 1990s, with more and more experience, MNCs became more comfortable with running international operations and managing the associated political risks. Moreover, liberalization in many countries had reduced political risk to some extent. Most MNCs have devised ways of reducing vulnerability by following appropriate business strategies such as not concentrating assets and resources in one particular country. By the mid-1990s, companies providing political risk management services were seeing a sharp decline in business. Two large service providers, International Country Risk Guide and Political Risk Services merged. Multi-National Strategies and International Reporting Information Systems reoriented their activities. All global companies usually face some form of political risk or the other. So, identifying political risks and understanding how to deal with them must be an integral part of any strategic planning exercise.

141. The transition from piecemeal management of risks to ERM involves considerable investment of time and money. Some of the important obstacles to the implementation of ERM include lack of alignment between risk management and planning processes, lack of role clarity, distortions in information flows and inadequate understanding of the benefits of ERM. To put in place a successful ERM system, companies have to integrate it with the planning process, build support for the concept across the organization and appoint the right champions. ERM should be tightly integrated with capital allocation, corporate strategic planning and business unit strategic planning. Where possible, it should also be integrated with functions like product design, human resources and other less strategic but nevertheless important managerial processes. To build support for ERM, companies must demonstrate that it creates value, minimizes bureaucracy by keeping the processes simple and strikes a balance between local and central control. A suitable organizational structure is vital for implementing ERM. Making the existing head of risk management or the CFO, Champion of the ERM initiative is not always appropriate. Many companies are looking at a new post, the Chief Risk Officer (CRO) who can discharge functions such as informing the board about the major risks, framing ERM implementation strategies, overseeing risk reporting and monitoring and educating people about risk management. Alternately, a committee consisting of top managers can be used to spearhead the ERM initiative. The

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CRO need not necessarily be a new hire. In many cases, a senior manager can be given this additional charge. Designating a specific individual as CRO removes ambiguity about where the ultimate responsibility for stopping risky transactions those are against the interests of shareholders lies. He or she should hold single point responsibility while managing a crisis. The CRO should be fully aware of the risk tolerances and the risk management objectives of the board and the nature of risk exposures faced by the firm. The CRO should obviously be separated from functions where risk taking is involved. Preferably, the CRO should be reporting to the board and not to the CFO. Irrespective of who is appointed as the CRO, one thing is for sure. The CRO must balance a short-term trading mindset with a long-term strategic orientation. In other words, he must be conversant with the languages of both trading and strategy. Though, on the one hand, the ultimate responsibility for risk management lies with the CEO, the CEO should not find himself reduced to an operating manager. The CEO also cannot afford to get involved in all the operational issues. So he has to necessarily depend on the skills of the CRO to balance the long term and short-term perspectives while managing risk. An independent risk management function facilitates the development and ongoing improvement of models, systems, and processes used to quantify risks. It ensures that risk management policies and procedures are consistently applied across all the units in the corporation. It also plays a policing role to check that policies are being implemented effectively. And it helps in taking an aggregate view of the different exposures held by the organization.

ERM is still an evolving subject. The difficulties in implementing ERM should not be underestimated. To be effective, ERM should be strategic rather than tactical in its orientation. A tactical orientation means that the objectives are limited, typically involving hedging of explicit future commitments. A strategic approach looks at how the company as a whole and its competitive position within the industry will be affected by the risk management processes selected. An integrated approach requires an overall understanding of the company's operations as well as its financial policies. Consequently, it views ERM as the responsibility of senior managers and does not allow it to be delegated to the treasury desk or individual businesses. Risk management needs to be integrated with corporate strategy. The challenge for CEOs is to understand the various risks their organizations face and get involved in the management of these risks instead of abdicating the responsibility to operating managers.

Caselet 56

142. It should be borne in mind that CDO is essentially a correlation product. The investors of CDO are in reality buying correlation risk. The interest and the principle payments of the CDO structures are re-directed to various investors through "trenches". In case of cash flow CDO, the collateral portfolio is not subject to active trading by the CDO manager. This has a direct implication on the uncertainty regarding interest and principal payments to the CDO tranches, which is in fact induced by the number and timing of defaults of the collateral securities. Losses occur when there is occurrence of some credit event. This can be either being a default of the collateral or a credit downgrade of the collateral. In either case the market value of the collateral drops. As stated earlier, it is not only the occurrence of credit events, but also, the timing and security of the CDO issue. By timing one refers to the exact loss, which is not other than the non-recoverable amount of the debt. It goes on beyond saying that the value of a CDO is actually the value of the proceeds of the various trenches. So any miscalculation in the risk of one tranche, leads to the mispricing of the subsequent trenches. There is existence of various kinds of risks that contributes to the credit risk. For example, industry, country or economic risks are systematic risks, because they can affect more than one entity at the same time. On the other hand, specific risk is the one that is specific to one entity.

143. Basically CDOs are two types, a balance sheet CDO and an arbitrage CDO. A balance sheet CDO is normally of a cash flow type. It results into the transfer of loans from the balance sheet, which in turn impacts the balance sheet of the originator. A balance sheet CDO is typically in the form collateralized loan obligation (CLO). By the transfer of loans from the balance sheet, it provides capital relief and increase in their liquidity. Whereas, arbitrage CDO's may be collateralized bond obligation (CBO) and can have either cash flow or

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market value structures. This involves buying loans or bonds or asset backed securities (ABS) from the market, pooling them. The primary objective of an arbitrage CDO is making arbitrage profits. A further classification of balance sheet CDO's can be done. They are cash flow CDO's and synthetic CDO's. The former are of the usual type of CDO's that involve the transfer of portfolio of loans from the originating bank into the special purpose e\vehicle (SPV). The latter does not involve in the transfer of loans, instead transfers the risk, which is inherent in the loan.

Caselet 57

144. The excess cash which is generated in the day-to-day operations by Motorsoft could be invested in safe and easily marketable instruments like treasury bills, certificates of deposits, commercial papers, units of UTI, etc. depending on the time horizon and safety requirements.

Treasury Bills

These are highly liquid in nature and Government of India guarantees their repayment. The RBI acts as an agent for issuing T-bills and is always willing to discount them. Based on the nature of the issue T-bills can be categorized into;

a. On Tap Treasury Bills

b. Auctioned Treasury Bills.

Certificate of Deposit (CD)

CDs are short-term deposits, issued by banks, by way of usance promissory notes, having maturity period between one month and one year. They are negotiable in nature, issued at a discount rate which is freely determined by the issuing bank, depending on the market. Financial Institutions can issue CDs ranging from one year to three years. They are issued in multiples of Rs.5 lakhs subject to a minimum issue size of Rs.5 lakh.

Commercial Paper (CP)

CPs are short-term, unsecured promissory notes issued at a discount to the face value by well-known companies enjoying a high credit rating. They have flexible maturities tailored to the requirements of the borrowers and investors. The maturity varies from one month to one year and is issued in multiples of Rs.5 lakh but the amount should not be less than Rs.25 lakh by any single issuer. Neither prior approval from the RBI nor underwriting is mandatory for their issue. The stamp duty on primary issue is 0.25% for all other investors and 0.05% for banks. Their secondary market transactions do not attract any stamp duty. CP is freely transferable by endorsement and delivery.

145. The need for holding cash arises from a variety of reasons which are briefly summarized below:

Transaction Motive

A company is always entering into transactions with other entities. While some of these transactions may not result in an immediate inflow/outflow of cash (e.g: credit purchases and sales), other transactions cause immediate cash inflows and outflows. So firms always keep a certain amount of cash to deal with routine transactions where immediate cash payment is required.

Precautionary Motive

Contingencies have a habit of cropping up when least expected. A sudden fire may break out, accidents may happen, employees may go on strike, creditors may present bills earlier than expected or debtors may make payments later than warranted. The company has to be prepared to meet these contingencies to minimize its losses. For this purpose companies generally maintain some amount in the form of cash.

Speculative Motive

Firms also maintain cash balances in order to take advantage of opportunities that do not take place in the course of routine business activities. For example, there may be a sudden decrease in the price of raw materials which is not expected to last long or the firm may want to invest in securities of other companies when the price is just right. These transactions are of a purely speculative nature for which the firms need cash.

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Lack of Proper Synchronization between Cash Inflows and Outflows

In the case of reasonably well-managed profitable companies, the total amount of cash inflows' for the year is usually higher than the total amount of cash outflows. However, the company can have spells of cash deficits and surpluses. This kind of a situation arises mainly due to lack of proper synchronization between cash inflows and outflows. Seasonal industries such as tea, jute are typical examples for mismatching of inflows and outflows. Consequently, these companies tend to follow a conservative cash management policy by holding more cash.

Asymmetry in the Occurrences of 'Shortages' and 'Surpluses' of Cash

Orgler comes out with an interesting argument that the finance manager is more worried about the situation of an 'uncovered cash deficit' than the situation of surplus cash lying idle in the bank. This attitude on the part of finance manager is quite understandable as the deficiencies in cash management are more likely to come out into the open during a period of cash crunch than in a period of cash surplus. As the opportunity loss sustained by the company for keeping excess cash at bank is not likely to affect all sections of the employees while inability to meet wages and salaries does, the finance manager may feel tempted to err, if at all, on the conservative side.

This will have the impact of the need for additional cash lying at bank.

Caselet 58

146. The main reason for doing social cost benefit analysis in projects is to subject a project to a consistent set of general objectives of national policy. The choice of one project rather than another must be viewed in the context of their total national impact, and this total impact has to be evaluated in terms of a consistent and appropriate set of objectives. The avoidance of a complete dichotomy between project choice and national planning is one of the main reasons for doing SCBA. When one project is chosen rather than another, the choice has its consequences for employment, output, consumption, savings, foreign exchange earning, income distribution and other things of relevance to national objectives. The purpose of SCBA is to see whether these consequences taken together are desirable in the light of the objectives of national planning. Social costs and benefits of the project is the primary focus of the SCBA and they tend to vary from the monetary costs and benefits of the project. Some of the principal sources of discrepancy are:

i. **Market Imperfections**

The basis for computing the monetary costs and benefits of a project are the market prices. They reflect the social values only when the perfect competition is prevalent which of course is very rare in developing countries. When imperfections are obtained, market prices do not reflect social values. Rationing, prescription of minimum wage rates and foreign exchange regulations are some of the market imperfections found in the developing nations.

ii. **Externalities**

The effects of the project that work outside the market are called 'externalities'. For example, an industrial project may produce a great deal of smoke and it may create employment opportunities. The commercial profits do not take into account the pollution that is caused by the project and the employment opportunities created by the project. In SCBA, the cost of such pollution and the external benefit on account of increased employment are relevant, though monetary costs or benefits are not involved. It is, therefore, emphasized that externalities are relevant in SCBA because in such analysis all costs and benefits, irrespective to whom they accrue and whether they are paid for or not, are relevant.

iii. **Taxes and Subsidies**

Taxes are monetary costs and subsidies are monetary gains for a project sponsor. However, from a social point of view, they are generally regarded as transfer payments and hence are irrelevant.

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iv. **Concern for Savings**

A private firm is not concerned about how benefits are used for consumption and savings and does not put differential valuation on savings and consumption. From a social point of view, this division between savings and consumption is essential. A rupee of benefits saved is deemed more valuable than a rupee of benefits consumed. The concern of society is duly reflected in SCBA wherein a higher valuation is placed on savings and lower valuation on consumption. This is especially true for countries which are capital scarce and whose saving potential is low.

v. **Concern for Redistribution**

A private firm is unconcerned about how the benefits are distributed. However, a society is concerned about the redistribution of benefits across various segments. For instance, a project which uses large amount of poor, unskilled labor might be preferable from society point of view than another project which uses factors of production supplied by rich people.

vi. **Merit Wants**

Goals and preferences not expressed in the market place, but believed by policy makers to be in the larger interest, may be referred to as merit wants. Merit wants are not relevant for a private firm, but are important from the social point of view. When two projects, one proposing to produce liquors and another producing cement are compared, that latter may be considered as more desirable even though the former may be expected to generate more profits.

147. Value analysis, another wonderful tool developed by Michael Porter, is aimed at identifying the activities of the firm that are contributing value to the firm and those that are not. This is also a structured tool like the five force model.

In this model, all the activities of a firm are grouped into two: primary activities and support activities. The primary activities are in turn made into five groups. These five groups are as follows:

a. *Inbound Logistics:* Activities like receiving, storing, and distributing inputs, transportation of inputs, etc.

b. *Operations:* Activities that convert the inputs into the final product like machinery, assembling, packaging, etc.

c. *Outbound Logistics:* Activities related to collecting, storing and distributing the final product.

d. *Marketing and Sales:* Activities relating to creation of consumer awareness about the product and sale of the product, like sales administration, advertising, sales campaigns, etc.

e. *Service:* Activities aimed at enhancing or maintaining the value of a product.

Each of these groups of primary activities is related to the support activities. Support activities make up the following four groups:

i. **Procurement:** Activities relating to purchase of inputs to the primary activities.

ii. **Technology Development:** Activities relating to acquisition or development of technology, whether the technology relates to a product or process or just a raw material.

iii. **Human Resource Management:** This group consists of activities such as recruiting, training, developing and rewarding the people in an organization.

iv. **Infrastructure:** This group consists of the development and maintenance of various structures and functional routines in an organization.

Once the value activities – primary and support are identified and their inter linkages are established, the next step is to identify the activities and linkages that create value to the firm. The factors that create and/or sustain the competitive advantage of a firm are the critical factors and they are called the cost drivers or value drivers. For example, a firm's competitive advantage may be its low cost of transportation consequent to its proximate location to both its suppliers and consumers. In such a case, a strategy of geographical expansion or shifting the location is unadvisable to the firm. Sometimes, value may be

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created by linkages between different primary activities. For example, keeping more inventories will reduce the tightness of production schedules and enable faster reaction to customers' demands. But higher inventories will result in increased storage costs. A trade-off has to be made between the two. An assessment of whether the value added by keeping more inventories is higher than the additional cost should be made. If it is more, the linkage becomes a value driver for the firm. Similarly, linkages may also exist among support activities and between primary activities and support activities. All these activities and their linkages have to be carefully nurtured. Only they sustain the firm in the market place.

Caselet 59

148. The largest providers of mezzanine capital historically have been insurance companies, pension funds and donations. But in the current trend of lenders the number of mezzanine financiers has expanded. These include equity groups, leveraged public funds, commercial banks and investment banks. The mezzanine market has grown from $15.2 billion in 1998 to $37.3 billion by 2002 according to Venture Economics. The increase or decrease in the level of mezzanine financing depends on the overall M&A activity. Due to weak economic environment and corporate defaults commercial banks have reduced their lending standards. Another reason for the growth in the mezzanine financing is the increase in the rate of refinancing. The low interest rate along with lethargic M&A environment has further supported this trend. According to Loan Pricing Corporation repayments on institutional loans recorded $8.6 billion in this first quarter of 2003, or 6.5% of total outstanding loans. This was equal to the fourth quarter repayment rate, though lower than the third quarter repayments which totaled to 9.6% of the outstanding loans. Therefore mezzanine financing is a key factor in creating a fair and advantageous capital structure for a company. The combination of low interest rates and tighter guarantee standards on senior loans has made mezzanine debt eye-catching to the borrowers. But with lenders dainty over each other to encourage customers, returns are shrinking. Investors or the borrowers are able to avail mezzanine loans at low interest rates as 8% to 9% which comparable to the senior loan rates in the early 90s. According to the Managing Director of a mezzanine loan provider, Mony Reality Capital Inc based in New York "It used to be that the lenders were able to achieve 15% to 20% average returns on the loans but the crowded arena has compressed yields down to 12% to 15%." Despite the descending fretfulness on proceeds, mezzanine financing still is an attractive business. It is expected that more buyout firms will operate internationally in the year 2003.

149. In current economic scenario of uncertainty, companies that are healthy and capital-hungry are moving uncompromisingly for extra capital. Existing lines of credit are squeezed and loans from the existing traditional lenders are getting tougher to obtain. In such a situation the company has three options: bank financing, private equity and lastly the increasingly popular Mezzanine financing. Mezzanine financing has become vital to the middle-market companies in the recent months as they contribute a small percentage of a company's total available capital. Mezzanine financing refers to the latter stage of financing. At this stage the company is usually profitable and has a business track record. The company needs fresh induction of capital to finance its growth plans. Mezzanine financing act as a viable funding alternative. Mezzanine debt has positioned itself in the equity market. They are the junior subordinate debt which includes equity warrants are generally used in financing leverage buyouts. A company will not qualify for senior debt capitalization if it does not posses any assets or if there is no current cash flow. The company may have significant growth prospects, but is not ready to go public for raising funds; it can creatively effect debt capitalization through mezzanine financing. This form of debt rests in a "gray area" between senior and subordinated debt. Senior debt has first priority in payment under the bankruptcy code, preceded by employees, trade creditors and first perfected collateral interests. Senior lenders do not provide complete financing to the companies. Therefore they are tuning to mezzanine financers who bridge the gap between the senior debt and the amount of equity. Mezzanine loans range from 2-5 years. Other mezzanine financing alternative includes junior debt that is secured by a partnership interest, and a preferred equity structure in which the lender makes a capital contribution to the borrower in exchange for an equity share in the property.

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Part VI: Model Question Papers (with Suggested Answers)

Each model question paper consists of two papers – Paper I and Paper II. Paper I contains three parts – A, B and C. Part A is intended to test the conceptual understanding of the students. It contains around 30 multiple-choice questions carrying one point each. Part B contains problems and caselets with an aggregate weightage of 46-50 points. Part C consists of essay-type questions with emphasis on practical applications carrying about 20-24 points.

Paper II consists of a Case Study and Caselets to test the skills of the candidates in adoping an integrated approach to either real or simulated situations. The case study tests primarily the quantitative abilities of the candidates whereas the caselets test qualitative aspects.

Students are requested to note that this is an indicative format of the question paper in general and that the ICFAI University reserves the right to change, at any time, the format and the pattern without any notice. Hence, the students are adivsed to use the model question papers for practice purposes only and not to develop any exam-related patterns out of these model question papers.

The suggested answers given herein do not constitute the basis of evaluation of the students' answers in the examination. These answers have been prepared by the Faculty Members of the ICFAI University with a view to assist the students in their studies. And, they may not be taken as the only answers for the questions given.

Model Question Paper I

Time: 3 Hours **Total Points: 200**

Paper I

Part A: Basic Concepts (30 Points)

Answer all the questions. Each question carries one point.

1. The most commonly held view of capital structure is that the weighted average cost of capital

   a. Declines steadily as more debt is used
   b. First declines with moderate amounts of leverage and then increases
   c. Increases proportionately with increases in leverage
   d. Is unaffected by the level of debt used
   e. Is minimized at a balanced capital structure of 50% equity and 50% debt.

2. M&N Enterprises is forecasting EPS of Rs.2.50 per share for next year. The firm has 1,00,000 shares outstanding. It pays 12 percent interest on its debt, and it faces a 40 percent marginal tax rate. Its estimated fixed costs are Rs.2,00,000 while its variable costs are estimated at 45 percent of revenue. The firm's target capital structure is 1:1. It has total assets of Rs.10,00,000. The level of sales on which M&N is basing its EPS forecast is

   a. Rs.2,00,478
   b. Rs.9,16,000
   c. Rs.10,00,000
   d. Rs.12,30,303
   e. Rs.24,56,122.

3. French Associates, Inc. has Rs.40,00,000 in assets, and currently has no debt. It is financed entirely with 3,00,000 shares of common stock, each of which trades at Rs.15 per share. The firm's EBIT is expected to be Rs.10,00,000 at year end (i.e., at t = 1). The corporate

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tax rate is 40 percent. French Associates expects to pay out a dividend at year end which is 55 percent of its net income. The company estimates that its earnings and dividends grow at a constant rate of 5 percent a year.

The company is considering a recapitalization where they would issue Rs.12,00,000 of debt at a before-tax cost of 10 percent. The proceeds from the debt issued would be used to repurchase shares of the company's stock at Rs.15 per share. The company's investment bankers estimate that the cost of equity capital would be 12 percent after the recapitalization. The company's stock price immediately following the recapitalization is expected to be (Assume that the dividend has not yet been paid).

a. Rs.17.25
b. Rs.15.00
c. Rs.20.98
d. Rs.18.86
e. Rs.33.17.

4. Camey Corporation is planning an investment of Rs.20 million. Its optimal capital structure is 40 percent equity and 60 percent debt. Its Earnings Before Interest and Taxes (EBIT) were Rs.36 million for the year. The firm has Rs.180 million in assets, pays an average of 10 percent on all its debt, and faces a marginal tax rate of 40 percent. If the firm maintains a residual dividend policy and will keep its optimal capital structure intact, the amount of the dividends it will pay after financing its capital budget is

a. Zero
b. Rs.5.4 million
c. Rs.7.1 million
d. Rs.12.0 million
e. Rs.15.1 million.

5. The balance sheet (based on market values) of Alpha Ltd., which has 1,000 outstanding shares is as follows:

Balance Sheet Based on Market Values

Liabilities	Rs.	Assets	Rs.
Equity	60,000	Cash	10,000
		Other Assets	50,000
	60,000		60,000

Alpha has declared a dividend of Rs.3 per share. The stock goes ex-dividend tomorrow. What will be its ex-dividend price? (Assume no taxes).

a. Rs.54.00
b. Rs.56.00
c. Rs.57.00
d. Rs.59.40
e. Rs.63.00.

6. A firm has total assets of Rs.20 million and a debt/equity ratio of 0.60. Its sales are Rs.15 million, and it has total fixed costs of Rs.6 million. If the firm's EBIT is Rs.3 million, its tax rate is 40 percent, and the interest rate on all of its debt is 9 percent, the firm's ROE is

a. 6.98%
b. 13.75%
c. 5.25%
d. 11.16%
e. 11.25%.

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7. The common stock outstanding and net income of KP Ltd. are 10,00,000 shares and Rs.80,00,000 respectively. KP Ltd. intends to re-purchase 15% of its shares, and this is not expected to affect its net income or P/E ratio. If the current stock price is Rs.30, the price after the re-purchase will be

a. Rs.33.64

b. Rs.36.92

c. Rs.35.29

d. Rs.37.55

e. Rs.31.43.

8. Calculate the price to book value ratio of a company based on the following information:

Return on equity	25%
Cost of equity	15%
Growth rate of earnings and dividends	5%

a. 1.00

b. 1.38

c. 1.75

d. 2.00

e. 2.25.

9. Which of the following is not an assumption of Walter model?

a. The firm is a going concern and has a perpetual life.

b. The only source of finance available to the firm is debt.

c. The cost of capital of the firm remains constant through the life of the firm.

d. The return on investment remains constant through the life of the firm.

e. None of the above.

10. Which of the following factors is not considered by Alcar model?

a. Operating profit margin.

b. Incremental investment in working capital.

c. Income tax rate.

d. Dividend growth rate.

e. Cost of capital.

11. Which of the following adjustments is not recommended by Current Cost Accounting (CCA) method to determine the current cost operating profit?

a. Depreciation adjustment.

b. Cost of sales adjustment.

c. Equity value adjustment.

d. Monetary Working Capital adjustment.

e. None of the above.

12. Which of the following is not a determinant of the shareholder value as propounded by Alfred Rappaport?

a. Cost of capital.

b. Rate of growth of sales.

c. Investor relation.

d. Value growth duration.

e. Operating profit margin.

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13. According to which model, the net liquidation value is the best indicator of the financial health of a firm?

a. LC Gupta Model.

b. Beaver Model.

c. The Wilcox Model.

d. Blum Marc's Failing Company Model.

e. Altman's Z–Score Model.

14. Which of the following statements is/are not true with respect to the Baumol Model?

i. Cash expenses are incurred evenly over the planning horizon.

ii. Cash inflows are random and hence the balance in cash movements are random.

iii. Neither the amount of conversion nor the timing of conversion of securities into cash and vice versa is fixed.

a. Only (i) above

b. Only (ii) above

c. Only (iii) above

d. Both (i) and (iii) above

e. Both (ii) and (iii) above.

15. Which of the following is not a growth strategy?

a. Concentric diversification.

b. Conglomerate diversification.

c. Joint venture.

d. Harvest.

e. Innovation.

16. Which of the following statements are true according to the BCG matrix?

i. Business units having low growth rate and high market shares are termed Cash Cows.

ii. Business units having low growth rate and low market shares are termed Cash Cows.

iii. Business units having high growth rate and low market shares are termed Dogs.

iv. Business units having high growth rate and high market shares are termed Stars.

a. Only (i) above

b. Only (ii) above

c. Only (iii) above

d. Both (i) and (iii) above

e. Both (i) and (iv) above.

17. Which of the following factors is not considered in determining the industry attractiveness as per the GE Nine-cell planning grid?

a. Entry and exit barriers.

b. Economies of scale.

c. Knowledge of customers and markets.

d. Caliber of management.

e. Industry profitability.

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18. Which of the following is not a determinant of cost behavior of the value activities constituting the value chain?

a. Learning.

b. The pattern of capacity utilization.

c. Linkages.

d. Location.

e. Demand for the end product.

19. According to the classification given by David Mitchell, those business firms which relentlessly integrate new acquisitions into their system unfazed by organizational and restructuring problems and the human implications are called

a. White Hunters

b. The Gentlemen Shooters

c. The Cross-breeders

d. The Carnivores

e. The Dairy Farmers.

20. A leader who uses coercive power and manipulation to attain personal goals is called

a. Phantom

b. Catalyst

c. Strategic Leader

d. Machiavellianist

e. Democratic Leader.

21. A summary of the key success factors within a particular industry is referred to as

a. Global Matrix

b. Industry Matrix

c. Value Matrix

d. Success Matrix

e. Firm Matrix.

22. Which of the following variables is/are related to rivalry among existing firms?

i. Access to distribution channels.

ii. Alternative suppliers.

iii. Alternative buyers.

iv. Product differentiation.

v. Amount of fixed costs.

a. Only (i) above

b. Only (ii) above

c. Both (i) and (v) above

d. Both (ii) and (iii) above

e. Both (iii) and (iv) above.

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23. The connections between the way one value activity is performed and the cost of performance of another activity are known as

a. Explicit Knowledge

b. Tacit Knowledge

c. Linkages

d. Respected Activities

e. Value Chain.

24. The collection of beliefs, expectations, and values learned and shared by a corporation's members and transmitted from one generation of employees to another is known as

a. Cultural Integration

b. Cultural Intensity

c. Corporate Culture

d. Corporate Integration

e. Corporate Identity.

25. Tactics which are played in the market place of an established competitor are known as

a. Defensive tactics

b. Offensive tactics

c. Strategic tactics

d. Contrarian tactics

e. Multiple tactics.

26. One risk of cost leadership is

a. Lost cost proximity

b. Eroding target segment

c. Technology may change

d. New focusers may sub-segment

e. None of the above.

27. If the management of a company can obtain a good price for its shareholders and the company's employees can keep their jobs, a company in a weak position may want to

a. Expand

b. Vertically integrate

c. Horizontally integrate

d. Sell out

e. Go for takeover.

28. Businesses that fit with the parent corporation but contain very few opportunities to be improved by the parent are known as

a. Ballast businesses

b. Heartland businesses

c. Edge-of-heartland businesses

d. Parenting businesses

e. Subsidiary business.

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29. In which form of competition, large multi-business corporations compete against other large multi-business firms in a number of markets?

a. Intense.

b. Multipont.

c. Concentrated.

d. Formidable.

e. Frontal.

30. According to the Marakon Model, the value of a firm is measured as the

a. Ratio of book value to market value

b. Ratio of market value to book value

c. Ratio of sales turnover to market capitalization

d. Ratio of market capitalization to sales turnover

e. Ratio of equity capital to debt equity.

Part B: Problems (50 Points)

1. Novell Corporation, a manufacturer of computer hardware, reported earnings per share of Rs.2.10 in 2003, on which it paid dividends per share of Rs.0.69. Earnings are expected to grow 15% a year from 2004 to 2008, during which period the dividend payout ratio is expected to remain unchanged. After 2008, the earnings growth rate is expected to drop to a stable 6%, and the payout ratio is expected to increase to 65% of earnings. The firm has a beta of 1.40 currently, and it is expected to have a beta of 1.10 after 2008. The risk-free rate is 4.5% and the market price of risk is 5.5%.

You are required to determine

a. The expected price of the stock at the end of 2008.

b. The present value of the stock.

(4 + 4 = 8 points)

2. NIT Ltd, an unlevered firm, has expected earnings before interest and taxes of Rs.2 million per year. NIT's tax rate is 40%, and the market value is Rs.12 million. Management is considering the use of debt; debt would be issued and used to buy back stock, and the size of the firm would remain constant. The default free interest rate on debt is 12%. However, as the leverage is increased there would be an offset in the form of the rising cost of bankruptcy. The firm's analysts have estimated, approximately, that the present value of any bankruptcy cost is Rs.8 million and the probability of bankruptcy will increase with leverage according to the following schedule:

Value of Debt (in Rs.)	Probability of Bankruptcy
2,500,000	0.00
5,000,000	0.10
7,500,000	0.205
8,000,000	0.30
9,000,000	0.45
10,000,000	0.525
12,500,000	0.70

You are required to determine the optimal amount of debt when bankruptcy costs are considered.

(9 points)

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3. Food World, a retail firm, is making a decision on how much it should pay out to its stockholders. It has Rs.100 million in investible funds. The following information is provided about the firm:

a. It has 100 million shares outstanding, each share selling for Rs.15. The beta of the stock is 1.25 and the risk-free rate is 4.5%. The expected return on the market is 12%.

b. The firm has Rs. 500 million of debt outstanding. The marginal interest rate on the debt is 9%.

c. The corporation's tax rate is 30%.

d. The firm has the following investment projects:

Project	Investment requirement (in Rs.)	After-Tax Return on capital
A	15 million	20%
B	10 million	18%
C	25 million	14%
D	20 million	12%
E	30 million	10%

Assume that all these projects have risk characteristics similar to the firm. The firm plans to finance all its investment needs at its current debt ratio. There will be no change in the working capital requirements.

You are required to determine the maximum amount of dividends the firm can pay.

(8 points)

4. Secure Systems Limited, reported EBITDA of Rs.1,290 million in 2003, prior to interest expenses of Rs.215 million and depreciation charges of Rs.400 million. Capital Expenditures in 2003 amounted to Rs.450 million, and working capital was 7% of revenues (which were Rs.13,500 million). The firm had debt outstanding of Rs.3.068 billion (in book value terms), trading at a market value of Rs.3.2 billion, and yielding a pre-tax interest rate of 8%. There were 62 million shares outstanding, trading at Rs.64 per share, and the most recent beta is 1.10. The tax rate for the firm is 40%. The risk-free rate is 7%.

The firm expects revenues, earnings, capital expenditures, and depreciation to grow at 9.5% per year from 2004 to 2008, after which time the growth rate is expected to drop to 4%. (Capital spending will offset depreciation in the steady state period.) The company also plans to lower its debt/equity ratio to 50% for the steady state (which will result in the pre-tax interest rate dropping to 7.5%.). Assume market premium for risk to be 5.5%.

You are required to

a. Estimate the value of the firm.

b. Estimate the value of the equity in the firm and the value per share.

(8 + 2 = 10 points)

5. Tele Soft Ltd. would like to segregate its client profile into the superior class and inferior class on the basis of the current ratio and net profit margin. Given below is the information relating to 12 accounts consisting of an equal number of superior and inferior clients:

Superior clients			Inferior clients		
Client	Current ratio	Net Profit Margin (%)	Client	Current ratio	Net Profit Margin (%)
A	1.95	25	G	0.85	22
B	1.75	17	H	0.62	10
C	1.58	16	I	0.44	3
D	1.32	20	J	0.58	9
E	1.80	13	K	0.62	5
F	1.78	16	L	0.65	8

From the above information, you are required to estimate the discriminate function that best discriminates between superior and inferior clients.

(10 points)

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6. Impex Limited has estimated cash requirement of Rs.15,00,000 per month. The company holds a portfolio of securities worth Rs.50 lakh. The company had purchased this portfolio 5 years ago at an average price of Rs.100 per share. The current average market price of the securities in the portfolio is Rs.177. The company is thinking of selling some of the securities in order to meet its cash requirements over the planning horizon. The fixed cost per conversion is expected to be Rs.500.

   Using the Baumol Model, you are required to determine the amount of securities the firm needs to convert per order so as to minimize the total cost. (The planning horizon of the firm is three months)

   (5 points)

Part C: Applied Theory (20 Points)

1. With growing levels of uncertainty and risk, firms are having to face an indecisive and non-deterministic future. Effective Risk Management is gaining prominence and increasing attention in the corporate world. What are the various approaches using which firms can manage their risks?

   (10 points)

2. The strategic perspective of the behavior of costs of a firm is not fully understood by many firms as a result of which they fail to exploit the opportunities to improve their relative cost position. In the light of this statement discuss the common pitfalls in cost leadership strategies.

   (10 points)

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Paper II

Part D: Case Study (50 Points)

Read the case carefully and answer the following questions:

1. You are required to determine the optimum level of investment and funding for Milon Ltd., during the forthcoming year.

(10 points)

2. You are required to make the following analysis for Hardwork Ltd.:

a. Determine the EPS at each level of borrowings assuming that the cost of equity capital remains the same.

b. Determine the beta, expected return, and price of the equity shares for each level of borrowings.

c. Suggest the optimal capital structure in the prevailing situation.

d. What should be the equilibrium repurchase price of the equity share at the optimal Debt/Assets ratio of the firm, if the market considers the information about repurchase? Assume that the Miller-Modigliani propositions hold good.

(4 + 6 + 1 + 3 = 14 points)

3. a. Mr. Kumar, the finance manager of Milon Ltd., opines to the CFO that moderate borrowing doesn't significantly affect the probability of financial distress or bankruptcy. Consequently moderate borrowing won't increase the expected rate of return demanded by the stockholders. The more debt the firm issues, the higher the interest rate it must pay. That is one important reason why firms should operate at conservative debt levels. Do you agree with the opinion of Mr. Kumar? Give your opinion with suitable reasoning based on Miller-Modigliani propositions.

b. You are approached by the CFO of the company regarding a statement that he had recently come across in a daily that said, an increasing number of companies are finding that the best investment they can make these days, is in their own shares. State and justify your opinion in this regard.

(6 + 4 = 10 points)

4. Which environmental variables had the greatest impact on Milon Ltd.? And why do you think Milon's strategy to attract upscale consumers failed?

(8 points)

5. How do you evaluate Milon's chances of recapturing its lost market share?

(8 points)

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In the 1980's, Milon Ltd., a motorcycle manufacturer dominated the Indian market. Milon's formula for success was fairly simple: offer consumers a high-quality product at a low price. Milon was also very creative with its advertising program. The "you meet the nicest people on a Milon" campaign successfully convinced many people to become first-time motorcycle buyers. Milon found itself at the top of the motorcycle industry.

In the preceding decade, Milon fought a sharp decline in sales. In the eighties, Milon led the industry with a 58.5 percent share of the Indian market; Yamaha was distant second with a 10.2 percent share. By 1990, Milon's share had dropped to 28.9 percent, and Yamaha's share had increased to 15.6 percent. Sales fell sharply and thereby the company was hit very badly on its financial front. What went wrong for Milon?

Milon fell victim to its own failure to adapt its marketing strategy to a changing marketing environment. First, consumer values have changed. Motorcycles seem to have regained the black leather jacket image that Milon fought so hard and so successfully to change in earlier decades. According to the motorcycle industry, sales of motorcycles and All Terrain Vehicles (ATVs) have dropped 45.6 percent since 1984. The tastes and preferences of society have moved upscale, and the demand for motorcycles has fallen sharply.

Realizing that the society was changing, Milon changed its marketing strategy. The company thought Indians would be willing to pay higher prices for the latest in technology. The company attempted to introduce bikes for the upscale market. Unfortunately, the rupee was rising sharply against the dollar at that time, and Kawasaki and Suzuki held firm on prices. The result: About six hundred Milon motorcycle dealers went out of business and Milon's move upscale was a failure.

Milon made several other costly errors. In 1985, the Consumer Product Safety Commission began a campaign to outlaw three-wheel all-terrain vehicles, which accounted for nearly 40 percent of Milon's North India sales. Milon failed to step up production of four wheel ATVs even while competitors boosted production and advertising. As a result, Yamaha soon replaced Milon as the largest producer of ATVs in India.

Milon also placed too much emphasis on technology. Its philosophy has been to design technologically superior products and hope that consumer demand will follow. But two of Milon's most innovative bikes- the 1988 version of the Super Wing and the Gold Coast, introduced in 1989- met with little success. The price of the Gold Coast has been dropped from Rs.40,000 to Rs.35,000. Milon discovered that consumers were not willing to pay that price for motorcycles, no matter how superior the bike was.

Milon has been working hard to correct its mistakes in the last decade. The company is using promotion heavily, including offering free rides in shopping malls, sponsoring races, and offering free training in its rider safety education centers throughout the country. The company is also going back to the strategy that once worked so well- quality products at low prices. Milon has reduced prices on several of its models. It hopes that its fresh advertising campaign " Come ride with us," which is quite similar to "you met the nicest people on Milon," will attract a new group of bikers. And for the first time in many years, the political and economic environment may be in Milon's favor because of rising fuel costs, increased traffic jams, and growing concerns over pollution. After witnessing the favorable environment in the market the strategic group in consultation with the Director (Finance) started developing its capital expenditure plans for the forthcoming year.

The company has identified the following profitable projects for the coming year:

Project	Investment (Rs. in Millions)	IRR (%)
A	4	13.8
B	8	13.5
C	6	12.5
D	5	12
E	8	11
F	4	10

These projects have the same degree business risk as its current projects. The capital structure of the company consists of long term debt of Rs.32 million, preference share capital of Rs.8 million and equity share capital of Rs. 40 million. The preference capital carries a post-tax cost of 10% and the long-term debt carries an interest rate of 9%. These funds are invested in the current projects of the company and any new funds raised will be raised in the same proportion as that of the current capital structure. In the given situation, Milon Ltd. can raise up to Rs.5 million in debt funds at an interest rate of 9%; debt exceeding Rs.5 million will carry an interest rate of 10%. Additional preference capital can be raised at the same post-tax cost. The firm is subject to a marginal tax rate of 40%.

Milon Ltd. expects to generate Rs.10 million of retained earnings over the coming year. Its expected dividend next year is Rs.2.14 per share and the equity stock of the company currently sells at Rs.25 per share. The new equity stock, if raised, is expected to net Rs.24 per share to the firm. Over the past ten years the dividend per share of the company has gradually doubled from Re.1 to Rs.1.97, and this growth rate is expected to continue in the near future.

Milon Ltd. has a 50% owned, debt free, listed, subsidiary called Hardwork Ltd. The company's EBIT in the previous year was Rs.40,000, which is expected to remain constant for the foreseeable years. The company plans to payout all earnings as dividends since it

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does not have any expansion plans. The shares of the company are traded in the stock market. The firm currently has 10,000 shares outstanding and its book value as well as market value is Rs.20 per share.

The company is pursuing the idea of leveraging itself by making a buyback of its shares, from the issue of debt funds. Following are the interest rates obtained from the bankers:

Debt/Assets Ratio	After-tax Cost of Debt (%)
0.10	4.8
0.20	5
0.30	5.4
0.40	6
0.50	7.2
0.60	9

The subsidiary is subject to a tax rate of 40%; assume a risk-free rate of interest of 6% and market return of 10%.

Part E: Caselets (50 Points)

Caselet 1

Read the following caselet carefully and answer the following questions.

1. For evaluating business performance both in financial and non-financial terms there is a necessity for the investors to look beyond the ubiquitous information furnished by the media. There is a tendency among the investors to overlook critically important indicators that would otherwise have enabled them to better discern the firm's potential for wealth creation. Do you agree? Justify your opinion.

(7 points)

2. There are different groups of people who read the financial statements, each looking for different types of information. Earnings might be the most important area for investors, but other areas of information are also of extreme significance. In this backdrop, explain how notes to accounts and Management Discussion and Analysis provide insights to the investors.

(8 points)

Because there are literally hundreds of things about a company to examine when analyzing its stock, it is tough to know where to start. Most investors are good at evaluating earnings, growth rates, revenue, and the P/E ratio, but they also tend to overlook other aspects that can be just as important.

One of the items which the average investor tends to ignore is cashflow. This represents the constant flow of money in and out of a company. All companies provide separate cash flow statements as part of their financial statements, but cash flow can also be estimated as net income plus depreciation and other non-cash items. The second aspect which is also generally overlooked by the typical investor is the management. This is one aspect of a company that can make a world of difference. Think of management in terms of sports: Michael Jordan might not have been the "whole show" during his reign at the Chicago Bulls, but he was undoubtedly a huge contributing factor to their success. The same is true for the management of a business.

Further receivables and the finished goods inventory are two items in the balance sheet on which the average investor does not place enough emphasis. Receivables represent the sales for which the company has yet to collect the money. Sales drive accounts receivable, so when sales are growing, accounts receivable will grow at a similar rate. Inventory of the finished goods available for sale ties in closely with accounts receivable.

Two other items which the investors tend to lose sight of, in the maze of details that are present in any annual report are the notes to accounts and the Management Discussion and Analysis (MD&A). These are the items which contain vital information which can not be expressed in very objective terms or quantifiable in the financial statements.

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The technique of looking at the overall company and its outlook is sometimes referred to "qualitative analysis," and it is a perspective that is often forgotten. Peter Lynch once stated that he found his best investments by looking at the trends his children follow.

Assessing a company from the fundamental/qualitative standpoint is one of the most effective strategies for evaluating a potential investment, and it is as important as looking at sales and earnings. These overlooked areas are by no means the only things investors need to evaluate, but looking at more than just the obvious will give you that extra advantage over other investors. Earnings are important, but earnings are also the most widely published financial figure for any company, so why base an investment decision solely on what other people already know? The moral here is always to dig deeper by doing solid research so that you can aim to be a step ahead of the crowd.

Caselet 2

Read the following caselet carefully and answer the following questions.

1. Compare the organizational characteristics of Power Ware and Netronix, and identify the sources of conflict between the two companies.

(4 + 4 = 8 points)

2. The culture of an organization is determined by certain characteristics. Describe the characteristics that determine the culture at Netronix.

(9 points)

Old vs. New Cultures

Sunil Khurana, 35, Managing Director, PowerWare Ltd, was on his routine early morning rounds of the company's shopfloor, when Vinayak Pandey, Chief Security Officer, pulled up on his side.

''We have a problem, sir,'' Pandey said. ''It is the boys at Netronix,'' he said, trying to keep pace with both Khurana and Manu Patel, VP (Manufacturing), who was accompanying the MD. ''They are indisciplined. They are punching their attendance cards at all odd hours. They walk in and out of the factory as they please. It is a breakdown of discipline. It has generated resentment among the regulars.''

''There we go again,'' said Khurana, winking at Patel. ''Pandey, why don't you come for the executive committee meeting scheduled in half-hour? We'll catch up.''

Khurana could see the divide. Ever since it was set up as an e-commerce venture within the premises of PowerWare in June 2000, Netronix had opened up battlefronts within. The venture *per se* had made eminent business sense. PowerWare was a major player in the Indian electrical industry with the third-largest market share in its flagship product of transformers. Employing around 400 workmen at a sprawling industrial estate in Pune, it had a turnover of Rs.100 crore.

Having built up domain expertise, setting up Netronix.com as an industry portal was a logical next step for PowerWare. The site's objective was to provide a database of manufacturers, products, product specifications, dealers, India-specific research reports, and country reports.

''We have several exciting plans for Netronix,'' said Khurana, opening the meeting later at his office. ''As part of generating revenue streams for the portal, we are working on three areas. All electrical manufacturers and dealers will be invited to open their online shops at our portal for a fee. We will also be billing them between 0.5 and 1 percent of the value of each transaction as our commission. And once we become a full-fledged b2b exchange, we will have regular auctions for disposal of surplus inventories that will also bring in fee-income.''

''But the major source of revenue,'' said Hiranmay Kelkar, V-P (Marketing), ''comes from becoming an Application Service Provider to Small and Medium Enterprises (SMEs) in the electrical industry. We can put up a software package on our portal that would enable thousands of SMEs to use it as a selling medium for either a license fee or a transaction fee payable to Netronix. We are looking at a B2B potential in excess of Rs.10,000 crores per annum that should translate into a Rs.100 crores portal income.''

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''That is equivalent to the turnover of our brick-and-mortar business at PowerWare,'' said Vinod Roy, V-P (Finance), excitedly. "Given the fact that our capital investment in Netronix was Rs.15 crores and the recurring annual investments will be about Rs.10 crores, the returns are quite impressive.''

''That should normally charge up the entire organization,'' said Aditya Sinha, V-P (HRD). ''But there are schisms. Of course, there are reasons. The traditional business at PowerWare is not technology-intensive. The pace is slow and relaxed. Business relationships have been long-term. There is no need for customer focus because a bulk of our revenues come from state electricity boards. Contrast this with the situation at Netronix, which has only 20 employees. True, except for five, they were drafted from PowerWare. But they are young, all in their late 20s. Because we update the site every four hours, they work 24/7. They have flexi time. When we signed them on, we doubled their salaries straightaway. We have also promised them ESOPs in future.''

''It might help if we physically moved Netronix out of the premises of PowerWare,'' suggested Pandey. Sinha was quick to point out that it will only be a cosmetic change. ''We must retain it within PowerWare,'' chipped in Khurana who, as the concurrent CEO of Netronix, saw it as his personal responsibility to ensure company-wide integration. ''I have been witness to the contrasts in the operating environment of the two businesses. Unlike our parent business where processes are governed by precision and detail, the new business has no rules to go by. Frankly, it is a crazy scene. But the guys there are committed. The point is: How do we blend the inherent merits of both businesses to build a seamless organization?''

''I think the issue is more basic,'' said Neil Richards, who had been part of the HRD division of PowerWare before being asked to head the operations at Netronix. ''There is a growing feeling among senior employees at PowerWare that they are subsidising a loss-making business. After all, Netronix is bleeding. And it will be at least another three-to-five years before the hemorrhage stops. And they are all miffed at the attention that the 'nerds', as they call us, attract wherever we go. The fancy packages we get, the paper money we will encash... a lot of myths are being floated. In fact, one of the plant supervisors asked me in the canteen only this morning: ''when will you start making some money for a change? Our bonus this year will go down because of the losses you guys are making at Netronix. Can't blame him, though.''

Caselet 3

Read the following caselet carefully and answer the following questions.

1. What are the advantages and disadvantages of forward-integration for GCL? Discuss.

(8 points)

2. What are the other survival strategies available for GCL and what is the best-recommended strategy? Why?

(10 points)

Anurag Galgotia, 29, already CEO of his 50-year-old family textiles firm, Galgotia Cotton Looms (GCL), is experiencing the thrill of a turnaround.

"Still relishing the numbers?" asked the CFO, Sadashiv Godbole, referring to GCL's Q3 results for 2002, which showed a Rs.1.5 crore profit against a Rs.21 crore loss for the same quarter of 2001. "We're back in business," said Godbole, sinking into the upholstery.

Nearly twice Galgotia's age, Godbole was a 20-year GCL veteran. He had signed up with Anurag's father Kishorilal Galgotia, who had started the firm in 1952, in Ludhiana, to make cotton textiles. Cotton sheets, shirtings, cambric, and mazril were the first products, and it seemed like only yesterday that the firm went public-before getting into synthetic fibre and even steel.

By the early 1990s, the GCL tapestry, once richly interwoven with natural, synthetic and steel threads, had started fraying. First, the polyester division became a drag, and then, steel-as competitive dynamics started changing. Polyster division was turning red and the falling prices of steel added more misery to GCL .

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By 1998, GCL conglomerate had got to what then seemed like a point of no return. Debt had mounted to a staggering Rs.1,300 crore, almost equivalent to the group turnover. Financial institutions threatened to pull the plug on the company, and the pink papers went to town with obituaries on GCL.

The diversification was unnatural to start with, said critics. In his time, Galgotia Sr., a cotton loyalist himself, used to respond philosophically, arguing that so long as people were discerning of what was natural and what was man-made, and the business was not deceiving anyone, there was no cause for worry.

Galgotia Jr., who had just returned from Wharton, had only hard options left. Painful as it was, he had to restructure the group. The uncompetitive polyester division was sold off to the Keshwani group for Rs.620 crore. Financial institutions got a chunk of preference shares. At the end of it all, GCL came out lean, mean and still weak-with residual debt of Rs.680 crore.

In spite of all that, young Galgotia had defied the doomsayers, and managed to haul GCL out of the red. “Ask Vishesh to see me,” Galgotia told his secretary. Godbole knew what was coming. A three-way brainstorming session with Vishesh Pradhan, the Group Marketing Head. Galgotia preferred such informal sessions to pretentious boardroom antics.

“Terrific results,” began Pradhan, on entering the corner office “To be frank, I did not expect our cost-saving efforts to show results so soon.”

Galgotia could see that his top honchos had been motivated by GCL’s showing. But he was keen on knowing what his best minds thought of GCL’s future. “We all know that this recovery was due to three factors: the staff optimization drive, coupled with aggressive technology implementation in the plants; the performance of our textiles division, which was mainly due to the 25 percent slump in cotton prices; and the successful diversification of the filament division into lucrative thermoplastic and engineering grade nylon. My question is: where do we go from here?”

Cost-cutting couldn’t be a perpetual strategy, nor could GCL expect cotton prices to remain low forever. Pradhan spoke: “I think it’s time we decided what GCL is. I don’t think we can continue being a textiles-nylon-steel player, and still work wonders.”

“Be direct,” said Godbole.

“I’m talking about steel,” said Pradhan, “We’ll never be a steel major, so why are we making steel?”

“You must be joking,” interjected Godbole. “Our debt is off the danger mark, and if only you’d read the balance sheet carefully, you’d have noticed that the steel division was our productivity topper. Besides, we’ll never fetch a half-decent price for it.”

Pradhan cleared his throat for a response: “I still think we should stick with cloth fibre and cloth, that’s it, but integrate the business either backward or forward. Backward routes are blocked by heavy competition in polyester-it’s a scale-of-operations game. That leaves cotton farming, which could be complicated. But forward? Shouldn’t we redouble our efforts in getting closer to the consumer? It’s almost an axiom now. The link closest to the consumer sits on the fattest margins.”

“What’s wrong with GCL as a consumer brand?” asked Galgotia.

“Nothing, it’s just that textiles aren’t what people talk about anymore, even if we have product distinction. They talk about Fashion Weeks and all that, and those are the actual brands young people have in mind. Value-addition has moved forward, from cloth to the design-that’s where we should be headed as well.”

“We’re a high-volume industrial group,” said Godbole, “not a boutique for the urban brat-pack.”

“Well,” retorted Pradhan, “I meant a mass-market initiative. The market’s cotton versus synthetic balance affects our bottomline directly, and we have a big stake in tomorrow’s clothing trends-we should be out there, shaping them. Cotton is a winner, so long as

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consumers turn discerning and see clothing as a means of communication rather than a shield against the elements."

"We have no power over that," said Godbole.

Galgotia looked unmoved by either of them. "Now, let me suggest something," said the CEO, "I understand you guys are keen on some radical strategies. But let's realise that we're barely out of the woods yet."

The group fell silent. Godbole and Pradhan recognised the tone of voice the young chief had spoken with. Some soul-speak was on its way. "I think we should begin with the basics," Galgotia began, leaving his seat and walking up to the window overlooking the crowded central Delhi market. "First of all, we should infuse some much-wanted capital into the textile and filament divisions. Let's replace old looms. On the front-end, let's go after exports, big time. We must not miss the 2005 world trade opportunity, and the natural versus synthetic trends are clearer in the high-margin western markets. Cotton wins."

"Great," muttered Pradhan, turning to Godbole. "Now if only we had that much-wanted capital to infuse."

"I think we have," smiled back Godbole. "We have been current for the last one-and-a-half years with all our financiers. I have it covered"

"Getting the priorities set is the first task. I have just spelt out a survival strategy. Something we must do. But what we need next is a clincher. Something that will tell our shareholders that GCL is game for the long haul. I suggest we break up and reassemble on Monday with an imaginative plan on everybody's mind."

Galgotia turned around and gazed at the horizon. He had given himself another green ribbon. But were Pradhan's ideas the ones that would propel him to it?

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Model Question Paper I

Suggested Answers
Paper I

Part A: Basic Concepts

1. ***(b)*** According to the traditional approach to capital structure, as debt is added to the capital structure the cost of capital declines initially because of lower post-tax cost of debt. But as leverage is increased, the increased financial risk overweighs the benefits of low cost debt and so the cost of capital starts increasing. Hence the correct answer is (b).

2. ***(d)*** EPS = [(Sales – Variable costs – Fixed costs – Interest) × (1 – tax rate)]/Number of shares outstanding.

Step 1: Calculate interest expense.

Amount of debt = 0.50 × 10,00,000 = Rs5,00,000

Interest expense = 5,00,000 × 0.12 = Rs60,000.

Step 2: Solve for EPS

EPS = 2.50 = [(Sales – 0.45 Sales – 2,00,000 – 60,000) × (1 – 0.4)]/1,00,000

2.50 = [(0.55 Sales – 2,60,000) × (0.6)]/1,00,000

2.50 = [0.33 Sales – 1,56,000]/1,00,000

2,50,000 = 0.33 Sales – 1,56,000

4,06,000 = 0.33 Sales

Sales = Rs12,30,303.

Alternate method:

EPS = [(EBIT – Interest) x (1–tax rate)] / shares outstanding Solve for EBIT Net Income = EPS × shares outstanding = 2.50 x 1,00,000 = Rs.2,50,000. EBT = NI / (1–T) = 2,50,000 / (0.6) = Rs.4,16,667 Interest (from above) = Rs.60,000

EBIT = EBT + Interest = 4,16,667 + 60,000 = Rs.4,76,667

Sales = 0.45 Sales + 4,76,667 + 2,00,000 (1.0) Sales – (0.45) Sales = Rs.6,76,667 (0.55)

Sales = Rs.6,76,667

Sales = 6,76,667 / (0.55) = Rs.12,30,304.

3. ***(d)*** Step 1: Determine EPS

EBIT	Rs.10,00,000
Interest Expense	= (0.10) × 12,00,000 = Rs.1,20,000
PBT	= Rs.8,80,000
Taxes (at 40%)	= Rs.3,52,000
Net Income	= Rs.5,28,000
Shares purchased	= Rs.12,00,000/Rs15 = 80,000
Shares remaining	= 3,00,000 – 80,000 = 2,20,000
EPS	= Rs.5,28,000/2,20,000 = Rs.2.40.

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Step 2: Determine the next dividend (D_1)

EPS_1 x Dividend Payout = (D_1)

(D_1) = Rs.2.40 × 0.55 =Rs.1.32

Step 3: Use required return form of constant dividend growth model to estimate P_0.

$K_e = D_1/ P_0 + g = 1.32 / P_0 + 0.05 = 0.12$

P_0 = Rs.1.32 / (0.12 - 0.05) = Rs.1.32 / 0.07 = Rs18.86.

4. ***(c)*** Interest cost:

Total assets = Rs.180M; 60% debt × Rs.180M = Rs.108 million in debt.

Interest cost = Rs.108M × 0.10 = Rs.10.8 million.

Net income (in millions):

EBIT	Rs.36.0
Less: Interest	– 10.8
EBT	Rs.25.2
Less: Taxes (@35%)	– 10.08
Net income	Rs.15.12

The portion of project financed with retained earnings:

Retained earnings portion: 20M x 0.40 = Rs.8.0 million

Debt portion = Rs.20M x 0.60 = Rs.12.0 million

The residual available for dividends = Rs.15.12M – Rs.8.0M = Rs.7.12 million in dividends.

5. ***(c)*** Since the balance sheet shows market values, the stock is worth $\left(\frac{\text{Rs.}60,000}{1,000}\right)$ = Rs.60 per share today (cum dividend). The ex-dividend price will be (Rs.60 – Rs3) = Rs.57. Once the dividend is paid, Alpha has Rs.3,000 less cash, so total equity is worth Rs.57,000 or $\left(\frac{\text{Rs.}57,000}{1,000}\right)$ = Rs.57 per share.

6. ***(d)*** Rs.20,000,000 = Total equity + Total debt.

Total debt = 0.60 (Total equity)

20,000,000 = Total equity + 0.60(Total equity)

Total equity = 20,000,000/1.60 = Rs.12,500,000.

Total debt = Rs.20,000,000 – Rs.12,500,000 = Rs.7,500,000.

Debt interest = 7,500,000(0.09) = Rs.675,000.

Net income = (EBIT – I)(1 – T)

= (3,000,000 – 675,000) 0.60 = Rs.1,395,000.

ROE = 1,395,000/12,500,000 = 11.16%.

7. ***(c)*** Number of shares re-purchased = 0.15 × 10,00,000 = 1,50,000

EPS_0 = NI/No. of shares = Rs.80,00,000/10,00,000 = Rs.8

Current P/E = P_0/EPS_0 = Rs.30/Rs.8 = 3.75

EPS_1 = Rs.80,00,000/(10,00,000 – 1,50,000) = Rs.9.41

The price after re-purchase = $P_1 = EPS_1 \times P/E$ = Rs.9.41 × 3.75 = Rs.35.29

8. ***(d)*** P/B = (r – g)/(k – g)

= (25 – 5)/(15 – 5) = 2.00.

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9. *(b)* According to the Walter's model, the firm is a going concern and has a perpetual life span. The cost of capital and the return on investment remain constant throughout the life of the firm. The only source of finance available to the firm is retained earnings. Thus the statements given in (a), (c) and (d) are correct. However statement given in (b) which says that the only source of finance is debt is incorrect. Hence the correct answer is (b).

10. *(d)* According to the Alcar model, there are seven value drivers that affect a firm's value. These are:

    - The rate of growth of sales.
    - Operating profit margin.
    - Income tax rate.
    - Incremental investment in working capital.
    - Incremental investment in fixed assets.
    - Value growth duration.
    - Cost of Capital.

    Obviously, dividend growth rate is a factor not considered in this model. So the correct answer is (d).

11. *(c)* CCA recommends that three different adjustments are to be made in the income statements to determine the current cost operating profit. These are:

    – Depreciation adjustment.

    – Cost of sales adjustment.

    – Monetary Working Capital adjustment.

    Hence the correct answer is (c).

12. *(c)* Investor relation is an after effect of the company's performance. Irrespective of the company's performance, the company has to maintain a good investor relation. Thus, Rappaport does not consider it as a determinant of shareholder value.

13. *(c)* Wilcox model says that the net liquidation value of a firm is the best indicator of its financial health. All the other models are based on a set of financial ratios for predicting corporate failure.

14. *(e)* Baumol Model is a deterministic model of cash budgeting. It assumes that the cash inflows as well as outflows are incurred evenly over the planning horizon. Conversion of securities into cash takes place at regular intervals. So both statements (ii) and (iii) are incorrect. Hence the correct answer is (e).

15. *(d)* Harvest is a divestment strategy and not a growth strategy.

16. *(e)* According to the BCG matrix, the firms can be classified on the basis market growth rate and market share as follows:

    Question Marks: High Market growth rate and low market share.

    Stars: High market growth rate and high market share.

    Cash Cows: Low market growth rate and high market share.

    Dogs: Low market growth rate and low market share.

    Thus, statements (i) and (iv) are correct and the correct answer is (e).

17. *(a)* GE matrix takes two factors into consideration – Business strength and industry attractiveness. Exit and entry barriers are considered in determining the business strength and not the industry attractiveness. Hence the correct answer is (a).

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18. *(e)* The cost behavior of value activities is determined by ten major drivers These are:

- Economies of scale.
- Learning.
- The pattern of capacity utilization.
- Linkages.
- Interrelationships.
- Integration.
- Timing.
- Discretionary policies.
- Institutional factors

Demand for the end product is not one of these drivers Hence the correct answer is (e).

19. *(d)* According to the classification given by David Mitchell, those business firms which relentlessly integrate new acquisitions into their system unfazed by organizational and restructuring problems and the human implications are called Carnivores.

20. *(d)* Phantom is a board of directors having low degree of involvement in strategic management where it never knows what to do. On the other hand a catalyst is a board having high involvement in strategic management and takes a leading role in establishing and modifying the mission, objectives, strategy and policies. Strategic leader is one who gives direction to his subordinates with a long-term vision which he shares with them. Democratic leader takes into consideration the suggestions by his subordinates in arriving at any decision. He follows a participative style of management. A Machiavellianist is one who uses coercive power to achieve his personal goals.

21. *(b)* A summary of the key success factors within a particular industry is referred to as the industry matrix.

22. *(c)* Access to distribution channels is a cause of rivalry among existing firms as the channels are limited and all the players are vying for the given distribution channels. Amount of fixed costs also leads to rivalry among existing firms as the proportion of fixed costs in the cost structure (i.e. operating leverage) decides the responsiveness of the firms to business risks. Existence of alternative suppliers, buyers and product differentiation leads to reduction in rivalry among existing firms.

23. *(c)* The connections between the way one value activity is performed and the cost of performance of another activity are known as linkages.

24. *(c)* The collection of beliefs, expectations, and values learned and shared by a corporation's members and transmitted from one generation of employees to another is known as the corporate culture.

25. *(b)* A tactics which is played in the market place of an established competitor is known as offensive tactics as the challenger goes into the territory of the leader and fights a battle in the leader's territory only.

26. *(c)* Cost leadership is usually based on the technology adopted for production. In case the technology becomes obsolete the cost leadership may also be lost.

27. *(d)* As the company is in a weak position, it would like to get out of the business if the chances of survival are very low. In such a case, if the management of a company can obtain a good price for its shareholders and the company's employees can keep their jobs it would like to sell off.

28. *(a)* Businesses that fit with the parent corporation but contain very few opportunities to be improved by the parent are known as Ballast businesses.

29. *(b)* When large multi-business corporations compete against other large multi-business firms in a number of markets it is known as multipoint competition.

30. *(b)* According to the Marakon Model, the value of a firm is measured as the ratio of market value to book value.

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Part B: Problems

1. a. Expected earnings per share in 2009 = 2.10 × $(1.15)^5$ × 1.06 = Rs.4.48

Expected dividends per share in 2009 = Rs.4.48 × 0.65 = Rs.2.91

Cost of Equity capital after 2009 = $R_f + \beta (R_m - R_f)$ = 4.5 + 1.1 × 5.5 = 10.55%

According to Dividend Discount Model

$$P_o = \frac{D_1}{k_e - g}$$

Therefore, the expected price at the end of 2008 = $\frac{2.91}{0.1055 - 0.06}$ = Rs.63.96.

b.

Year	EPS (in Rs)	DPS 9in Rs)
2004	2.42	0.79
2005	2.78	0.91
2006	3.19	1.05
2007	3.67	1.21
2008	4.22	1.39

Cost of equity = $R_f + \beta (R_m - R_f)$ = 4.5 + 1.4 × 5.5 = 12.2 % ≈ 12%

Present value of stock = 0.79 × PVIF (12, 1) + 0.91 × PVIF (12, 2) + 1.05 × PVIF (12, 3) + 1.21 × PVIF (12, 4) + 1.39 × PVIF (12, 5) + 63.96 × PVIF (12, 5) = Rs.40.02.

2.

Value of the firm = Current Value of the Firm + Tax Benefits – Bankruptcy Costs

Expected Bankruptcy Cost =(Present Value of Bankruptcy cost × Probability of Bankruptcy)

Tax Benefits = (0.40 × Value of Debt)

Current Market value of the firm = Rs.1,20,00,000

Value of Debt (in Rs)	Tax Benefits	Expected Bankruptcy cost	Value of the Firm
25,00,000	10,00,000	0	1,30,00,000
50,00,000	20,00,000	8,00,000	1,32,00,000
75,00,000	30,00,000	16,40,000	1,33,60,000
80,00,000	32,00,000	24,00,000	1,28,00,000
90,00,000	36,00,000	36,00,000	1,20,00,000
1,00,00,000	40,00,000	42,00,000	1,18,00,000
1,25,00,000	50,00,000	56,00,000	1,14,00,000

As can be seen from the above table, for increase in debt beyond the level of Rs.75,00,000 the expected bankruptcy cost is greater than the expected tax benefit. The value of the firm is maximized at a level of debt of 75,00,000. Thus, it implies that the optimal value of debt is Rs.75,00,000.

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3. The expected Free Cash Flows (FCF) = Investible Funds – Expected capital expenditure (1– Debt Ratio) – Change in Working Capital (1 – Debt Ratio)

Debt Ratio = Debt /(Debt + Equity) = 500/500+1500 = 0.25

In order to determine the expected capital expenditures, we should first determine the cost of capital

Cost of equity = $R_f + \beta (R_m - R_f)$ = 4.5 + 1.25 (12 – 4.5) = 13.875%

Post–tax cost of debt = 9 (1–0.30) = 6.3%

Cost of capital = 0.13875 $\times$ 0.75 + 0.063 $\times$ 0.25 = 0.11985 = 11.99% $\approx$ 12%

Since Projects A, B, C and D have post-tax return greater than the post-tax cost of capital the firm will select these four projects.

So, the expected capital expenditure = Rs.(15+10 + 25 + 20) million = Rs.70 million.

Since there is no change in working capital requirements

Free Cash Flow = 100 – 70 (1-0.25) – 0 = Rs.47.50 million

So the firm can distribute a maximum of Rs.47.50 as dividends to its shareholders.

4. a.

(All figures in Rs Millions)

Year	EBITDA	Depreciation	EBIT	EBIT (1-T)	Capital Expenditure	Change in Working Capital	FCF	Terminal Value
0	1290	400	890	534	450	82	402	
1	1413	438	975	585	493	90	440	
2	1547	480	1067	640	540	98	482	
3	1694	525	1169	701	591	108	528	
4	1855	575	1280	768	647	118	578	
5	2031	630	1401	841	708	129	633	14,941

<u>**2003 –2007**</u>

Cost of Equity = $R_f + \beta (R_m - R_f)$ = 4.5 + 1.1 ×5.5 = 13.05%

Post-tax cost of Debt = 4.8%

Cost of Capital = 9.37%

<u>After 2007</u>

Cost of Equity = 11.89%

Post-tax cost of debt = 4.5%

Cost of Capital = 9.45%

Value of the Firm

$$= \frac{440}{(1.0937)} + \frac{482}{(1.0937)^2} + \frac{528}{(1.0937)^3} + \frac{578}{(1.0937)^4} + \frac{633+14941}{(1.0937)5} = \text{Rs.11,566 million.}$$

b. Value of Equity in the firm = Value of the Firm – Value of Debt =Rs.(11,566 – 3,200) million = Rs.8,366 million.

Value per share = 8,366/62 = Rs134.94.

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5. Let the discriminate function be $Z_i = aX_i + bY_i$

Where, Z_i = Discriminate score for the ith account

X_i = Current ratio for the ith account

Y_i = Net profit Margin for the ith account.

CustomerAccount	X_i	Y_i	$(X_i - X_m)$	$(Y_i - Y_m)$	$(X_i - X_m)^2$	$(Y_i - Y_m)^2$	$(X_i - X_m)(Y_i - Y_m)$
Gr. I A	1.95	25.00	0.79	11.33	0.6241	128.3689	8.9507
B	1.75	17.00	0.59	3.33	0.3481	11.0889	1.9647
C	1.58	16.00	0.42	2.33	0.1764	5.4289	0.9786
D	1.32	20.00	0.16	6.33	0.0256	40.0689	1.0128
E	1.80	13.00	0.64	-0.67	0.4096	0.4489	-0.4288
F	1.78	16.00	0.62	2.33	0.3844	5.4289	1.4446
Gr. II G	0.85	22.00	-0.31	8.33	0.0961	69.3889	-2.5823
H	0.62	10.00	-0.54	-3.67	0.2916	13.4689	1.9818
I	0.44	3.00	-0.72	-10.67	0.5184	113.8489	7.6824
J	0.58	9.00	-0.58	-4.67	0.3364	21.8089	2.7086
K	0.62	5.00	-0.54	-8.67	0.2916	75.1689	4.6818
L	0.65	8.00	-0.51	-5.67	0.2601	32.1489	2.8917
Total	13.94	164.00	0.02	-0.04	3.76	516.67	31.29
Average	1.16	13.67					

$X_m = 13.94/12 = 1.16$

X_{m1} = Sum of X_i for Gr. I/6 = 10.18/6 = 1.70

X_{m2} = Sum of X_i for Gr. II/6 = 3.76/6 = 0.63

$Y_m = 164/12 = 13.67$

Y_{m1} = Sum of Y_i for Gr. I/6 = 107/6 = 17.83

Y_{m2} = Sum of Y_i for Gr. II/6 = 57/6 = 9.5

$\sigma_x^2 = (1/n\text{-}1)\ \Sigma(X - X_m)^2 = (1/11) \times 3.76 = 0.342$

$\sigma_y^2 = (1/n\text{-}1)\ \Sigma(Y - Y_m)^2 = (1/11) \times 516.67 = 46.97$

$\sigma_{xy} = (1/n\text{-}1)\ \Sigma(X - X_m)(Y - Y_m) = (1/11) \times 31.29 = 2.84$

$dx = X_{m1} - X_{m2} = 1.70 - 0.63 = 1.07$

$dy = Y_{m1} - Y_{m2} = 17.83 - 9.5 = 8.33$

$a = (\sigma_y^2 dx - \sigma_{xy} dy)/ (\sigma_x^2\sigma_y^2 - \sigma_{xy}^2)$

$= (46.97 \times 1.07 - 2.84 \times 8.33)/(0.342 \times 46.97 - 2.84 \times 2.84)$

$= 26.60 / 7.998 = 3.32$

$b = (\sigma_x^2 dy - \sigma_{xy} dx)/ (\sigma_x^2\sigma_y^2 - \sigma_{xy}^2)$

$= (0.342 \times 8.33 - 2.84 \times 1.07)/(0.342 \times 46.97 - 2.84 \times 2.84)$

$= -0.1899 / 7.998 = -0.024$

Hence, the required discriminant function is $Z_i = 3.32X_i - 0.024Y_i$

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6. The total cash required over the planning period = Rs.15,00,000 X 3 = Rs.45,00,000

The average annual yield on the securities can be determined as follows:

$100 (1+ r)^5 = 177$

$=> r = 12.09$ %

Therefore, the yield for three month period = 3%

Fixed conversion cost = Rs.500 per conversion.

According to Baumol model, the total cost is minimized when conversion size (C) is given by

$C= \sqrt{2bT/I}$

Where, b = Fixed cost per conversion

T = Total cash required during the planning horizon

I = Yield on marketable securities over the planning horizon.

Substituting the given values, we get

$\sqrt{2 \times 500 \times 45,00,000/0.03}$ = Rs.3,87,298.33

Therefore, the company needs to convert Rs.3,87,298 worth of securities per conversion in order to minimize the total cost.

Part C: Applied Theory

1. The following are the different approaches to managing risks:

- Risk avoidance
- Loss control
- Combination
- Separation
- Risk transfer
- Risk retention
- Risk sharing.

Risk Avoidance

An extreme way of managing risk is to avoid it altogether. This can be done by not undertaking the activity that entails risk. For example, a corporate may decide not to invest in a particular industry because the risk involved exceeds its risk bearing capacity. Though this approach is relevant under certain circumstances, it is more of an exception rather than a rule. It is neither prudent, nor possible to use it for managing all kinds of risks. The use of risk avoidance for managing all risks would result in no activity taking place, as all activities involve risk, while the level may vary.

Loss Control

Loss control refers to the attempt to reduce either the possibility of a loss or the quantum of loss. This is done by making adjustments in the day-to-day business activities. For example, a firm having floating rate liabilities may decide to invest in floating rate assets to limit its exposure to interest rate risk. Or a firm may decide to keep a certain percentage of its funds in readily marketable assets. Another example would be a firm invoicing its raw material purchases in the same currency in it which invoices the sales of its finished goods, in order to reduce its exchange risk.

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Combination

Combination refers to the technique of combining more than one business activities in order to reduce the overall risk of the firm. It is also referred to as aggregation or diversification. It entails entering into more than one business, with the different businesses having the least possible correlation with each other. The absence of a positive correlation results in at least some of the businesses generating profits at any given time. Thus, it reduces the possibility of the firm facing losses.

Separation

Separation is the technique of reducing risk through separating parts of businesses or assets or liabilities. For example, a firm having two highly risky businesses with a positive correlation may spin-off one of them as a separate entity in order to reduce its exposure to risk. Or, a company may locate its inventory at a number of places instead of storing all of it at one place, in order to reduce the risk of destruction by fire. Another example may be a firm sourcing its raw materials from a number of suppliers instead of from a single supplier, so as to avoid the risk of loss arising from the single supplier going out of business.

Risk Transfer

Risk is transferred when the firm originally exposed to a risk transfers it to another party which is willing to bear the risk. This may be done in three ways. The first is to transfer the asset itself. For example, a firm into a number of businesses may sell-off one of them to another party, and thereby transfer the risk involved in it. There is a subtle difference between risk avoidance and risk transfer through transfer of the title of the asset. The former is about not making the investment in the first place, while the latter is about disinvesting an existing investment.

The second way is to transfer the risk without transferring the title of the asset or liability. This may be done by hedging through various derivative instruments like forwards, futures, swaps and options.

The third way is through arranging for a third party to pay for losses if they occur, without transferring the risk itself. This is referred to as risk financing. This may be achieved by buying insurance. A firm may insure itself against certain risks like risk of loss due to fire or earthquake, risk of loss due to theft, etc. Alternatively, it may be done by entering into hold-harmless agreements. A hold-harmless agreement is one where one party agrees to bear another party's loss, should it occur. For example, a manufacturer may enter into a hold-harmless agreement with the vendor, under which it may agree to bear any loss to the vendor arising out of stocking the goods.

Risk Retention

Risk is retained when nothing is done to avoid, reduce, or transfer it. Risk may be retained consciously because the other techniques of managing risk are too costly or because it is not possible to employ other techniques. Risk may even be retained unconsciously when the presence of risk is not recognized. It is very important to distinguish between the risks that a firm is ready to retain and the ones it wants to offload using risk management techniques. This decision is essentially dependent upon the firm's capacity to bear the loss.

Risk Sharing

This technique is a combination of risk retention and risk transfer. Under this technique, a particular risk is managed by retaining a part of it and transferring the rest to a party willing to bear it. For example, a firm and its supplier may enter into an agreement, whereby if the market price of the commodity exceeds a certain price in the future, the seller foregoes a part of the benefit in favor of the firm, and if the future market price is lower than a predetermined price, the firm passes on a part of the benefit to the seller. Another example is a range forward, an instrument used for sharing currency risk. Under this contract, two parties agree to buy/sell a currency at a future date. While the buyer is assured a maximum price, the seller is assured a minimum price. The actual rate for executing the transaction is based on the spot rate on the date of maturity and these two prices. The buyer takes the loss if the spot rate falls below the minimum price. The seller takes the loss if the spot rate rises above the maximum price. If the spot rate lies between these two rates, the transaction is executed at the spot rate.

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2. Pitfalls In Cost Leadership Strategies

The strategic perspective of the behavior of costs of a firm is not fully understood by many of them, which hence fail to exploit opportunities to improve their relative cost position. Firms, in assessing and acting upon cost position, make common errors, some of which include:

Exclusive Focus on the Cost of Manufacturing Activities: The mere mention of "cost" makes most managers Instinctively think of manufacturing. However, activities such as marketing, sales, service, technology development, and infrastructure generate a significant, if not overwhelming, share of total cost. These activities, however, often receive very little attention in cost analysis. The entire value chain, when examined, often results in relatively simple steps that can significantly reduce cost. For example, dramatic impacts can be seen on the cost of performing research as a result of recent advances in computers And computer-aided design.

Ignoring Procurement: Many firms consider purchasing as a staff function and devote few management resources to it. Though the firms work hard to reduce labor costs, they pay scant attention to purchased inputs. Purchase price of key raw materials is often the central focus of analysis within the purchasing department. Individuals with little expertise of motivation to reduce cost are often allowed by the firm to purchase many items. As a result, linkage between the purchased inputs and costs of other value activities go unrecognized. Major cost benefits for many firms can ensure from modest changes in purchasing practices of the firm.

Overlooking Indirect or Small Activities: Large cost activities and/or direct activities like, fabrication and assembly of components are usually the focus of cost reduction programs. Insufficient attention is paid to activities representing a small fraction of total cost, and indirect activities, such as maintenance and regulatory costs, are often altogether ignored.

False Perception of Cost Drivers: Misdiagnosing of their cost drivers is a common mistake committed by firms. For example, it may be incorrectly assumed by a firm having the largest national market share and the lowest costs that national market share drivers cost. However, the firm with large regional share in the regions in which it operates, may actually be the source of its cost leadership. Due to a failure to understand the sources of its cost advantage, a firm may attempt to reduce cost by increasing its national share. This may further worsen its cost position by reducing its focus on regional operations. The firm may also concentrate its defensive strategies on national competitors and ignore the more significant threat posed by powerful regional competitors.

Failure to Exploit Linkages: All the linkages affecting cost, particularly, linkages with suppliers and linkages among activities such as quality assurance, inspection, and service, are rarely recognized by firms. The success of many Japanese firms can be attributed to their ability to exploit linkages. For example, Matsushita and Canon, in spite of the fact that their policies contradict traditional manufacturing and purchasing practices, are known for their ability to recognize and exploit linkages. Errors such as, requiring each department to cut costs by the same amount, even though raising costs in some of the departments may lower total costs, result from the failure to recognize linkages.

Contradictory Cost Reduction: Firms often employ contradicting means of reducing cost. For example, a firm, in order to reap benefits of scale economies, might try to gain market share, while at the same time it may go in for model proliferation thus dissipating scale economies. Also, firms may locate close to buyers With a view to reduce freight costs but at the same time emphasize weight reduction in new product development. Sometimes, cost drivers work in opposite directions. This makes it essential for a firm to recognize the tradeoffs.

Unwitting Cross Subsidy: The failure of firms to recognize the existence of segments in which costs behave differently makes them often engage in unwitting cross subsidy. Rarely is it possible to measure the cost difference among products, buyers, channels, or geographic areas by using the conventional accounting systems. A firm may thus charge excessive prices on some items in the line or to some buyers While subsidizing prices for others For example, due to its lower aging requirements, the cooperage for white wine is less costly than red wine. Based on average costs, if a winery sets equal prices for white and red wine, the price of red wine will be subsidized by the price of the lower-cost white wine. Competitors that understand costs may often make use of unwitting cross subsidy as an avenue to use costs to undercut a firm's prices and improve their market position. A firm may also, as a result of cross subsidy, be exposed to focused competitors Who compete only in the overpriced or premium segments?

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Thinking Incrementally: Rather than finding ways to reconfigure the existing value chain, cost reduction efforts often strive for incremental cost improvements in the value chain. Incremental cost improvements may result in the point of diminishing returns, while reconfiguring the value chain can result in a whole new cost platform.

Undermining Differentiation: Elimination of a firm's sources of uniqueness to the buyer as a result of a cost of a reduction can undermine its differentiation. This action of a firm should be the result of a conscious choice even though doing so may be strategically desirable. Activities that do not contribute to a firm's differentiation should form the focus of its cost reduction efforts. Further, if a cost leader differentiates in activities wherever differentiation is not costly, it will result in the cost leader improving its performance.

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Paper II

Part D: Case Study

1. Solution for Milon Ltd.

After-tax Cost of debt

$K_d = I(1–t)$

$= 9 \times (1-0.4) = 5.4\%$ for the first Rs.5 million debt.

$= 10 \times (1-0.4) = 6\%$ for the Debt exceeding Rs.5 million.

After tax cost of Preference share = 10% (given)

After tax cost of Equity shares:

$$K_e = \frac{D_1}{P_0} + g$$

Given D_1 = Rs.2.14 per share, P_o = Rs.25 Per share, g = Re.1 to Rs1.97 in the last 10 yeaRs

i.e. $1 \times (1+g)^{10} = Rs1.97$

$g = (1.97)^{1/10} – 1 = 0.07$ or 7 %.

$$k_e = \frac{2.14}{25} + 0.07 = 15.56\%$$

k_e is the cost of internal equity

Cost of external equity, $k_s = \frac{2.14}{24} + .07 = 15.92\%$

Calculation of Break Points:

$$BP = \frac{T_{fi}}{i}$$

Where 'T_{fi}' is the maximum finance available for a particular source, and 'i' is the fixed proportion of the source of fund in the capital structure.

Break Point for debt = $\frac{\text{Rs.5million}}{0.40}$ = Rs.12.5 million

Break point for Retained earnings t = $\frac{\text{Rs.10 million}}{0.50}$ = Rs.20 million

Current Structure

Source	Equity stock	Preference stock	Long-term debt
Amount (Rs.in millions)	40	8	32
Weight	50 %	10%	40%

Source (1)	**Weight (2)**	**Amount (Rs in Million) (3)**	**Wt. Specific cost (%) (4)**
Up to Rs.12.5 million			
Shareholder's Funds	0.5	6.25	15.56
Preference stock	0.1	1.25	10
Debt	0.4	5	5.4
	WMCC (Col.2 * col.4)		**10.94**

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Source (1)	Weight (2)	Amount (Rs in Million) (3)	Wt. Specific cost (%) (4)
From 12.5 million to 20 million			
Shareholder's Funds	0.5	10	15.56
Preference stock	0.1	2	10
Debt	0.4	8	6
	WMCC (Col.2 * col.4)		**11.18**
Beyond Rs.20 million			
Shareholder's Funds	0.5		15.92
Preference stock	0.1		10
Debt	0.4		6
	WMCC (Col.2 * col.4)		**11.36**

Optimum capital expenditure plan:

Project D has an IRR of 12% and by the time we reach Project D, our cumulative investment would be Rs.23 million. At this level our WMCC is 11.36%. Project E, the next available project has an IRR of 11%, which is lower than the WMCC. Thus we cannot accept project E, or any other project thereafter. Thus it will be optimal for the company to invest in the projects A, B, C and D, with the corresponding capital structure as shown below:

Share holder's fund	Amount	Amount
Retained earnings	Rs.10 million	
Existing Equity New equity	Rs.40 million Rs.1.5 million	Rs.51.5 million
8% Preference share capital Existing New	Rs.8 million Rs.2.3 million	Rs.10.3 million
Debt		
Existing	Rs.32 million	
9% debt (new)	Rs.5 million	
10% debt (new)	Rs.4.2 million	Rs.41.2 million
Total		Rs.103 million

The existing investment is Rs.80 million and the new projects A, B, C, and D require an investment of Rs.23 million thereby making the total investment as Rs103 million.

2. a. Solution for Hardwork. Ltd.

Calculation of EPS

1	2	3	4	5	6	7
D/A	Pretax cost (%)	Borrowing	Interest	EAT	No. of Shares	EPS
0.10	8.0	20000	1600	23040	9000	Rs.2.56
0.20	8.3	40000	3320	22008	8000	Rs.2.75
0.30	9.0	60000	5400	20760	7000	Rs.2.97
0.40	10.0	80000	8000	19200	6000	Rs.3.20
0.50	12.0	100000	12000	16800	5000	Rs.3.36
0.60	15.0	120000	18000	13200	4000	Rs.3.30

D/A %Ratio Debt /Assets ratio given in the problem

Pre-tax Interest rate is arrived by dividing the after-tax rate with (1-tax rate) e.g.4.8/0.06 = 8% in the first row.

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Amount to be borrowed = Rs.2,00,000 x D/A ratio e.g. 2,00,000 x 10% = 20,000 in the first row.

Interest = Interest rate (Col.2) x Borrowing (Col.3) e.g. 08x 20,000 in the first row.

Earnings After Tax EAT = (borrowing – interest) (1-tax rate).

No of shares outstanding after the repurchase of share out of amount browed @ of Rs.20 per share is = (Rs.200,000 – Borrowing) / Rs.20.

EPS = Col.5 / Col.6

b.

Calculations of beta, K_e, Price of the share.

1	2	3	4	5	6	7	8
D/A	D/E	K_d	EPS	E_{sti} Beta	K_e %	Price	WACC
0	0.00	4.8%	2.40	1.50	12.00	20.00	12.00
0.10	0.1111	4.8%	2.56	1.60	12.40	20.65	11.64
0.20	0.2500	5.0%	2.75	1.73	12.92	21.28	11.34
0.30	0.4286	5.4%	2.97	1.89	13.56	21.90	11.11
0.40	0.6667	6.0%	3.20	2.10	14.40	22.22	11.04
0.50	1.0000	7.2%	3.36	2.40	15.60	21.54	11.40
0.60	1.5000	9.0%	3.30	2.85	17.40	18.97	12.36

Col.no

2. Debt / Equity Ratio = (D/A) /(1–D/A). e.g. In the second row 0.10 / (1–0.10)
3. K_d (After tax cost of debt) is given in the problem.
4. EPS as calculated above.
5. Calculation of Beta:

   For the unlevered firm the information given is that at the EPS of Rs.2.4 the price per share is Rs.20. Since the company is completely paying out all the earnings and the EBIT remains constant The K_e of the Company will be EPS/price i.e. Rs.2.4/20 = 12%. The information further provided is that return on market is 10% and that the risk free rate of interest is 6%. If we equate thus in the CAPM model we get the value of Beta of the unlevered firm.

   i.e. 12 = 6 + (10 – 6) * (β) => (β) = 1.50

   Further we can find the beta of the levered firm by using the Hamada Equation.

   $\beta_L = \beta_U[1 + (1\text{-}t)(D/E)]$

6. Ke of the company can be found by using the CAPM Model.
7. Since the company follows 100% dividend payout policy the EPS will be equal to DPS, Price per share will be EPS/ K_e.

c. Optimum capital Structure:

The Optimum capital structure will be Debt of Rs.80,000 and Equity of Rs.1,20,000, at this level the price per share of the company is highest i.e. Rs.22.22 per share.

d. Equilibrium Repurchase price at 40% D/A ratio:

$$\text{Equilibrium repurchase price} = \frac{\text{Value of the firm}}{\text{Nos. of shares outstanding}}$$

At 40% of borrowing the amount borrowed will be Rs.80,000, k_d = 6% (Post-tax), k_e = 14.4%, total expected dividend = Rs.19,200 as per the calculations above.

Market value of Equity will be Rs.19,200/0.144 = Rs.1,33,333

Market value of the firm will be Rs.1,33,333 + 80,000 = Rs.2,13,333.

Equilibrium repurchase price per share will be Rs.2,13,333/10,000 shares = Rs.21.33

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3. a. Moderate borrowing doesn't significantly affect the probability of financial distress or bankruptcy. But it does increase the variability and market risk borne by stockholders This additional risk must be offset by a higher average return to stockholders More the debt, higher the borrowing cost is not an important reason to operate at conservative levels of debt in the capital structure. So long as MM's proposition holds, the overall cost of capital of the firm is not affected by changes in financial leverage or the increase in the rates of interest with more and more borrowings. However, it is to be noted that increasing interest rates may signal an increasing probability of financial distress that has to be taken into account while deciding the type of financing for the profitable avenues in the reach of the firm. The objection that MM ignore the fact that with a higher amount of debt, the rate of interest will also rise may not be valid. The second proposition of MM allows for the required rates of return on both debt and equity to increase with a growing proportion of debt in the capital structure. The rate on bonds increases because the debt holders are taking on more of the risk of the firm. The rate on common stock also increases because of increasing financial leverage. The second proposition of MM holds that the rate of return the shareholders can expect to receive on their holdings increases with the increase in the debt-equity ratio. But shareholders are indifferent to increased leverage though the expected return increases in the presence of leverage because any increase in expected return is exactly offset by an increase in risk and therefore in the shareholders' required rate of return. As a result the overall capitalization rate of the firm remains the same.

b. A company investing in its own shares is equivalent can to a buyback of its own shares in the open market. In an efficient market, a share repurchase as an investment has a net present value of zero. The shareholders of the company would prefer a buyback of shares rather than the firm investing in a project, which is not expected to yield a positive NPV. This will be the preference of the shareholders if the selection is between investments and repurchases. The quote in the daily appears to be in the light of only negative NPV projects being available. Another possibility is that the managers Might be in possession of certain information that points to the stock price being too low. If this were true, although it is difficult to know how this helps the firm, buyback of shares would harm those shareholders who sell but helps those who retain their stocks.

4. The environmental variables that had the greatest impact on Milon's motor cycle business are

- Economic environment
- Technical environment
- Demographic / social / cultural environment
- Ecological environment.

Analyzing the Economic environment: The economic environment is the single most important environment in its impact on the financial well being of company. At the same time, it is the environment that you, as an individual, have the least ability to influence. The overall economic environment affects the business in two ways:

It affects the rate of market growth in market which, in turn have an impact on your rates.

It affects ability to raise capital, whether through borrowing, stock issue or retained earnings.

There are many easily accessible measures of economic activity. However, not all of them are of equal interest. In every industry, there are key economic factors that require special attention. In the motorcycle business, rising prices and the fuel costs are key economic factors because the demand for motorcycles will reduce if the prices are increased.

Technological environment:

Nowhere is the threat from the external environment more dramatic than in the technological environment. Industry after industry has been devastated by new technology developed outside that industry.

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Assessing the Demographic / Social /Cultural environment:

If the technological environment can bring the most dramatic changes, the demographic / social / cultural environment(the people environment) produces the most gradual, yet the most significant changes of any of the environments. It affects every business. Even if you manufacture industrial goods, you have to remember that your customer's need for your products is ultimately derived from some final customer need.

Judging the Ecological environment: Assessing your place in the ecological environment takes the broadest possible point of view. Here are few examples-

The destruction of the rain forest in the Amazon Basin in South America is raising serious questions about the availability of oxygen throughout the world.

Chlorofluorocarbons from spray cans and from burning fossil fuels may be contributing to the change in the temperature of the earth by strengthening the 'greenhouse' effect.

The economic recession, and the competitor's wise moves to maintain the same price made the Milon's upscale move a failure. The company was not able to study properly the external environmental changes. As the rupee was rising sharply against the dollar, definitely consumers will postpone their purchases. Also, the company failed in studying the changing consumer tastes and preferences. To move to the upscale market, proper market research is required:

What are the expectations of the consumer?

What are the new features we can add?

What are the competitors are offering?

What are the weaknesses in our product strategies? etc.

The company's strict adherence to higher price and its inability to respond quickly to the changing customer fashions and technological improvements made its upscale market move a failure.

5. The company has to refine its total marketing strategy. It has to identify the areas, in which it is weak. The following steps have to be taken to increase the market share of the company.

- Increase market share through acquisitions
- Managing the existing market share.
- Creating a market segment for low share companies
- Giving importance to R & D
- Attempt must be made to increase the sales promotion efforts especially towards you on segment
- Providing good quality goods at reasonable prices
- Creating a strong brand image among the consumers
- Innovative advertising.

Section E: Caselets

Caselet 1

1. Figures reported in annual reports mean exactly what the company designs them to appear - either more nor less. So investors looking at fundamentals must discern on a company-by-company basis what the earnings whisper. Thus, investors ought to use different parameters that make earnings evaluation easier, clearer, and more meaningful. Some of the commonly overlooked indicators are: cashflow, management of the company and composition of current assets in terms of inventory of finished goods and receivables.

Proper cash flow levels vary from industry to industry, but a company not generating the same amount of cash as competitors is bound to lose out. A company without available cash to pay bills is in real trouble, even if the company is profitable. By using the cash flow-to-debt ratio, which compares the amount of cash generated to the amount of outstanding debt, you can judge the health of cash flow. This comparison reflects the company's ability to service their loan and interest payments.

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Good management doesn't do everything, but it certainly is an integral part of the company. Sam Walton (of Wal-mart) and Jack Welch (of General Electric) are examples of people who led their firms through thick and thin, recessions and booms. The responsibility of the management has been greatly enhanced in the wake of financial turmoils and scandals that have shaken the investor confidence. The large-scale disasters of the likes of Enron and WorldCom have served the purpose of highlighting the importance of good corporate governance which can only be ensured by a prudent management.

Normally receivables grow in tandem with sales. So when sales are growing receivables should also grow at a similar rate. Problems arise from receivables which are increasing faster than sales, which indicates that the company is not receiving payment for its sales and thus leaving itself short for handling the expense of producing those sales. Finished goods inventory also tends to respond to sales in a similar way to receivables. High inventory is bad for several reasons. Firstly, there is a cost associated with storing the extra inventory: increases in inventory cause higher storage costs. Secondly, a growing inventory can indicate that the company is producing more than it can sell.

In addition to the above the vital information and crucial insights furnished by the footnotes to the financial statements, the directors' report on board responsibility and corporate governance, MD & A etc. tend to be overlooked or side stepped by the common investors prior to making decisions.

It has been seen in the past that the traditional measures and the GAAP-based reported earnings, leaves companies with plenty of room for creative accounting and manipulation. Operating earnings, which leaves out one-time gains and expenses from the bottom line, is meant to make the numbers comparable across companies. Unfortunately, many analysts now have their own criteria for what should be excluded, so analyzing and comparing companies using operating earnings can be difficult for the investors while it is probably impossible to develop a standard that can handle every contingency, good and honest reporting is essential to assessing company fundamentals and value.

As a preface to the annual report, a company's management typically spends a few pages talking about the recent year (or quarter) and gives a background of the company. While this is not the guts of the financial statements, it does give investors a clearer picture of what the company does. It also points out some key areas where the company has performed well. The management's analysis is provided at their discretion, so take it for what it's worth. Issues that analysts might look for in this portion are how candid and accurate are the managers' comments, does the manager discuss significant financial trends over past couple years, how clear are the managers comments and do they mention potential risks or uncertainties moving forward? If a company gives an adequate amount of information in the MD&A, it's likely that management is being honest. It should raise a red flag if the MD&A portion of the financial statement ignores serious problems that the company has been facing. A good example would be a company that is known to have large portions of outstanding debt but fails to mention anything about it in the MD&A. Withholding important information not only deceives those who read the financial statements, but in extreme cases also makes the company liable for lack of disclosure.

Similarly, the notes to the financial statements (sometimes called footnotes) are also an integral part of the overall picture. If the income statement, balance sheet, and statement of cash flow are the heart of the financial statements, then the footnotes are the arteries that keep everything connected. If the analyst does not read the footnotes he may be missing out on a lot of information.

The footnotes list important information that could not be included in the actual ledgers The notes list relevant things like outstanding leases, the maturity dates of outstanding debt, and even details on where the revenue actually came from. Generally speaking there are two types of footnotes:

Accounting Methods - This type of footnote identifies and explains the major accounting policies of the business. This portion of the footnotes tells about the nature of the company's business, when its fiscal year starts and ends, how inventory costs are determined, and any other significant accounting policies that the company feels that you should be aware of. This is especially important if a company has changed accounting policies. It may be that a firm is changing policies only to take advantage of current conditions to hide poor performance.

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Disclosure - The second type of footnote provides additional disclosure that simply could not be put in the financial statements. The financial statements in an annual report are supposed to be clean and easy to follow. To maintain this cleanliness, other calculations are left for the footnotes. For example, details of long-term debt such as maturity dates and the interest rates at which debt was issued, can give you a better idea of how borrowing costs are laid out. Other areas of disclosure include everything from pension plan liabilities for existing employees to details about ominous legal proceedings the company is involved in.

The majority of investors and analysts read the balance sheet, income statement, and cash flow statement. But for whatever reason, the footnotes are often ignored. What sets informed investors apart is digging deeper and looking for information that others typically wouldn't.

Caselet 2

1.

Powerware		Netronix
Hierarchical; command & control	Organization Structure	Networked and flexible
Setting the agenda & enforcing change	Role of Leadership	Creating a milieu for success
Long-tern; individual rewards	Compensation	Short-term; collective rewards
Focused on functional turfs	Internal Processes	Focused on the customer
Linear, time-bound & predictable	Career Plan	Lateral and multi-tasked

Sources Of Conflict

- Netronix does not have revenue sources
- Power Ware is subsidizing a loss-making venture
- Varying perceptions of office discipline and conformity
- Gaps in salary structure too wide
- A feeling among Power Ware employees of being marginalized.

2. Khurana has to ensure, through appropriate communication channels, that all employees of Power Ware recognize the fact that the idea behind setting up Netronix is to provide value-added services at every link in the value chain. He must reiterate the fact that the new business will require time to stabilize and that it will be a drain on the resources of the organization in the short term but, if nurtured well, deliver very high returns to all the stakeholders of Power Ware. The success of Netronix will also demonstrate the company's ability to constantly renew itself in anticipation of future technology trends.

There are three basic determinants of organization culture and they are:

First, the influence of the business environment in general and the industry in particular. For instance, companies in industries characterized by rapid technological change, such as software, electronic and computer companies, normally have cultures that strongly value innovation.

Second, founders, leaders and managers bring a pattern of assumptions often depend on those individuals' own experiences in culture of the national, regional, ethnic, religious, occupational and professional communities to which they belong.

Third, the actual experience people in the organization have had in working out solutions for coping with the basic problems the organization encounters molds shared assumptions. For instance, two companies may each value cooperation and internal competition, but one company may emphasize cooperation more in decision making and resource allocation, while internal competition may predominate in the other. The cultures of these two companies consequently are quite different even though some of their basic assumptions about cooperation and internal competition are the same.

Taken together, these three principle sources suggest that the content of culture derive from a combination of prior assumptions and new learning experiences.

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Caselet 3

1. **Advantages of Forward Integration**

The company can get into the garment manufacturing business, as more and more buyers are wanting to buy everything under one roof.

There is immense potential waiting to be tapped in exports. With winds of globalization sweeping all the industries, outsourcing has become the norm. In such a scenario, GCL can tap exports better, if it gets into garment manufacturing: it can be more cost-competitive in the exports market.

This also requires GCL to link up closely with international trends, which are as much driven by fabric as by styling. GCL can therefore assume the role being the market leader in manufacturing cutting-edge fabrics.

There are opportunities for innovations on fabrics. Value addition is derived through both fabric and with styling. In an era of undifferentiated products, new innovations in fabric will go a long way in driving salience and sale.

By focusing on value added fabrics, performance fabrics, superior quality and specialized textiles and hybrid yarns (cotton/non-cotton), GCL can drive its sale through sheer product brilliance. Through value engineering, it can drive not just sales but also higher margins and profits.

Disadvantages of Forward Integration

Increase in debt burden which could impact profitability

Creating a consumer brand is time-consuming and expensive.

Building a strong brand in the consumer's mind is a complex task, especially given the existing high clutter levels in the market.

High level of competition in the retail segment could make it difficult to penetrate the market and build volumes in a short time

Will increase exposure to the textile industry, and hence less scope for diversifying risk

2. **Acquisitions:** GCL should focus on its existing role as the supplier of fabric in the current scenario. GCL can build on its fine capabilities in the textile industry, by looking out for undervalued firms for acquisition targets**.**

Strategic alliances with overseas textile firms: There are several countries-like South Africa and Bangladesh-which enjoy the status of the most-preferred trading partner with countries like the US. It makes sense for GCL to lease manufacturing facilities in such countries and export to the US and Europe from there, by using its own fabric, to be competitive.

GCL can also become competitive by moving into value-added niche markets through the route of joint ventures and strategic tie-ups with world-class, cost-effective Asian producers: access to global technology is imperative in enhancing product quality.

Since tariff barriers in India will be progressively reduced, the two-pronged strategy outlined above will build upon the company's strengths, leverage its JV partners' technology and brand image, and help it to develop its domestic and external markets. It would also help GCL to focus on improving its core business processes and gain competitive advantage by producing quality products, which at the same time would meet WTO stipulations.

Backward integration into the cultivation of cotton: Land laws in India are still not amenable to such an approach. But it may be beneficial to forge relationships with major cotton growers A control over the supply-chain gives the company a tremendous staying power.

Go for domestic alliances: GCL should identify niche segments within each product category towards enhancing revenues from domestic sales. These would be areas where the customer is assured of a value added offering.

GCL seems to be on the right track, with the first step to exit the polyester business and re-structure the residual companies, bringing the overall debt down to a manageable level.

GCL has been current with the financial institutions and banks for a year and a half, which has strengthened the company's credibility amongst vital stakeholders In general, the company must strive to improve its performance so as to let the world know that it is once again a force to be reckoned with.

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Restructuring: The Company needs to analyze what businesses are their core competence. In steel, GCL should evaluate whether it can focus adequate resources to survive and grow in the complex and highly competitive environment. If possible, it should explore any opportunity that might exist in making specialized products in steel so as to lift itself out of the mass-market dynamics, thereby driving margins and profits.

Given the initial success in thermoplastic and engineering grade nylon, GCL should look at strengthening this division so as to exploit any further opportunities, which exist. This would help them consolidate and grow in this emerging new area of operation.

The impending rationalization of the Customs duty structure as recommended by the WTO would open the Indian marketplace to global players GCL has to think global markets, to develop into a global provider of mass-use fashion fabrics based on commercializing emerging technologies in a cost competitive manner. Given the opportunities on the horizon, GCL must make a strong thrust towards exports. Here value addition could prove to be a key success factor. To begin with, the domestic readymade garments market, which has attained critical mass, could be a focus area.

GCL needs therefore focus on investing on product innovation, value engineering and quality so as to grow aggressively in the textile business.

In order to remain competitive in the textile business, GCL needs to move out of areas where the company competes with the unorganized sector, and move into areas of higher value addition

In the meantime, the cost-cutting measures that the company has been focusing which have yielded positive results must be continued.

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Model Question Paper II

Time: 3 Hours **Total Points: 200**

Paper I

Part A: Basic Concepts (30 Points)

Answer all the questions. Each question carries one point.

1. Which of the following statements is most correct?

a. A key disadvantage of the pure residual dividend policy is that it usually results in a variable dividend payout, which is unattractive to investors.

b. Stock splits tend to reduce the number of shares outstanding.

c. An increase in the capital gains tax rate should work to discourage corporations from repurchasing their shares.

d. The bird-in-hand theory of dividends suggests that firms that decreasing their dividend payout should expect to realize a higher share price and a lower cost of equity capital.

e. Both (a) and (c) above.

2. Marsland Industries follows a strict residual dividend policy. The company has a capital budget of Rs.4,000,000. It has a target capital structure which consists of 40 percent debt and 60 percent equity. Marsland forecasts that its net income will be Rs.3,000,000. What will be the company's expected dividend payout ratio this year?

a. 20%.

b. 30%.

c. 35%.

d. 40%.

e. 45%.

3. Which of the following statements most correctly describes the factors that influence capital structure decisions?

a. The greater the business risk, the higher the optimal debt ratio will be.

b. Large depreciation tax shields and tax-loss carry-forwards will make it more advantageous for firms to assume more debt.

c. If a firm is run by a very aggressive manager, he/she may be more inclined to use debt to bolster profits, and hence raising the optimal debt level.

d. The major reason firms limit the use of debt is that interest is tax-deductible, which raises the effective cost of debt.

e. The higher the probability of future capital needs and the worse the consequences of a capital shortage, the stronger the balance sheet should be.

4. Which of the following conditions must be satisfied for success of divisionalization?

a. The firm must have two or more units for which revenues and expenses can be measured separately.

b. Corporate management should exercise a measure of self restrain in interfering with divisional matters.

c. Each division should not be independent of other divisions with respect to production and marketing activities.

d. Both (a) and (b) above.

e. (a), (b) and (c) above.

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5. The risk that arises out of the assets of a firm being not readily marketable is called

a. Market risk

b. Marketability risk

c. Business risk

d. Financial risk

e. Exchange risk.

6. Which of the following statements regarding bankruptcy models is/are true?

i. According to Wilcox model, the net liquidation value of the firm is the best indicator of the financial health of the firm.

ii. Blum Marc's failing company model is based on liquidity ratios only.

iii. According to the Beaver model, the ratio of cash flow to total debt is the single best predictor of corporate failure.

a. Only (i) above.

b. Only (ii) above.

c. Only (iii) above.

d. Both (i) and (iii) above.

e. All (i), (ii) and (iii) above.

7. Which of the following is/are considered to be a value driver as per the 'Alcar' approach to value based management?

a. Cash flow from operations.

b. Long-term capital gains.

c. Aggregate fixed capital investment.

d. Value growth duration.

e. Both (c) and (d) above.

8. Which of the following statements regarding target-costing is/are not true?

a. Target costing reduces the development cycle of the product wherein costs are targeted at the time of product design.

b. Target costing has proved to be very efficient in the manufacture of complex products that requires many sub-assemblies.

c. Target costing can be used to forecast costs to be incurred in the future and provides motivation to meet future cost objectives.

d. Target cost is the excess of the sales price for the target market over the pre-determined margin of profit.

e. Both (b) and (d) above.

9. What should be the increase in nominal interest rate if the expected inflation rate increases from 3 percent to 4 percent? Assume that applicable tax rate is 30 percent.

a. 0.83 percent

b. 1.27 percent

c. 1.43 percent

d. 2.33 percent

e. 3.00 percent.

10. Which of the following is a variable that can be analyzed at the generic level as per the McKinsey approach?

a. Return on invested capital.

b. Product mix and Product design.

c. Customer mix and Customer relationship.

d. Level of capacity utilization.

e. Cost of managing inventories.

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11. Whereas __________ answer(s) the question "What is our business?" the __________ answer(s) the question "What do we want to become?"

a. Long-term objectives; short-term objectives.

b. Mission statement; vision statement.

c. Strategies; objectives.

d. Goal; objectives.

e. None of the above.

12. If Ford Motor Company acquires Goodyear Tyre Company, which of the following represents this strategy?

a. Conglomerate diversification.

b. Backward integration.

c. Horizontal integration.

d. Forward integration.

e. Vertical integration.

13. Which of these strategies describes Disney's efforts to build a new theme park in Hong Kong?

a. Innovation.

b. Market development.

c. Product development.

d. Conglomerate diversification.

e. Liquidation.

14. Which of these is not an appropriate Question Mark division strategy for a product in the BCG Matrix?

a. Product development.

b. Divestiture.

c. Market penetration.

d. Conglomerate diversification.

e. Innovation.

15. Which of these is/are not stated advantage(s) of a divisional structure?

a. Allows local control of local situations.

b. Leads to a competitive climate within a firm.

c. Accountability is clear.

d. Promotes specialization of labor.

e. Both (a) and (c) above.

16. Change is any alteration of the status quo. Organizational change is a substantive modification to some part or the entire part of the organization. Which of the following strategies to overcome resistance to change involves explaining the need for and the logic of change to individuals?

a. Participation and involvement.

b. Facilitation and support.

c. Negotiation and agreement.

d. Education and communication.

e. Manipulation and co-optation.

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17. Mr. Rohit is the most successful CEO of Trans Inc. During his tenure, the company has never looked back. One of the reasons for his success is his ability to motivate his people and to inspire their loyalty and devotion to his vision for the firm. Which of the following managerial skills is Mr. Rohit good at?

a. Technical skills.

b. Interpersonal skills.

c. Conceptual skills.

d. Design skills.

e. None of the above.

18. Which of the following statements regarding organizational culture is not true?

a. It is always a strength to any organization.

b. It, sometimes, eases and economizes the communication flow inside the organization.

c. It may generate higher levels of cooperation and commitment in the organization.

d. It may facilitate in organizational decision making and control.

e. It is internalized beliefs and values that organizational members hold in common.

19. Which component in a mission statement represents an organization's basic beliefs, values, aspirations and ethical priorities?

a. Philosophy.

b. Self-concept.

c. Concern for public image.

d. Culture.

e. Technology.

20. Popular strategy that occurs when two or more companies form a temporary partnership for the purpose of capitalizing on some opportunity is called

a. Merger

b. Acquisition

c. Takeover

d. Divestiture

e. Joint venture.

21. Managers of business organizations have all of these responsibilities except

a. Economic

b. Legal

c. Ethical

d. Discretionary

e. None of the above.

22. Which of these, according to the board of directors' continuum, represent the highest degree of involvement in strategic management?

a. Active participation.

b. Phantom.

c. Catalyst.

d. Rubber stamp.

e. Minimal review.

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23. When a price cut by one airline is immediately matched by all other airlines, which of the following can be inferred?

a. Threat of substitute products or services.

b. Threat of new entrants.

c. Bargaining power of suppliers.

d. Rivalry among existing firms.

e. Bargaining power of customers.

24. Which of these, according to Porter, is not a support activity in a manufacturing firm's value chain?

a. Firm infrastructure.

b. Marketing and sales.

c. Human resource management.

d. Procurement.

e. Service.

25. In which of these structures do employees tend to be specialists in the business functions important to that industry such as manufacturing, marketing and finance?

a. Simple structure.

b. Strategic business units.

c. Divisional structure.

d. Functional structure.

e. Matrix structure.

26. Which of the following is the process by which strategies and policies are put into action through the development of programs, budgets and procedures?

a. Strategy implementation.

b. Synergy.

c. Reengineering.

d. Job enrichment.

e. Restructuring.

27. McKinsey's 7-S framework highlights the importance of shared values leading to culture of the organization as a whole and forms the nucleus of the framework. In this regard, which of the following does not belong to McKinsey's 7-S framework?

a. Style.

b. Structure.

c. Simplicity.

d. Systems.

e. Skills.

28. Which power is used in the advertisements of shirts like Van Heusen and Arrow to show how group acceptance takes place through wearing their shirts?

a. Expert power.

b. Coercive power.

c. Legitimate power.

d. Referent power.

e. Reward power.

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29. Competitive scope has a great influence on competitive advantage, because it shapes the configuration and economics of the value chain. Which of the following is not an appropriate dimension of competitive scope?

a. Geographic scope.
b. Business scope.
c. Industry scope.
d. Segment scope.
e. Vertical scope.

30. In which of these organizational life cycle stages, concentric and conglomerate diversification strategies are popular?

a. Birth.
b. Growth.
c. Maturity.
d. Decline.
e. None of the above.

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Part B: Problems (50 Points)

1. Following are the statements of position as at March 31, 2002 and March 31, 2003 and the statement of operating performance for the year ended March 31, 2003 of Magnus Ltd.

Particulars	March 31, 2002 (Rs.)	March 31, 2003 (Rs.)
Land & Buildings	50,000	50,000
Plant & Machinery	2,34,000	2,34,000
Less: Accumulated Depreciation	78,000	84,600
Inventories	1,26,000	2,55,000
Accounts Receivable	75,000	2,46,750
Cash & Cash Equivalents	60,000	28,500
	4,67,000	**7,29,650**
Stockholders' Equity	2,97,000	3,63,150
10% Long-term Debt	50,000	50,000
Accounts Payable	1,20,000	3,16,500
	4,67,000	**7,29,650**

Particulars	Rs.	Rs.
Sales Turnover		3,32,500
Cost of Goods Sold	2,64,000	
Interest on Long-term Debt	5,000	
Depreciation	6,600	
Operating Expenses	2,000	
		2,77,600
Net Margin		54,900

The general price index for the relevant periods is given below:

October 01, 1991	50
April 01, 2001	150
April 01, 2002	200
March 31, 2003	250

The transactions of the business are assumed to have occurred evenly throughout the year under consideration at an average price level of 225. The company acquired the land in the beginning of the year 2001 while the plant & machinery was procured in the middle of the year 1991. The interest commitment was discharged on March 31, 2003 and the firm generally uses the FIFO method of valuing inventories. Operating expenses are settled in cash. Magnus Ltd. requires its financial statements to be prepared after adjusting for the effect of inflation using the CPP method. Purchases and sales are on credit basis. The balancing figure in the price-level adjusted balance sheets may be assumed to be monetary gain/loss. Ignore taxes.

You are required to prepare:

a. The Income Statement after adjusting for price-level changes for the year ended March 31, 2003.

b. The Statement of Monetary Gain/Loss.

c. The Statements of Position after adjusting for price-level changes as at March 31, 2002 and March 31, 2003.

(3 + 3 + 8 = 14 points)

2. SFI Ltd., a manufacturer of spark plugs for usage in two-wheelers, has the following elements in its capital structure. The common stock of the firm is Rs.3,00,000 with one lakh outstanding shares. The securities premium or the contributed capital in excess of par is Rs.1,00,000, the amount of which is equivalent to the retained earnings of the firm. The company is geared to the extent of Rs.6,00,000 with an annual interest obligation of 10 percent. SFI Ltd. is contemplating an expansion that is anticipated to require additional funds of Rs.6 lakh. The new venture forming part of the expansion can either be financed by the issue of fresh equity yielding a net of Rs.4 per share to the firm or sale of new debentures at an interest rate of eleven percent. The present total assets of the company are Rs.11 lakh and the marginal rate of tax applicable to the firm is forty percent. Assume that the earnings before interest and tax is normally distributed.

Given the above information, you are required to answer the following:

a. Calculate the indifference point between the two financing alternatives.

b. If the expected level of EBIT for the company is Rs.2.40 lakh with a variance of Rs.0.25 lakh, determine the probability that the debt financing alternative will produce a higher earnings per share compared to the equity alternative.

c. If the firm were to select the debt alternative, compute the probability that the firm will not have positive earnings per share in any period.

(2 + 2 + 2 = 6 points)

3. a. Sphinx Ltd. uses the Baumol model to estimate its optimal cash balance for the period under consideration. The optimal cash balance under this method is Rs.10 lakh. Every time the marketable securities are converted into liquid reserves, a cost of Rs.250 is incurred. If the opportunity cost of funds applicable to the firm is 10 percent p.a., you are required to estimate the weekly cash usage rate.

b. Sphinx Ltd. would like to experiment with the Miller-Orr model for its cash reserve limits. Under this method, the company will be subject to a daily interest rate of 0.0125%, a standard deviation of cash balance of Rs.12,000 and will have to pay a sum of Rs.75 on every occasion marketable securities are traded in the market.

You are required to:

i. Estimate the cash spread and the average cash balance under the Miller-Orr model if the lower limit of cash balance is Rs.1 lakh.

ii. Determine the change in the cash spread and the average cash balance if a minimum cash balance of Rs.50,000 is to be maintained.

iii. Determine the change in the cash spread and the average cash balance if the standard deviation of cash balance were to be doubled and the lower limit were Rs.50,000. Briefly explain the effect of the change.

(2 + 4 = 6 points)

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4. For National Ltd., the earnings per share and the dividends per share at the end of one year are anticipated to be Rs.9 and Rs.5 respectively. The growth in future earnings and dividends expected by the investors is 10 percent, and the expected rate of return of the investors is 15 percent.

You are required to determine the current stock price, the stock price after one year and growth rate, if it switches over to a cent percent dividend payout, and decides to raise the necessary amount for financing its growth by a fresh issue of shares. Assuming the applicability of the constant dividend-growth model, and that the Modigliani-Miller hypothesis on dividend policy holds good, explain your calculations/inferences.

(7 points)

5. The finance manager is of the opinion that in the process of discriminating the high-credit worthy accounts and the low-credit worthy, the two key ratios that can be employed for discrimination are the current ratio and the earning power where the former is the ratio of current assets to current liabilities and the latter is the ratio of the earnings before interest and tax to the total assets. Information relating to fourteen accounts comprising an equal number of the above mentioned good and bad accounts are given below:

High-credit worthy accounts			Low-credit worthy accounts		
Client number	Current ratio	Earning capacity (%)	Client number	Current ratio	Earning capacity (%)
1	1.25	15	8	0.86	10
2	1.43	18	9	0.66	8
3	1.68	15	10	0.49	6
4	1.89	22	11	0.52	9
5	2.12	20	12	0.72	–6
6	0.95	16	13	0.58	7
7	1.05	12	14	0.41	-3

You are required to establish the appropriate discriminant function that best discriminates between the high-credit worthy accounts and the low-credit worthy accounts.

(11 points)

6. Mart World is a retail firm whose financial particulars as at the end of the fiscal 2003 are as given below:

	(Rs. in lakh)
Equity capital	300
Long-term debt	100
Fixed assets	300
Current assets	100
Revenues	300
Cost of sales	175
Depreciation	25
Earnings before interest & tax	100
Interest on debt	10
Profit after tax	54

The market price of the share is Rs.5, the outstanding shares are one hundred lakh and the debentures are selling at par. The current beta of the firm is 1.12 and T-bill rate is 7%. The management of Mart World is considering a debt-equity swap wherein money is to be borrowed to re-purchase 70 lakh shares of stock in the open market. This swap arrangement is expected to lower the firm's rating to C and raise the interest rate on the company's borrowings to 15 percent. Assume the market risk premium to be 5.5 percent.

You are required to answer the following:

a. What is the cost of equity, cost of debt and the weighted average cost of capital of the firm before the debt-equity swap?

b. What is the required rate of return on equity after the swapping arrangement? What is the effective tax rate after the swap and the new weighted average cost of capital of the firm?

(2 + 4 = 6 points)

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Part C: Applied Theory (20 Points)

1. Nissan, the Japanese automaker had identified that its US sales are coming down. The quality and design of its cars were not up to the standards of other Japanese companies, such as Honda, Mazda and Toyota. Recognizing the problem Nissan introduced a new designed mid-sized car, which was based on cost-leadership strategy. It was decided not to increase the size of its car and hence would keep its cost and price low. The cost of Nissan Altimo was $14,000 well below the sticker price of $19,000 of Toyota Camry and Honda Accord. Explain the advantages enjoyed by Nissan as a cost leader and problems to be faced, if any.

(10 points)

2. Shell company has adopted a new Management Information System (MIS) in its Chennai branch. Though the MIS promised rich benefits, Shell's employees were quite apprehensive about the new system and resisted this recent move of the company. Can you suggest some measures or techniques for overcoming resistance to change at Shell.

(10 points)

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Paper II

Part D: Case Study (50 Points)

Read the case carefully and answer the following questions:

1. Using the draft accounts for the calendar year 2003 as a base, you are required to prepare the following:

a. A forecast income statement for the year ended December 31, 2004.

b. A forecast statement of financial position as at December 31, 2004.

c. A cash flow forecast for 2004 (this is not an investment appraisal and you do not need to discount your cash flows).

d. Calculations of after tax return on shareholders' funds, earnings per share and dividends per share for the two years 2003 and 2004.

Work to the nearest Rs.'000 for parts (a) and (b). Assume that the expansion is to be part-funded by a rights issue of 1 for 10 at 475 paise. Ignore issue costs.

(3 + 4 + 4 + 3 = 14 points)

2. You have been asked by the finance director to provide a detailed financial analysis with supporting evidence for discussion by the board of directors. You are required to answer the following as part of a report to the finance director of Casper Arts (India) Ltd.:

a. Discuss the key aspects and implications of the financial information you have obtained in your answer to question 1, in particular whether the company is likely to achieve its financial objectives in the years to 31st December, 2003 and 2004. Include in your discussion comments on the suitability of the financial objectives for the company in its present circumstances and advise on alternative objectives that the directors could consider.

b. Explain the need for additional financing in 2004 and discuss alternative types of finance that might be suitable for the company at the present time. Use relevant data from the scenario and your answers to part (a) of the question, plus any additional calculations you think appropriate and relevant. Make whatever assumptions you think necessary. If you have been unable to complete your calculations for part (a), use your assumptions as the basis for discussions.

c. Discuss the difficulties of incorporating inflation into forecasts and comment on how a rate of inflation exceeding the 2-3 percent anticipated for 2004 might affect the achievement of the objectives (you are not expected to rework your figures).

d. Recommend a course of action for the board to consider.

(7 + 5 + 3+ 3 = 18 points)

3. Discuss the merits of the dividend policies pursued by the three associate companies. Explain the circumstances under which each whole-time director might be correct in his belief that his company's dividend policy is maximizing shareholder wealth. State clearly any assumptions that you make.

(8 points)

4. Selecting the correct channel structure is an important step in the effective distribution system. What criteria would you take in selecting the channel members for Casper Arts (India) Ltd. for the rural market penetration?

(10 points)

Casper Arts (India)

Casper Arts (India) Ltd. manufactures and distributes paint and related products and is the market leader in industrial/automotive segment. It supplies over 90% of the Original Equipment Manufacturers (OEM) requirements. It has traded for many years and has been listed on the domestic stock market for over three decades now. The shares are now widely held, with approximately 75 percent in the hands of institutional investors.

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The company embarked its journey in 1920 as Gahagan Paints and Varnish Co. Ltd. at Lower Parel in Bombay. In 1930, three British companies merged to form Lead Industries Group Ltd. In 1933, Lead Industries Group Ltd. acquired entire share capital of Gahagan Paints and thus, Casper Arts (India) Ltd. was born. Casper Arts (India) Ltd. grew popular and it went public in the year 1957, and established itself in the market. The company has recently entered into a technical collaboration with Kansai Paint Company Limited, which is the largest paint manufacturing company in Japan and among the top ten coating companies of the world.

In an attempt to increase its business from the industrial segment the company started thinking on new avenues. And after a thorough research they found a new market in the rural India. The research report found that rural India reportedly is fuelling growth for sectors such as FMCGs and consumer durables; the multi-million paints industry too is drawing up strategies to improve sales in rural areas.

The paints major Casper Arts (India) Ltd. is rolling out a range of initiatives in the rural areas, which at present forms about 10 per cent of the total paints industry, to strengthen its distribution network and increase its penetration in these markets.

Mr. Anuj Jain, Vice-President, Marketing and Sales, Casper Arts (India) Ltd., said: "It's an ongoing activity and we are looking at developing the 'width' as well as the 'depth' of our network. In order to tap the potential in smaller markets, we have undertaken a detailed town-wise mapping exercise of the key regions to identify and target the unrepresented areas to increase our network. We have implemented several programs to strengthen and build relationships with the dealers. One of such initiatives was instituting the 'Core Dealer' and the 'Core Contractor' Clubs. The company constantly communicates with these dealers and contractors on the current and future plans."

At present, Casper Arts (India) Ltd. has a distribution network of around 11,500 dealers. The company also has specific range of products for the rural markets, being marketed as the Goody range. Meanwhile, though the company is planning to step up its communication activities in the rural areas, it says it will continue to employ region-specific strategies.

As part of its region-specific initiatives, Casper Arts (India) Ltd. has local movie stars in the Kerala market and the Tamil Nadu market to promote its brand.

At present the size of the paints industry in the rural segment is quite small and forms only 10 per cent of the overall paints market, while the rest is occupied by the semi-urban and urban markets.

"The small size of the market is on account of the very recent entry by players in the organized segment. The rural markets are very price sensitive and are dominated by the unorganized players. Lime wash is mostly used for interior wall coating. A company with decades of market standing, Casper Arts (India) Ltd., is expected to maximize shareholder wealth. But this is not going to be so easy a task due to the organizational structure it has adopted."

Casper Arts (India) Ltd. has three associated companies, A, B and C whose affairs are being governed by the three whole-time directors in its board with the managing director reserving the oversight. The managerial personnel are at variance regarding the dividend policy to be adopted for the year under reckoning. They decided to deliberate upon the strategic issue of their company's dividend policies at a business lunch. Each whole-time director is convinced that his company's policy is maximizing shareholder wealth.

– Company A has deliberately paid no dividends for the last five years
– Company B always pays a dividend of 50% of earnings after taxation
– Company C maintains a low but constant dividend per share (after adjusting for the general price index), and offers regular scrip issues and shareholder concessions.

Draft, abbreviated financial statements of Casper Arts (India) Ltd. for the year to 31st December, 2003 are attached. The company's directors are considering a rights issue to help finance an expansion Program. The first phase of the expansion will involve expenditure of Rs.3 million on fixed assets and Rs.1 million on stock in 2004. Additional capital expenditure of Rs.2 million will be required in 2005.

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Based on the assumption that the expansion will go ahead, the following information is furnished for the purpose of facilitating future projections and analysis:

i. Turnover is expected to grow by 5 percent in the financial year ending 31st December, 2004. This increased level of sales is expected to be at least maintained in 2005 and beyond.

ii. The ratio of cost of sales excluding depreciation to sales (turnover) will improve in 2004 by 2.6 percentage points as a result of improved buying procedures.

iii. Operating expenses in 2004 are expected to be held constant at the year 2003 level as a result of organizational restructuring and efficiency measures. However, this will involve a one-off charge of Rs.1,25,000 during the year for redundancy payments.

iv. Labour cost is anticipated to increase at a higher rate than the prices.

Other relevant information is as follows:

a. The company's finance officer estimates that tax payable for 2004 will be Rs.850,000. Assume tax is paid in the year in which the liability occurs.

b. The ratios of debtors to sales and trade creditors to cost of sales less depreciation are expected to remain the same in 2004 as in 2003. Operating expenses are paid in the year in which they occur.

c. No sales of fixed assets are planned for the next two years. Depreciation on existing and new assets will be Rs.1.2 million in 2004.

d. Dividends are payable in the year after they are declared. The company plans to maintain the 2003 payout ratio in 2004.

e. The company's cost of equity is 14 percent per annum. It uses this rate to evaluate new investments but a full appraisal has not yet been carried out for the expansion proposals.

f. Assume interest charges for 2004 will relate only to payment on existing fixed rate debt (i.e. no overdraft interest will be payable).

g. Inflation is anticipated at between 2 percent and 3 percent per annum for 2004. Interest rates on long-term bonds suggest that inflation is likely to rise above 3 percent in 2005.

h. It is assumed that the total tax liability will increase by 10 percent after 2004.

Financial objectives

The company's financial objectives are stated as follows:

- To earn an annual after tax return on shareholders' funds (as at the end of each financial year) of at least 25 percent.
- To increase earnings per share and dividends per share by at least 10 percent per year.
- To increase share price year on year without taking undue risk.

Draft financial statements for the year to 31st December, 2003

Income Statement	Rs.'000
Sales turnover	16,500
Cost of sales (note 1)	11,600
Operating expenses	1,750
Operating profit	3,150
Interest	200
Corporation tax	885
Net profit	2,065
Dividends declared	1,136
Retained profit	929
Balance Sheet	

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Income Statement	Rs.'000
Fixed assets (net book value)	7,500
Current assets	
Stock	2,850
Debtors	1,675
Cash and bank	55
Current liabilities	
Trade creditors	1,750
Other creditors (dividends)	1,136
Net current assets	1,694
10% Debentures 2005	2,000
Total assets less liabilities	7,194
Financed by	
Ordinary share capital (ordinary shares of Re.1)	5,000
Retained profits	2,194
Total shareholders' funds	7,194

Notes:

1. Including depreciation of Rs.925,000.
2. Share price information (in paise)
   - As at 31st December, 2002: 465p
   - Range for year (1.1.02 – 31.12.02) 425p – 535p
   - As at December 31, 2003: 525p
   - Range for year (1.1.03 – 31.12.03) 515p – 565p
3. Other financial information for 2002
   - Earnings per share 37.2p
   - Dividends per share 20.5p
   - After tax return on shareholders' funds 26.2%

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Part E : Caselets (50 Points)

Caselet 1

Read the following caselet carefully and answer the following questions:

1. LWIPL owes its success to its marketing strategies, which it adopted. Critically examine the various elements of company's marketing strategy and evaluate the competitive advantage they conferred on the company.

(8 points)

2. Market segmentation is an indispensable step to succeed in the competitive marketplace. LWIPL seemed to have mastered this aspect of business. Explain how the company segmented its customers and benefited from the market segmentation.

(10 points)

Luxor pens (Functional strategies)

In 2002, Luxor Writing Instruments Private Limited (LWIPL) was the market leader in the premium pens segment in India, with a market share of 60%. The company held a 10% share in the writing instruments industry, next only to the market leader, Reynolds that held 12%. LWIPL had been in the pen industry for nearly four decades. The company adopted innovative marketing strategies that had made it one of the most popular pen manufacturers in India.

LWIPL had launched its first brand in 1963 – the 'Artist' fountain pen. However, owing to its small scale of operations during that time, the pens were made available only in Delhi and surrounding areas. During the late 1960's, the Artist brand was renamed as 'Luxor.' In 1982, LWIPL launched Pilot 05 microtip pens with needle point technology priced at Rs.10, this was the first model of Pilot pens to be officially launched in India. The pens were manufactured at the Delhi plant of LWIPL. Though Pilot pens were available in India prior to the launch, they were available only in the grey market.

LWIPL invested heavily to upgrade its technology to manufacture microtip pens. These pens were launched with the intention of bridging the gap between ball point and fountain pens. This turned out to be a unique selling proposition for Pilot pens and they were quite successful as they were considered to be an ideal substitute for fountain pens. However, the Pilot pens launched initially were not refillable. Due to the price conscious nature of middle class people in India, the concept of disposable pens was not cherished for long. This prompted the company to launch a new, refillable variant of these pens. Within four years of launch, the annual sales of Pilot pens had increased ten fold to one million pens.

Buoyed by the success of Pilot pens, in 1990, LWIPL decided to launch another product under the 'Pilot' brand name, Luxor 0.5 mm Pilot V5. Priced at Rs.45. each, these pens were targeted at the middle and senior level executives. The attractive design of the pen and the superior technology (it had a liquid ink feeder system) used, contributed to the success of the brand. By 1995, the annual sales of Pilot pens had crossed 10 million. LWIPL decided to go for further brand extension in 1997, and launched the Pilot V7 which wrote bolder compared to V5.

LWIPL's pricing strategy was determined by factors such as the demand for products, their brand image and the nature of the target audience. When Pilot 05 was launched in 1982, it was priced at Rs.10, and it was considered to be expensive at that time. However, in 1990, eight years after its launch, when the demand for these pens reached its peak, Luxor sold them at Rs.25 each. The price continued to remain the same till early 2003, indicating the stagnant nature of its demand. On the other hand, Pilot V5 was priced at Rs.45 at the time of its launch. These pens were priced high due to its superior technology and the brand image that Pilot pens enjoyed. However, after 12 years of launch, the price of these pens had to be reduced by Rs.5.

In 1996, LWIPL launched Parker pens in India. Parker pens were primarily targeted at the upper middle class consumers, senior level executives and bureaucrats. At the time of the launch, the prices ranged between Rs.90 to Rs.10,000. Priced at Rs.90, the "Vector" brand of

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pens was the cheapest in the range. Within four years, "Vector" became the largest selling Parker brand in India. During the corresponding period, the price was increased to Rs.140.

In 1999, LWIPL launched the 'Papermate' brand of pens in India. The brand strengthened the presence of LWIPL in the low priced pen segment. These pens were primarily targeted at the school and college students and were priced in the range of Rs.4 to Rs.13.

In 2000, LWIPL launched the Parker Beta range, with prices ranging between Rs.50 to Rs.75. Targeted at the youth, the company sold around one million pens within a couple of months of its launch. In 2002, Parker pens were available in three broad price categories. By that time, the Parker range of pens had emerged as the largest selling brand in the LWIPL pens portfolio, contributing 40% of its revenues.

LWIPL also launched a series of innovative products in order to mark certain occasions. In January 2000, the company launched the "Millennium series" of Parker Vector roller pens. These pens had the world map inscribed on them and their unique design enabled people to determine the time difference between countries. Priced at Rs.250 each, these pens became very popular. In November 2001, LWIPL launched 'Special Moment', a gift pack consisting of Parker Vector and Parker Beta pens, which had the signature of the brand ambassador, Amitabh Bacchan inscripted on it. These pens were primarily targeted at pen collectors, who were fond of Parker pens. In February 2002, Parker launched the 'Black and White' range of Parker Vector ball pens which were priced at Rs.145 each. In mid 2002, the company launched the 'Football Legends World Cup edition' of Parker Vector pens in order to cash in on the popularity that the event enjoyed. In December 2002, LWIPL launched the "Gajgamini" range of Parker Sonnet fountain pens. The limited edition of pens (only 500 pens were released) was named after the paintings created by noted artist MF Hussain and also had his signature inscripted on them. LWIPL priced these pens at Rs.5,000 each.

Caselet 2

Read the following caselet carefully and answer the following questions:

1. 'Hindustan Motors itself is responsible for its inability to sustain leadership position in the post-liberalization era.' Critically comment on the above statement while analyzing the factors that led to the company's downfall.

(9 points)

2. In the 1990s, HM had lost its position in the passenger car market to MUL and foreign automobile companies that entered the automobile market after the opening up of the Indian economy. To face the competition, HM had undertaken many restructuring initiatives. Examine the restructuring initiatives of HM.

(8 points)

Hindustan Motors

Until the 1980s, Hindustan Motors' (HM) Ambassador and Premier Automobiles Ltd's (PAL) Padmini were the only two cars available in the Indian market. However in 1981, with the entry of MUL, the scenario changed drastically. MUL's small, fuel-efficient and well-designed car, Maruti 800, became a huge success. By the late 1980s, MUL became the market leader, leaving HM way behind.

In the early 1990s, when the Indian economy opened up, many multinational automobile companies entered the country. In the 1990s, Daewoo, General Motors, Daimler Benz, Hyundai and Honda entered India through joint ventures and partnerships with Indian firms.

HM was badly hit after the entry of foreign players. In the face of stiff competition from foreign players, HM launched the Ambassador Nova in 1990 (with better interiors) and an improved Ambassador 1800 ISZ (with better engine performance) in 1993. The company also appointed consultants McKinsey & Co. for a restructuring plan to turn around its business.

HM decided to tap new segments to ease the competitive pressure. In 1995, the company collaborated with Oka Motor Co. to develop a vehicle specifically targeting the rural markets.

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This led to the launch of the Trekker (also referred to as the Rural Transport Vehicle – RTV) in 1995. Launched in three northern states the Trekker was received well in the rural markets. However, the vehicle soon came under criticism owing to a host of technical problems.

By late 1998, Trekker's sales dropped by two-thirds of its initial volumes to around 800 a year. In 1999, HM launched the redesigned Trekker and an upgraded version of the Ambassador. Despite all the product upgradations and restructuring efforts, HM could not stem the decline in sales.

Analysts opined that HM's dismal performance was due to its lax management policies and shortsightedness. Before MUL entered the market, HM was the market leader. It was able to sell whatever it produced and therefore it did not care to upgrade the technology or production facilities.

However, HM's poor performance was not due to external factors such as competition only. The company had a host of internal problems – particularly in the human resource front at the Uttarpara (West Bengal) plant. The Uttarpara plant had workforce of 14,000 employees and the wage bill alone constituted 22% of plant's expenditure. Against the standard output of 8-10 cars per employee per annum, the plant's output was as low as 3 cars.

In its bid to turn around the plant, HM invested around Rs. 750 million to modernize the assembly line, build new body and paint shops and purchase new equipment. The company also embarked on a cost-cutting exercise and announced a Voluntary Retirement Scheme (VRS) for workers in April 1998 and again in November 1998, offering a Rs. 0.1 million package per employee.

However, the VRS was not well received by the strong Center of Indian Trade Union (CITU) and the Indian National Trade Union Congress (INTUC) led employee unions. Commenting on a similar VRS offered by the Fiat management at its Kurla, (Maharashtra) plant, employees said "Workers at the Fiat factory at Mumbai have got an average of Rs.0.35 million per worker while we are fobbed off with such measly sums." The strong political patronage to the unions made it tough for the management to convince workers about the VRS.

Both the CITU and INTUC union leaders refused to accept the VRS offered by the company. The unions were confident that the West Bengal State Government would back them on the issue. As employee protests intensified, HM approached the state government with a proposal to run the plant for only three days in a week, in an attempt to save Rs.0.32 million every week. The company also promised that it would continue to pay the workforce full wages for an entire week. However, the government rejected HM's proposal, following which the company decided to seek legal recourse. In January 1999, HM filed a writ petition in the Calcutta High Court, claiming that its decision to run the plant for three days was not prompted by industrial relations, but by the company's poor financial position. It also stated that the layoff in the Uttarpara plant was temporary in nature and the company would resume normal production as soon as demand picked up. The High Court then ordered the state government to reconsider the issue.

In May 1999, instead of reconsidering the issue, the state government filed an appeal before the division bench of the Calcutta High Court, claiming that HM had suppressed facts and figures during its meeting with them to settle the issue. The division bench directed that the matter be referred to the Industrial Tribunal. In July 1999, the Industrial Tribunal dismissed the company's proposal. HM again filed a writ petition against the Tribunal's order in the division bench of Calcutta High Court and the division bench upheld the Tribunal's order. In response to the division bench's order, HM moved to the Supreme Court in July 1999. During all this time, productivity at the plant suffered considerably, which added to company's woes.

When its attempts to reorganize its operations did not pay off, HM decided to look beyond its existing product portfolio to come out of its problems. As per McKinsey's recommendations, the company explored the global auto components business in 2000 and established a unit at Indore to assemble engines and gearboxes.

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In order to use its design and engineering skills to enter new businesses, HM entered into an agreement with Mahindra & Mahindra (M&M) for developing petrol engine for M&M vehicles. The company also tied up with GM to market the entire range of transmission equipment manufactured by Allison Automatics (a company owned by GM).

HM then overhauled its distribution system in order to become more market-friendly and dealer-friendly. In 1999, the company unveiled a new distribution strategy, wherein dealers were divided into three tiers – red, blue, and green depending on their location and performance records. While the red-tier catered to the metros for selling and servicing Lancers, the blue-tier catered to the semi-urban areas for Contessas and Ambassadors and the green-tier catered to the rural markets for Trekkers.

HM also decided to explore the overseas markets for its products and began exporting around 150 RTVs to Bangladesh in 2001. The company also managed to secure an export order for 300 petrol engines from a UK-based company, in addition to the 1,800 engines already supplied.

In February 2001, HM sold its earthmoving equipment manufacturing division to a wholly-owned Indian subsidiary of Caterpillar Inc. for Rs.3.3 billion. The company used this money to repay debts worth Rs.2.25 billion. This helped reduce the gross loss in 2000-01 to Rs.152.2 million from Rs.255.5 million in the corresponding quarter of 1999-00. The remaining sum of Rs.1.05 billion after the repayment of debt from the sale was used for working capital requirements and automotive business.

HM continued its customer relations enhancement initiatives with the launch of the 'click and customize' service for Lancer customers in September 2001. The company set-up kiosks in six cities (New Delhi, Bangalore, Chennai, Hyderabad, Chandigarh and Pune) that had computer terminals displaying the features of the petrol and diesel versions of the Lancer. HM had invested Rs.2.5 million in the software and Rs.0.1 million on each kiosk. The company planned to install 16 such computer kiosks at its dealers' premises across the country by the end of fiscal 2001-02. According to company sources, after the launch of the service, Lancer's market share had gone up by 4%.

In November 2001, HM announced its plans to manufacture engines for other automobile companies. The company was awaiting the outcome of its bid to make the engines for Ford's Ikon. With the second phase of the restructuring efforts in place, HM hoped to improve its growth in the automotive division and offset the losses from the passenger car segment.

The company's moves seemed to be finally bearing fruits as it was able to narrow down the losses in the first quarter of 2001-02 by around 30%. HM was banking on the Ambassador's niche markets (government and taxi) and hoped to retain the segment by launching new variants. The Trekker was also poised to do well after the relaunch in 1999 and HM hoped to sell 3,200 vehicles in near future.

Analysts however remained skeptical about HM's future prospects and its ability to make a turnaround as a passenger car-maker. They felt that the only way out for HM was to turn itself into auto-component supplier to multi-nationals producing passenger cars in the country.

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Caselet 3

Read the following caselet carefully and answer the following questions:

1. The Citicorp-Travelers merger was expected to be a perfect fit as the merger would facilitate cross-selling of each other's products in each other's territories. However, many hurdles hindered the realization of the synergies identified prior to the merger. According to you, what were the major hurdles that prevented the realization of synergies after the merger?

(7 points)

2. Citigroup's Co-CEO structure did not work well and one of the CEOs had to step down. Explain why the Co-CEO structure failed to function efficiently. What are the problems associated with such a structure?

(8 points)

In April 1998, the financial services giants Travelers Group and Citicorp agreed to the largest merger in corporate history. The $166 billion merger created the world's biggest company, Citigroup, with $700 billion in assets and a market value of nearly $160 billion. The new entity was expected to have 162,600 employees and 3,200 offices, and offer some 100 million customers in 10 countries a range of financial services. Citigroup was likely to have a 24-member board, with an equal number of members from each merging entity. John S Reed and Sandy Weill, the CEOs of Citicorp and Travelers, respectively, would serve as Co-CEOs and Co-Chairmen of the Board of Directors.

Citicorp and Travelers hoped that the merger would facilitate "cross-selling" of each other's products in each other's territories. While Travelers had a limited presence overseas, it had one of the strongest distribution systems in the US. Citicorp, however, had an impressive network outside the US. After the merger, Citicorp could sell its CitiGold and Private Banking Services more efficiently to Travelers' 20 million US customers. The customer segments of the pre-merger entities seemed to complement each other well. While Citicorp had a young, less affluent customer base, Travelers' customers were older and more affluent. Another area where synergies existed for Citicorp was mutual funds; Citicorp was weak in this area and hoped to learn from Travelers' experience.

Although many synergies would be achieved by the merger, there were some areas of concern. The compensation policy was very different for the two companies. Citicorp had a relatively conventional compensation structure that offered stock options to the people it wished to retain. It did not insist that executives retain their stock. The officers and directors at Citicorp put together owned less than 0.5% of the company's stock. At Travelers, Weill himself owned 1.3% of Travelers' stock, worth about $950 million, and the company's officers and directors together owned 2.45%.

The work culture of the two companies was very different. Travelers had an aggressive, fast, deal making culture. On the other hand, Citicorp had a conservative culture built around long-term customer relationships.

Appointing Reid and Weill as Co-CEOs also caused problems for the merged entity. Both Reed and Weill were contrasting personalities. Reed was a loner who disliked talking to the press while Weill was outgoing and liked to stand in front of crowds and answer their questions. Analysts doubted whether two such strong, but very different people could really share the top job for any length of time. Weill was a cost cutter and was always concerned about short-term profits and the stock price of the company. He also managed the company through personal relationships. Weill expected and received loyalty from his managers. Reed, however, had a long-term vision for the company and was willing to spend the money to realize it. Reed was not a "people person"; he valued on memos and processes to manage the organization. In October 1999, the merged entity took the first step towards integration by drawing up the organization chart. The chart itself was a clear indicator that Travelers had taken a dominant position in the new entity.

At the top of the chart were Co-CEOs, Reed and Weill. James Dimon, CEO of Saloman Smith Barney was appointed President. Dimon would head Citigroup's Global Corporate Businesses and would be assisted by Victor Menezes, CEO of Citibank, and Deryck Maughan, Co-head of Solomon Smith Barney.

Analysts wondered whether Weill and Reed could succeed in fashioning two very different cultures and businesses into one cohesive organization. They doubted that Weill and Reed could smoothly rearrange their corporate structures into one. Reed and Weill's inability to control their followers led to confusion over which corporate culture would predominate — the fast-moving, aggressive deal-making culture of Travelers or the more conservative culture of a large commercial bank.

Citicorp which had relationships with large multinational companies, wanted to maintain those contacts and didn't want to be absorbed into Travelers, which also served corporations but had little presence overseas. On the other hand, Travelers' employees did not like the idea of commercial bankers (Citicorp) with little bond-underwriting expertise taking the lead in emerging-market fixed-income deals.

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By mid 1999, though the merger seemed to be going reasonably well, there were signs of tension between Weill and Reed. Analysts felt that a rift at the top between Weill and Reed could hamper the performance of Citigroup. Reed and Weill were attempting several revolutions at Citigroup. They were trying to offer consumers around the world everything from CDs and credit cards to mutual funds and insurance. Reed and Weill were finding it very difficult to arrive at a consensus on numerous issues. For example, when they had to decide on a common pension plan for nearly 170,000 Citigroup employees, the gap between the two CEOs' attitudes was considerable. Travelers offered very conservative benefits to its employees, while Citicorp's benefits were quite generous. Weill believed in cutting costs by clubbing benefits and pension plans and replacing them with stock options. Citicorp traditionally paid fairly low salaries, but rewarded long-time workers with good benefits. Weill wanted to implement a new benefit plan by January 01, 1999. However, Reid and Weill couldn't reach an agreement until April, and the new benefit plan did not come into effect until January 01, 2000. The new benefit plan cut down Citicorp's benefits and relied more on stock options, while cutting costs in the short term.

In July 1999, relationship between Reed and Weill took a new turn. An internal memo dated July 28, 1999, indicated that Reed and Weill had agreed to split their responsibilities. Weill would be responsible for the company's operating businesses and financial function; Reed would take care of the Internet, advanced development, technology, human resources and legal functions.

In March 2000, a board meeting was called to deliberate on the failure of Citigroup's Co-CEO structure. In the meeting, Reed announced his plan to retire as Co-CEO of Citigroup, stating that the job of merging Citicorp and Travelers was done. Reed probably was hiding his feelings. In a speech he had given in August 1999 to the Academy of Management he had said: "We are talking about putting two cultures together that are quite different, quite distinct. I am trying to understand how to make this work. I will tell you that it is not simple and it is not easy, and it is not clear to me that it will necessarily be successful. As you put two cultures together, you get all sorts of strange, aberrant behavior, and it is not clear whether each side getting to know the other side helps, or whether having common objectives helps, or whether it is just the passage of time."

After Reed's exit, Weill was solely responsible for running Citigroup. Weill seemed to have done well: Citigroup recorded revenues of $112 billion in 2000 and $13.5 billion in profits, second only to Exxon Mobil's $17.7 billion. However, analysts felt that Weill, who turned 68 years in 2000, should retire and choose a successor. In 2003, Weill announced his successor.

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Model Question Paper II

Suggested Answers

Paper I

Part A: Basic Concepts

1. *(e)* Statement (a) is true because a residual dividend policy results in unstable dividends. Statement (b) is false because stock splits increase the number of shares. Statement (c) is true because an increase in the capital gains tax rate decreases the after-tax proceeds of selling shares to the company. Thus, the company can distribute funds to shareholders via share repurchases less easily. The bird-in-the-hand theory favors dividends, thus a firm that lowers its dividend payout should expect a lower share price and a higher cost of capital. Thus, answers a and c are both correct and answer e is the most correct answer.

2. *(d)* Step 1: Find equity required to maintain capital budget:

Capital budget	Rs.4,000,000
Percent of budget financed with equity	x 0.60
	Rs.2,400,000

Step 2: Calculate dividend:

Earnings	Rs.40,00,000
Less equity retained	24,00,000
Dividend	Rs.6,00,000

Step 3: Find payout ratio:

Dividend/Earnings = Rs.16,00,000/Rs.40,00,000 = 40%.

3. *(e)* In times of financial and economic downturn, creditors will look to supply funds to companies that have stronger financial positions.

4. *(d)* Divisionalization implies that each division should be independent of other divisions with respect to production and marketing activities.

5. *(b)* When assets, which are not readily marketable, is required to be sold for need of funds, the non-marketability may lead to liquidity risk. Thus, the assets not being readily marketable give rise to marketability risk.

6. *(d)* The Wilcox model considers the net liquidation value of the firm as the best indicator of a firm's financial health. Blum Marc's failing company model is based on a set of 12 ratios divided into liquidity, profitability and variability ratios. The Beaver model identifies the cash flow to total debt as the single best indicator of a firm's financial health.

7. *(d)* Shareholders' return comprises capital gains and dividend income. Cash flow from operations is a valuation components but not a driver as per this approach. Incremental investment in fixed and working capital is value drivers from the investment decision angle. Value growth duration is an indicator of the management perception of competitive advantage. It represents the period over which the investments are expected to earn a return in excess of the cost of capital.

8. *(b)* Target costing is based on external analysis of markets and competitors, and is a cost management tool that reduces a product's costs over its entire life cycle. But it is difficult to use in the presence of complex products because on the one hand, analysis of costs needs to be performed at various levels, while on the other, the activity of tracking costs becomes more complicated and cumbersome.

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9. *(c)* The increase in the nominal rate of interest must be higher than the increase in the rate of inflation, if the interest income is subject to tax. This is necessary for maintaining the real rate of interest.

The increase in nominal rate is given by = (Inflation rate after increase – Inflation rate before increase)/ (1 – tax rate)

= (4% – 3%)/ (1 – 0.3) = 1%/0.7 = 1.43%

10. *(a)* At generic level, the variables that reflect the achievement or non-achievement of the objective of value maximization most directly are identified.

11. *(b)* Mission statement answer(s) the question "What is our business?" and the vision statement answer(s) the question "What do we want to become"? i.e., to say a vision statement describes aspirations for the future, but without specifying the means to achieve those desired ends. In business strategy, a vision refers to the category of intentions that are broad, all-inclusive and forward thinking. A mission statement is a broad declaration of the fundamental, unique purpose that distinguishes an organization from others of its type; a general, enduring statement of company intent. (a) Long–term objectives are the guide points in defining standards of what the organization should accomplish in providing direction and motivation and the time period is more than one year and if the time taken is less than one year it is referred to as short term objectives. (c) Strategy refers to the determination of the purpose and the basic long-term objectives of an enterprise, and the adoption of courses of action and allocation of resources necessary to achieve these aims where as objectives are the guide points in defining standards of what the organization should accomplish in providing direction and motivation. (d) Goal is a major planning component that is a future target or end result than an organization wishes to achieve.

12. *(b)* Ford Motor Company acquiring Goodyear Tyre Company is an example of backward integration strategy, which is when a firm assumes a function previously provided by a supplier. (a) Conglomerate diversification is an approach that entails affecting growth through the development of new areas that are clearly distinct from current business (c) When a firm's long-term strategy is based on growth through the acquisition of one or more similar firms operating at the same stage of the production-marketing chain, its grand strategy is called horizontal integration. (d) In forward integration the company which is primarily into manufacturing, is moving forward towards its immediate customers in the value chain. (e) Vertical integration involves effecting growth through the production of inputs previously provided by suppliers or through the replacement of a customer role by disposing of one's own inputs.

13. *(b)* Disney's efforts to build a new theme park in Hong Kong describes the strategy of market development. i,e., to say the strategy of market development consists of marketing present products often with only minor modifications, to customers in related market areas by adding channels of distribution or by changing the content of promotion and so on. (a) Firms pursue concentration strategies to grow while remaining relatively simple. Concentrated growth is the strategy of the firm that directs its resources to the profitable growth of a single product, in a single market with a single dominant technology. (c) Product development involves the substantial modification of existing products or the creation of new but related products that can be marketed to current customers through established channels. (d) Conglomerate diversification is an approach that entails affecting growth through the development of new areas that are clearly distinct from current business. (e) Liquidation strategy involves closing down a business organization and selling its assets.

14. *(d)* Conglomerate diversification is not an appropriate Question Mark division strategy in a BCG Matrix, as the viable strategy for question mark business would be to divest the weaker businesses and invest heavily in high potential businesses to turn them into stars in the near future. (a), (b), (c), (e) Product development, divestiture, market penetration and innovation does form the appropriate strategy in the question mark division in a BCG matrix.

15. *(d)* Divisional structure is a type of departmentalization in which positions are grouped according to similarity of products, services or markets. The divisional structure does not promote specialization of labor. Whereas options (a), (b), (c) i.e. it allows local control of local situations, leads to a competitive climate within a firm, accountability is clear are the advantages of the divisional structure.

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22. ***(c)*** According to the board of director's continuum, catalyst represent the highest degree of involvement in strategic management. (a) In active participation the board approves questions, and makes final decisions on mission, strategy, policies, objectives and performs fiscal and management audits. (b) In this the board never knows what to do; if anything; no degree of involvement. (d) Rubber stamp permits officers to make all decisions. It votes as the officers recommend on action issues. (e) In minimal review the board formally reviews selected issues that officers bring to its attention.

23. ***(d)*** Rivalry among existing firms is normally evident, when a price cut by airline manufacturer is immediately matched by all other airline manufacturer. Firms try to match competitors' actions under this phenomenon. (a) The threat of substitute products or services is the extent to which firms in other industries offer substitute products for an established product line. (b) The threat of new entrants is the extent to which new competitors can enter the same product or service markets. (c) The bargaining power of suppliers is the extent to which suppliers can exert power in the industry by threatening to either increase the prices or reduce the quality of goods and services. (e) The bargaining power of customers is the extent to which customers are successful in forcing prices down, or securing higher quality or more service at the same price.

24. ***(b)*** According to Porter, marketing and sales is not a support activity in a manufacturing firm's value chain. (a) A company's infrastructure is the final support activity as it is considered to be very important because it has to do with the company wide context within which all other value creation activities take place. (c) Human resource management is also a support activity that can help an enterprise create more value. This human resource function gives an idea regarding the right mix of skilled people to perform value creation activities effectively. (d) Procurement is the support activity which helps in the production process and adds to value creation. (e) The service function plays a major role in providing after sales service and support.

25. ***(d)*** In functional structures employees tend to be specialists in the business functions important to that industry such as manufacturing, marketing, and finance. (a) In simple structure all the strategic and operating decisions are under the control of the owner-manager. (b) Strategic business units are distinct little business set up as units in a larger company to ensure that a certain product or product line is promoted and handled as though it were an independent business. (c) Divisional structure is a type of departmentalization in which positions are grouped according to similarity of products, services or markets. (e) Matrix structure is a type of departmentalization that superimposes a horizontal set of divisional reporting relationships on to a hierarchical functional structure; typically used simultaneously with a line and staff organization structure.

26. ***(a)*** Strategy implementation is the process by which strategies and policies are put into action through the development of programs, budgets, and procedures. (b) Synergy is a situation in which the whole is greater than its parts. In organizational terms, the fact that departments that interact cooperatively can be more productive than if they operate in isolation. (c) Reengineering is the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical, contemporary measures of performance such as cost, quality, service and speed (d) Job enrichment is a job design approach that involves the allocation of a wider variety of similar tasks to a job in order to make it more challenging. (e) Restructuring program involves changes in the relationships between divisions and function.

27. ***(c)*** Simplicity does not belong to McKinsey's 7s framework. Options (a) style (b) structure, (c) system and (d) skills along with strategy, staff, shared values do form the McKinsey's 7s framework and they highlight the importance of shared values leading to culture of the organization as a whole and forms the nucleus of the framework.

28. ***(d)*** Referent power is used in the advertisements of shirts like Van Heusen and Arrow to show how group acceptance takes place through wearing their shirts. i.e. referent power is the power that results from being admired, personally identified with or liked by others. (a)Expert power is the power that is based on the possession of expertise that is valued by others.(b)Coercive power is the negative side of reward power, based on the influencers ability to punish the influence.(c) Legitimate power is the power that stems from a position's placement in the managerial hierarchy and the authority vested in the position. (e)Reward power is the power based on the capacity to control and provide valued rewards to others.

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29. ***(b)*** The competitive scope includes four dimensions that affect the value chain. They are segment scope, geographic scope, vertical scope and industry scope. So the alternatives (a), (c), (d) and (e) are not the answer. Business scope is a general term, which is not used in defining the competitive scope while framing the value chain of a company. So the answer is alternative (b).

30. ***(c)*** Concentric and conglomerate diversification strategies are popular in maturity stage of the organizational life cycle as the market is saturated and demand is limited to replacement demand in a mature industry. Hence, the companies look out for conglomerate diversification and concentric diversification, which are venturing into new business areas, which has no relation with the previous ones. Options (a), (b), (d) and (e) are not relevant in this context.

Part B : Problems

1. a. **Comparative Income Statement for the year ended March 31, 2003.**

Particulars	Historical Cost (Rs.)	Conversion Factor	CPP Adjusted (Rs.)
Sales turnover	3,32,500	250/225	3,69,444
Cost of Goods sold:			
Opening Stock	1,26,000	250/200	1,57,500
Current Purchases * (Rs. 2,64,000 – Rs. 1,26,000)	1,38,000	250/225	1,53,333
	2,64,000		3,10,833
Gross Profit	68,500		58,611
Interest on Long-term Debt	5,000	250/250	5,000
Depreciation	6,600	250/50	33,000
Operating Expenses	2,000	250/225	2,222
	13,600		40,222
Net profit	54,900		18,389
Monetary Gain {See (ii)}			14,445

* Portion of current purchases included in cost of goods sold.

b.

Computation of Monetary Gain

Particulars	Historical Cost (Rs.)	Conversion Factor	CPP Adjusted (Rs.)
Net Monetary Liabilities as on April 01, 2002	35,000	250/200	43,750
Add:			
Purchases	3,93,000	250/225	4,36,667
Interest	5,000	250/250	5,000
Operating Expenses	2,000	250/225	2,222
	4,35,000		4,87,639
Less:			
Sales	3,32,500	250/225	3,69,444
Increment to Capital (Bal.)	11,250	250/225	12,500
	3,43,750		3,81,944
Net Monetary Liabilities as on March 31, 2003**	91,250		1,05,695
			91,250
Net Monetary Gain			14,445

** Net Monetary Liability = Long-term debt + Accounts payable – Accounts receivable – Cash & bank.

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c.

Statement of Position as on April 01, 2002
(Expressed in Money value as at March 31,2003)

Particulars	Historical Cost (Rs.)	Conversion Factor	CPP Adjusted (Rs.)
Land & Buildings	50,000	250/150	83,333
Plant & Machinery	2,34,000	250/50	11,70,000
Less: Depreciation	(78,000)	250/50	(3,90,000)
Inventories	1,26,000	250/200	1,57,500
Accounts Receivable	75,000	250/200	93,750
Cash & Cash Equivalents	60,000	250/200	75,000
	4,67,000		11,89,583
Stockholders' Equity	2,97,000	250/200	3,71,250
10% Long-term Debt	50,000	250/200	62,500
Accounts Payable	1,20,000	250/200	1,50,000
Monetary Gain (bal. fig.)			6,05,833
	4,67,000		11,89,583

Statement of Position as on March 31,2003

Particulars	Historical Cost (Rs.)	Conversion Factor	CPP Adjusted (Rs.)
Land & Buildings	50,000	250/150	83,333
Plant & Machinery	2,34,000	250/50	11,70,000
Less: Depreciation	(84,600)	250/50	(4,23,000)
Inventories	2,55,000	250/225	2,83,334
Accounts Receivable	2,46,750	250/250	2,46,750
Cash & Cash Equivalents	28,500	250/250	28,500
	7,29,650		13,88,917
Stockholders' Equity:			
Balance as at April 01, 2002	2,97,000	250/200	3,71,250
Addition to Capital	11,250	250/225	12,500
Net Profits	54,900		18,389
Monetary Gain [Rs.6,05,833 + Rs.14,445]			6,20,278
	3,63,150		10,22,417
10% Long-term Debt	50,000	250/250	50,000
Accounts Payable	3,16,500	250/250	3,16,500
	7,29,650		13,88,917

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2. a. $$\frac{(\text{EBIT} - \text{Rs.}60,000)(1-0.4)}{(100,000+150,000)} = \frac{(\text{EBIT} - \text{Rs.}60,000 - \text{Rs.}66,000)(1-0.4)}{100,000}$$

EBIT (Indifference point) = Rs.1,70,000.

b. The probability that the equity financing option will result in a higher EPS is equal to the probability that the EBIT level will be less than Rs.1,70,000. Based on the requirement of the problem, let us compute the probability that the actual EBIT will be greater than Rs.1,70,000. As the given variance is Rs.0.25 lakh, the standard deviation will be Rs. 0.5 lakh or Rs. 50,000.

Z = (Rs. 1,70,000 – Rs. 2,40,000)/Rs. 50,000 = – 1.4

From the normal distribution table, the probability of a value less than 1.4 standard deviations to the left of the mean is 8.08%. This is the probability that the equity alternative is superior to the debt alternative. Thus, the probability that the debt alternative is superior is 91.92% (1.0 – .0808).

c. The probability of negative earnings is the probability that actual EBIT will fall below the loss level, which is the sum of the existing interest obligation as well as the servicing burden on the new debentures, Rs.1,26,000 (Rs.60,000 + Rs.66,000).

Z = (Rs.1,26,000 – Rs.2,40,000)/Rs.50,000 = – 2.28

From the normal distribution table, we can see that the probability of EBIT falling below the Rs. 1,26,000 break-even level is a mere 1.13%.

3. a. As per the Baumol model for determining the optimal cash balance,

Optimal cash balance = $[(2 \text{ x Annual cash usage x Cost per sale of securities})/\text{Annual interest rate}]^{1/2}$

Inserting the figures given in the question,

Rs.10,00,000 = $[(2 \text{ x Annual cash usage x Rs.250})/(0.10)]^{½}$

Annual cash usage = Rs.20 Crore

∴ Weekly cash usage rate = Rs.38.46 lakh.

b. As per the Miller-Orr model for determining the spread between the upper limit and lower limit for cash balance,

i. Spread between upper and lower cash limits = $3[(3 \text{ x Transaction cost x Variance of cash flows})/(4 \text{ x Daily interest rate}]^{1/3}$

Upper limit – Lower limit = $3[(3 \text{ x Rs. 75 x Rs. 14.40 Crores}/(4 \text{ x } 0.000125)]^{1/3}$

= Rs.1,20,498

∴ Upper limit = Lower limit + Rs.1,20,498 = Rs.1,00,000 + Rs.1,20,498

= Rs.2,20,498

$$\therefore \text{ Average cash balance} = \left(\frac{2,20,498 + 1,00,000}{2}\right) = \text{Rs.}1,60,249$$

The average cash balance will be Rs. 1,60,249.

ii. If a safety cash balance of Rs.50,000 is to be maintained, the upper limit will be Rs.1,70,498 i.e. (Rs.50,000 + Rs.120,498), and the average balance will increase to Rs.110,249.

iii. If the standard deviation is doubled, the new spread between upper and lower cash limits works out to Rs.191,279. This will imply that the firm will need much more of a cash cushion if there is variability in cash usage.

∴ Upper limit = 1,91,279 + 50,000 = Rs.2,41,279

$$\therefore \text{ Average cash balance } = \frac{\text{Upper limit } + \text{ Lower limit}}{2} = \text{Rs.}1,45,640.$$

4. Using the perpetual growth model of calculating stock prices, we have

Current stock price = Expected dividends/ (Expected rate of return – Rate of growth)

P_0 = Div/(k – g) = Rs.5/ (0.15 – 0.10) = Rs.5/0.05 = Rs.100

As given, the firm will have to issue new shares to finance its growth if it switches to a cent percent payout policy. The growth rate of dividends tends to decline when the amount of retained earnings decreases every year.

On the basis of the original dividend policy, the price of the stock for the subsequent year can be obtained by multiplying the growth rate of 10 percent with the current stock price of Rs.100, which gives Rs.110.

At t = 1, if the number of original shares outstanding are taken to be N_1, the market value of the company shall be Rs.110N_1.

As per the revised policy, new shares numbering N_2 will be issued to compensate for the amount distributed out of retained earnings. This compensation will be equivalent to the Rs.4 per original share (the difference of Rs.9 and Rs.5), an aggregate loss of Rs.4N_1. The quantity of the new shares being N_2 and with P_1 as the price of the share at t = 1 under the revised policy $N_2P_1 = 4N_1$.

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At the same time, as the total value of the firm does not get changed, $110N_1 = P_1 (N_1 + N_2)$.

These two equations $N_2P_1 = 4N_1$ and $110N_1 = P_1 (N_1 + N_2)$, are to be solved to give the value of P_1.

By substituting $P_1 = 4N_1/N_2$ in the other equation, we get,

$110N_1 = 4(N_1/N_2) (N_1 + N_2)$,

$110N_2 = 4(N_1 + N_2) = 4N_1 + 4N_2$,

$27.50N_2 = N_1 + N_2$, $N_1 = 26.50N_2$

When this relation between N_1 and N_2 is again substituted in $N_2P_1 = 4N_1$, we get

$N_2P_1 = 4 \times 26.50N_2$, $\therefore P_1 = Rs.106$

It follows that if P_0 is the price at t = 0 and the expected rate of growth is g, then $P_1 = P_0 (1 + g)$ and also $P_0 = Rs.9/(0.15 – g)$. Solving for g and P_0, we get g to be 6 percent and P_0 to be Rs.100, which is the same as its original price thus leaving it unchanged.

5. Let the discriminant function be $Z_i = aX_i + bY_i$

Where Z_i = Discriminant score for the i th account

X_i = Current assets/Current liabilities for the i th account

Y_i = EBIT/Total assets for the i th account.

Account number	X_i	Y_i	$(X_i - X_m)$	$(Y_i - Y_m)$	$(X_i - X_m)^2$	$(Y_i - Y_m)^2$	$(X_i - X_m)(Y_i - Y_m)$
Gr. I							
1	1.25	15	0.21	4.36	0.0441	19.0096	0.9156
2	1.43	18	0.39	7.36	0.1521	54.1696	2.8704
3	1.68	15	0.64	4.36	0.4096	19.0096	2.7904
4	1.89	22	0.85	11.36	0.7225	129.0496	9.656
5	2.12	20	1.08	9.36	1.1664	87.6096	10.1088
6	0.95	16	–0.09	5.36	0.0081	28.7296	– 0.4824
7	1.05	12	0.01	1.36	0.0001	1.8496	0.0136
Gr. II							
8	0.86	10	–0.18	–0.64	0.0324	0.4096	0.1152
9	0.66	8	–0.38	–2.64	0.1444	6.9696	1.0032
10	0.49	6	–0.55	–4.64	0.3025	21.5296	2.552
11	0.52	9	–0.52	–1.64	0.2704	2.6896	0.8528
12	0.72	-6	–0.32	–16.64	0.1024	276.8896	5.3248
13	0.58	7	–0.46	–3.64	0.2116	13.2496	1.6744
14	0.41	-3	–0.63	–13.64	0.3969	186.0496	8.5932

$X_m = 14.61/14 = 1.04$

X_{m1} = Sum of X_i for Gr. I/7 = 10.37/7 = 1.48

X_{m2} = Sum of X_i for Gr. II/7 = 4.24/7 = 0.61

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$Y_m = 149/14 = 10.64$

Y_{m1} = Sum of Y_i for Gr. I/7 = 118/7 = 16.86

Y_{m2} = Sum of Y_i for Gr. II/7 = 31/7 = 4.43

$\sigma_x^2 = (1/n–1)\ \Sigma(X – X_m)^2 = (1/13) \times 3.9635 = 0.305$

$\sigma_y^2 = (1/n–1)\ \Sigma(Y – Y_m)^2 = (1/13) \times 847.2144 = 65.17$

$\sigma_{xy} = (1/n–1)\ \Sigma(X – X_m)(Y – Y_m) = (1/13) \times 45.99 = 3.54$

$dx = X_{m1} – X_{m2} = 1.48 – 0.61 = 0.87$

$dy = Y_{m1} – Y_{m2} = 16.86 – 4.43 = 12.43$

a. $= (\sigma_y^2\,dx – \sigma_{xy}\,dy)/(\sigma_x^2\sigma_y^2 – \sigma_{xy}^2)$

$= (65.17 \times 0.87 – 3.54 \times 12.43)/(0.305 \times 65.17 – 3.54 \times 3.54)$

$= 12.6957 / 7.3453 = 1.728$

b. $= (\sigma_x^2\,dy – \sigma_{xy}\,dx)/(\sigma_x^2\sigma_y^2 – \sigma_{xy}^2)$

$= (0.305 \times 12.43 – 3.54 \times 0.87)/(0.305 \times 65.17 – 3.54 \times 3.54)$

$= 0.7114 / 7.3453 = 0.097$

Hence, the required discriminant function is $Z_i = 1.728X_i + 0.097Y_i$

6. a. Current Cost of Equity = 7% + 1.12 (5.5%) = 13.16%

Current pre-tax Cost of Debt = Interest expense / Book value of debt = 10 / 100 = 10%

After-tax Cost of Debt = 10% (1 – 0.4) = 6%. The book interest rate can be used since the debentures are trading at par.

Current Weighted Average Cost of Capital = 13.16% (500/600) + 6% (100/600) = 11.97% ~12%.

b. With the swap, the market capitalization of equity drops to Rs.150 lakhs and the value of debt rises to Rs.450 lakh. The unlevered beta = 1.12/(1 + 0.6(1/5)) = 1 i.e., $[\beta_L = \beta_U(1 + (1 – T) D/E]$; the new levered beta = 1[1 + (1 – 0.40)(450 / 150)] = 2.80. The annual interest payments would be 450(0.15) = Rs.67.50 lakh. However, as the EBIT is Rs.150 lakh, which is sufficient to meet the revised interest obligation, the effective rate of tax remains unchanged.

The new cost of equity = 7% + 2.8 (5.5%) = 22.40%

The revised WACC = (150 / 600) 22.40% + (450 / 600)(1 – 0.40) 15% = 12.35%.

Part C: Applied Theory

7. By pursuing a strategy of cost leadership, Nissan concentrates upon achieving the lowest costs of production and distribution so that it has the capability of setting its prices at a lower level than its competitors. This strategy suggests that only one company in the industry can achieve a sustainable competitive advantage in this way.

A point to be emphasized here is that pursuing a cost leadership strategy does not merely mean that the company is competing through lower prices. Rather, the idea is that the cost leader will charge industry average prices but with lower costs, and hence will enjoy higher profits.

A cost leadership strategy will only be effective under the following circumstances:

Where the cost leader's products or services are perceived by the customer as being on par with its competitor's offerings. If this does not happen, a cost leader will be forced to discount prices well below its competitors to gain sales. This will nullify the benefits of its favorable cost position.

Where there is little or no differentiation between competitors' offerings.

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Advantages

The advantages of a cost leadership position are:

- The cost leader is protected from industry competitors by its cost advantage.
- Lower costs also mean that it will be less affected than its competitors by increases in the prices of inputs if there are powerful suppliers.
- The cost leader will be less affected by a fall in the prices it can charge for its products if there are powerful buyers.
- Since cost leaders usually have a big market share, they purchase in relatively large quantities, thus increasing their bargaining power over suppliers.
- If substitute products start to come into the market, the cost leader can reduce its prices to compete with them and retain its market share.
- The cost leaders cost advantage constitutes a barrier to entry, because other companies are unable to enter the industry and match the leaders' costs or prices.
- The cost leader is therefore relatively safe as long as it can maintain its cost advantage with price being a key for a significant number of buyers.
- The way in which Nissan developed its mid sized car, the Altima, provides a good illustration of a company that decides to pursue a cost-leadership strategy.

Disadvantages

A firm pursuing a cost leadership strategy cannot be sure of its leadership position because of the following reasons:

- The principal dangers of the cost leadership approach lurk in the competitor's ability to find ways to produce at a lower cost and beat the cost leader at its own game.
- If technological change makes experience-curve economies obsolete, new companies will apply lower cost techniques that give them a cost advantage over the cost leader. Competitors may also draw a cost advantage from labor-cost savings.
- The competitors' ability to imitate the cost leaders' methods easily is another threat to the cost leadership strategy. The cost leadership strategy in itself carries a risk, i.e in its single-minded desire to reduce costs; it may lose sight of changes in customer tastes. This will drastically affect the demand for a product.

8. Managers promoting change often possess insufficient knowledge to determine as to how a firm should respond to change. A senior manager interested in bringing about change must rely on employees to implement the new response once it has been developed. Therefore, they need to support managers and employees in designing a change initiative and implementing it. In certain organizations, employees withhold such support. Certain reasons for withholding support are:

Lack of Awareness

Change requires a broad view of both the competitive and general environment. Manager (at middle and lower level) and employees are often too focused on current activities to develop this kind of perspective. They become narrowly focused to the aware of potential change over the horizon. They fail to appreciate the need for change, especially if change means learning new methods, processes or techniques.

Lack of Interest

Even when managers and employees recognize the need for change, they often perceive it with lack of interest. This kind of reaction is common even with new developments. People also tend to ignore developments that represent, transcend or relatively small opportunities for expansion.

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Incompatibility with Cherished Values

Mostly firms develop their own sense of shared values and corporate cultures. Managers and employees oppose new strategies, products or approaches that appear to conflict with established practices. Therefore, strongly held values and corporate cultures can become significant obstacles to change.

Fear of Cannibalization

Development new products that are distinct from those of the firm's current lineup means admitting the possibility that alternatives or substitute products exist. Facing the threat of substitute products is hard for any company. Therefore, cannibalization is one of the main reasons that prevent companies from investing in new technologies/products before competitors compel them to do so.

Fear of Personal Loss

The fear of restructuring that would eliminate entire divisions or business, along with people involved in it, making corporate change painful. Moreover, change may reduce the career opportunities for employees and may even cost them their jobs.

Different Perception

A manager may make a decision and recommend change base on his/her own assessment of a situation. Other may resist the change because they may perceive the situation differently. As a result of different perception it become difficult for organizations to implement change.

The opposition to change must be overcome, if it is to be implemented successfully. Casualties are possible and sometimes inevitable. Moreover, some people will leave because they are uncomfortable with the changes. But there are several techniques to overcome resistance. They are:

Participation and Involvement

Participation is the most effective technique for overcoming resistance to change. Employees who participate in planning and implementing a change are better able to understand the reasons for change

Education and Communication

Education and Communication helps people understand the logic and the need for change. If open communication is established and maintained during the change process, uncertainty can be minimized.

Facilitation and Support

Facilities and support involve training and counseling. An example could be making only necessary changes, announcing those changes in advance and allowing time for people to adjust to new way of doing things. This can helps in reducing resistance to change.

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Paper II

Part D : Case Study

1. i. **Forecast income statement for the year to 31 December 2004.**

	Note	Rs.000
Turnover	1	17,325
Cost of sales	2	10,759
Depreciation		1,200
Operating expenses		1,750
Operating profit		3,616
Interest	3	200
Redundancy payment		125
Corporation tax		850
Net profit		2,441
Dividends declared	4	1,343
Notes:		
1. Turnover is expected to grow by 5% from Rs.16,500,000 to Rs.17,325,000.		
2.		Rs.'000
Cost of sales year ended 31.12.03		11,600
Less depreciation		925
		10,675
As a percentage of sales		64.7%
Expected reduction in percentage		2.6%
Percentage of sales for y/e 31.12.04		62.1%
Cost of sales for y/e 31.12.04		10,759
3. Debenture interest = Rs.2,000,000 × 10%		
4. The existing payout ratio is 1,136/2,065 = 55% This payout ratio will be applied to the net profit for the year of Rs.2,441,000.		

ii. **Forecast balance sheet as at 31 December 2004**

	Note	Rs.'000	Rs.'000
Fixed assets (net book value)	1		9,300
Current assets			
Stock	2		3,850
Debtors	3		1,758
Cash and bank	4		865
Less: current liabilities			
Trade creditors	5	1,763	
Other creditors (dividends)	6	1,343	
			3,106
Net current assets			3,367
Less: 10% debentures 2005 Amounts falling due after 12 months			2,000
Total net assets			10,667
Financing			
Ordinary share capital	7		5,500
Share premium account	8		1,875
Reserves	9		3,292
Total shareholders' funds			10,667

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Notes:

1.

	Rs.'000
Opening fixed assets	7,500
Additions for year	3,000
Less depreciation	1,200
Closing fixed assets	9,300

2. Stock will increase by Rs.1,000,000 on the 31.12.03 figure.
3. The ratio of debtors to sales at 31.12.03 is 1,675/16,500 = 10.15%.

   If this is applied to the 2004 sales of Rs.17,325,000, the closing debtors will be Rs.1,758,000.
4. This can be calculated most quickly as the balancing figure:

	Rs.'000
Shareholders' funds	10,667
Net assets excluding cash	9,802
Closing cash balance	865

Note: This figure can be cross checked once the cash flow forecast has been completed.

5. The ratio of trade creditors to cost of sales at 31.12.03 is 1,750/10,675 = 16.39%.

   If this is applied to the 2004 cost of sales of Rs.10,759,000, the closing creditors will be Rs.1,763,000.
6. From forecast profit and loss account.
7.

	Rs.'000
Share capital at 31.12.03	5,000
1 for 10 rights issue	500
Share capital at 31.12.04	5,500

8. The rights issue will raise 500,000 x 4.75 = Rs.2,375,000. The nominal value of the new shares is Rs.500,000. The balance of Rs.1,875,000 must be credited to the share premium account.
9.

	Rs.'000
Opening reserves	2,194
Add net profit for year	2,441
Less dividend	1,343
Closing reserves	3,292

iii. **Cash flow forecast for the year to 31.12.2004**

	Note	Rs.'000	Rs.'000
Cash arising from operations:			
Operating profit			3,616
Add back depreciation			1,200
Increase in debtors	1		(83)
Increase in creditors	2		13
Total			4,746
Less			
Investment in fixed assets		3,000	
Investment in stock		1,000	
Interest paid		200	
Corporation tax paid		850	

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	Note	Rs.'000	Rs.'000
Dividends paid		1,136	
Redundancy payment		125	
Total			6,311
Net cash flow from operations			(1,565)
New capital from rights issue			2,375
Total cash flow for the year			810
Opening cash balance			55
Closing cash balance			865

Notes:

i. 1,675 – 1,758 = (83)

ii. 1,750 – 1,763 = 13

iii. The dividend paid in the year to 31.12.04 is the dividend declared for the previous year.

iv. The after tax return on shareholders' funds can be found by dividing the profit available for dividend by the total shareholders' funds as at the year end.

Note: There is an argument for using the average level of shareholders' funds in the calculation, but the financial objective of the company defines shareholders' funds as the year end figure.

	2003 Rs.'000	2004 Rs.'000
Profit available for dividend	2,065	2,441
Shareholders' funds	7,194	10,667
Return on shareholders' funds	28.7%	22.9%
Earnings per share can be found by dividing the profit available for dividend by the total number of shares in issue at the end of the year.		
	2003	2004
Profit available for dividend (Rs.'000)	2,065	2,441
Number of shares in issue	5,000	5,500
Earnings per share	**41.3p**	**44.4p**
Dividend per share can be found by dividing the dividend declared for the year by the total number of shares in issue at the end of the year.		
	2003	2004
Dividend declared (Rs.'000)	1,136	1,343
Number of shares in issue	5,000	5,500
Dividend per share	**22.7p**	**24.4p**

2. To : Finance Director, Casper Arts Ltd.

From : Assistant to Finance Director

Date : December 31, 2003

Re : Review of forecast financial performance for the period 1.1.2003 – 31.12.2004.

Introduction

This report is concerned with the forecast financial performance of the company for the years 2003 and 2004. There are a number of points that the board should consider in its planning for the next year, and which will be discussed in more detail below.

- Key aspects and implications of the forecast financial statements (2004)
- The need for additional financing during 2004
- Difficulties of incorporating inflation into the forecast figures
- Recommended course of action.

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a. Key aspects and implications of the forecast financial statements **(2004)**

After-tax return on shareholders' funds

Casper Arts Ltd. has the objective of earning an annual after-tax return on shareholders' funds of at least 25%. The forecasts suggest that this target will be met for the year to 31.12.2003, with a return of 28.7%. However, the forecast for 2004 indicates a rate of return of 22.9%, which is below the target level. The main reason for the shortfall is the significant level of investment that is planned for the year, since net profits are forecast to increase by 18% during the same period.

It is a weakness of using this type of accounting measure that the calculated returns do go down at the start of a period of investment. This can translate into a temptation to cut back on entirely necessary investment as a means of improving short-term performance.

Annual 10% increase in earnings per share

The forecast performance against this measure is as follows:

	2002	2003	2004
Earning per share (paise)	37.2	41.3	44.4
Annual increase (paise)		4.1	3.1
Annual increase (percent)		11.0	7.5

This performance target should be met in 2003, but the company will fall well short of this in 2004. There are two main reasons for this:

The rights issue will increase the number of shares in issue before the benefits of the new investment are reflected in the earnings figure.

The one-off payment of redundancy costs will depress the earnings figure.

Once again, this is more a problem of the measure used than of the likely long-term performance of the company. This situation is likely to persist, even when the EPS is adjusted for comparability due to the change in the number of shares in issue, as demanded by the Financial reporting standards.

Annual 10% increase in dividend per share

The forecast performance against this measure is as follows:

	2002	2003	2004
Dividend per share (paise)	20.5	22.7	24.4
Annual increase (paise)		2.2	1.7
Annual increase (percent)		10.7	7.5

As with EPS, this performance target should be met in 2003, but the company will fall well short in 2004. Maintenance of the payout ratio at 55% means that the growth in dividend per share will directly reflect the rate of growth in earnings per share. The company would need to make a significant change to the payout ratio to meet this target, largely due to the increase in the number of shares in issue. Although in theory shareholders should be indifferent between capital appreciation and dividends, in practice there is often a preference for dividends at the expense of capital growth. This is because investors will usually opt for certain cash now in the form of dividends, rather than waiting for capital growth to be achieved.

The payout ratio is the crux of a major tension in company investment policy. Shareholders desire a good level of dividends that increase year on year, while companies often prefer to retain earnings as a simple way of financing future investment Restricting dividends may cause a loss of confidence by the markets and impact upon the share price, and for this reason companies will often prefer to finance new investments by means of debt.

To increase share price year on year

The share price provides a measure of the value of the company. Although in theory this is determined by the present value of future cash flows, discounted at the cost of capital, in practice other factors will also influence the share price. The overall level of market confidence, interest rates and takeover activity will all affect the price of the company's shares. For this reason, it would be more helpful to specify the target as the level of the share price in relation to the overall level of the market, rather than considering it in isolation.

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Given these provisons, the share price at the end of 2003 is higher than that at the end of 2002 (525p as compared with 465p), and thus the company appears to have met this target for the current year. The closing share price for 2004 can be estimated using the dividend valuation model and on the basis of the P/E ratio:

Dividend valuation model:

$$P_0 = \frac{d_0\,(1+g)}{(k_e - g)}$$

Where, P_0 = current market price of share (ex div)

d_0 = current net dividend per share

k_e = shareholders' cost of capital

G = expected annual rate of growth in dividends.

The cost of capital is 14%, and a 10% rate of dividend growth will be assumed inline with the financial objective. The net dividend per share will be taken as the dividend forecast of Rs.1,343,000 for 2004.

$$P = \frac{1{,}343(1+0.10)}{(14\% - 10\%)}$$

P = Rs.36.9mn

Price per share = Rs.36.9mn ÷ 5.5mn = Rs.6.71

P/E ratio:

The current P/E ratio (as on 31.12.03)can be found by dividing the share price of 525p by the EPS of 41.3p = 12.7. If this is applied to the earnings forecast for 2004 of Rs.2,441, the estimated market capitalization is Rs.31m. This equates to a price per share of Rs.5.64.

Both these approaches suggest that the share price will increase by the end of 2004, with the dividend valuation model predicting the largest increase. This is because this model incorporates the expected growth rate that is expected to result from the investment programme, whereas the P/E ratio method does not.

Alternative financial objectives

It has become apparent throughout the foregoing discussion that there are weaknesses in the use of the current financial performance targets. The main area on which attention should be focused is the extent to which the company is achieving an increase in the level of shareholder wealth, and the use of proxies for this such as dividend per share can be misleading. It would perhaps be more helpful to focus on the market capitalization and P/E ratio of the company in relation to the sector as a whole.

Another approach would be to take a wider view of the company's activities and direct attention to performance against a basket of ratios that would measure performance in the key areas of:

- Profitability and return
- Liquidity and working capital management
- Debt and gearing
- Shareholders' investment ratios.

Although such an approach would be less specific, it might assist the company to make better long-term decisions.

b. **The need for additional financing during 2004**

The cash flow forecast shows that in the absence of any additional financing, there will be a negative cash flow during the year of Rs.1.565m. This is due to the significant investment

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of Rs.4m in fixed assets and stock that will take place during the period. However, if profits growth continues at 5% per annum the cash flow for 2005 and 2006 should be roughly as follows:

	Notes	2005 Rs.'000	2006 Rs.'000
Cash flow from operations	1	4,983	5,232
Less			
Interest	2	200	200
Dividends	3	1,343	1,477
Taxation	4	935	1,029
Fixed assets		2,000	
Net cash flow from operations		505	2,526
Opening cash balance		865	1,370
Closing cash balance		1,370	3,896

Notes:

1. It is assumed that the income arising from operations will continue to grow at 5% per year, and that efficiency savings will offset inflationary increases in costs.
2. It is assumed that there will be no interest payments beyond those due on the debentures.
3. The dividend for 2005 is that forecast to be declared at the end of 2004. It is assumed that dividends will increase by 10% per year in line with the performance targets.
4. It is assumed that tax will increase at 10% per year.

In the absence of the rights issue being made, the cash position would be as follows:

	2004 Rs.'000	2005 Rs.'000	2006 Rs.'000
Opening cash balance	55	(1,510)	(1,005)
Cash flow for year	(1,565)	505	2,526
Closing cash balance	(1,510)	(1,005)	1,521

While it is acknowledged that these figures are very rough, they do seem to indicate that the company will only have a cash deficit for two years, with the cash balance becoming positive during the first half of 2006. This raises the question as to whether the company should be making a large rights issue to finance the investment, particularly given the effect of this on the performance indicators highlighted above. If the cash shortage is only a temporary situation, the company should consider using some form of short or medium-term finance to cover the deficit. The issue of additional equity capital should only be made if there are further profitable investments in the pipeline.

Alternative sources of funds in this situation include:

A medium-term bank loan

Financing the new assets by the use of hire purchase agreements or a finance lease

Staging the expenditure more gradually and using short-term finance.

Retaining a higher proportion of earnings for the next one or two years – this would require a significant change in the company's existing dividend policy.

c. Difficulties of incorporating inflation into the forecast figures

At present, low inflation is forecast for the period in question, and therefore the effect upon the forecast figures is likely to be low. However, this assumes that all the elements of the cost base will be subject to the general level of inflation. In practice, there is considerable variability in the level of inflation between different cost factors, and if there were to be a significant increase in the cost of key raw materials for example, this could have a major impact upon the forecasts. In addition, it is indicated that wages are increasing at a higher rate than prices, and this could have a significant impact upon a manufacturing company such as Casper Arts.

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The figures in the forecasts appear to be in nominal terms. The true situation might be clearer if figures were restated in real terms for comparison.

If inflation began to rise at a level above the 3% forecast, the impact would depend upon the way in which the different variables were affected, and the extent to which Casper Arts would be able to recover its costs through increases in selling prices. However, higher inflation would be likely to result in an improvement in the reported ratios on which performance is judged. This is because the dividend and earnings ratios are calculated on the basis of the book value of the assets, and it is unlikely that the entire asset base would be revalued immediately in the event of a rise in the level of inflation.

d. Recommended course of action

The forecasts suggest that the proposed investment will be beneficial in terms of both returns and cash flow. However, the following issues should be addressed before final decisions are taken regarding the investment and its financing.

All new investments are evaluated at the cost of capital of 14%. Since this is a major new investment for the company, the specific risks attaching to the project should be investigated and compared with the risk profile of the existing operations. If necessary, the discount rate should be adjusted to reflect any significant differences.

The sensitivity of the project outcome to changes in the key variables should be analyzed.

The method of financing the project should be re-evaluated. It appears that the company will become cash positive again within three years if no new capital is raised, and therefore the possibility of using medium-term finance rather than additional equity capital should be investigated with due consideration of the likely impact on the cash flows of the company.

There should be a review of the company's financial objectives and the way in which they are measured.

3. A's policy

Company A, which has deliberately avoided paying any dividends in the last five years, is pursuing a sensible policy for a rapidly growing company. All its post-tax profits are being reinvested in the company's business. By adopting this strategy. Company A reduces to a minimum its need to raise new capital from the market. Issue costs are reduced or eliminated and the company has greater flexibility in its investment programme since decision taking is not dependent on gaining market approval. Furthermore, since the company is probably investing heavily its taxation liability may well be small. However, this policy is justified only if the company has adequate profitable investment apportunities.

B's policy

At first sight the policy pursued by Company B, of distributing 50% of post-tax profits, appears to offer the shareholders predictability. In fact, however, with changes in the company's operating profits and in the tax regime, the post-tax earnings may fluctuate considerably. Reducing the dividend of a quoted company normally causes its share price to fall sharply, since the market takes this as casting considerable doubt on its future earnings potential. But, the more mature and predictable that Company B's business is, the greater the merit in its dividend policy. A mature business usually needs les new capital investment than a growing one and so a higher level of dividend is justified. Distributing profits allows shareholders to make some adjustment to the risk and return profile of their portfolios without incurring the transaction costs of buying and selling.

C's policy

Company C's policy falls between those of A and B in that a dividend is paid, albeit a small one. The predictability of the dividend will be welcomed by shareholders, since it allows them to make their financial plans with more certainty than would otherwise be possible. It also gives C part of A's advantage; retained earnings can be used as the principal source of investment capital. To the extent that they are relevant at all, scrip issues are likely to increase a company's market value, since they are often made to increase the marketability of the shares. Shareholder concessions are simply a means of attracting the 'small' shareholder who can benefit from them personally, and have no impact on dividend policy.

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Effect on shareholders

In addition to looking at the cash flows of each company, we must also consider the impact of these dividend policies on the after tax wealth of shareholders. Shareholders can be divided into groups or 'clienteles'. Different clienteles may be attracted to invest in each of the three firms, depending on their tax situation. It is worth noting that one clientele is as good as another in terms of the valuation it implies for the firm.

Company A would be particularly attractive to individuals who do not require an income stream from their investment and prefer to obtain a return through capital growth. Company B's clientele would prefer a much higher proportion of their return to be in the form of regular income, although it would not be income on which they rely since it may be very variable from year to year. Tax exempt funds, such as pension funds, are indifferent between returns in the form of income or capital and might well invest in B since they need a flow of income to meet their day to day obligations. A large, diversified portfolio would reduce the effect of variability in the dividend. Company C is more likely to appeal to the private investor since most of the return is in the form of capital growth and there are shareholder concessions too.

So, each company may maximize the wealth of its shareholders. If the theorists are right, A, B and C all maximize shareholder wealth because the value of the companies is unaffected by dividend policy. Alternatively, each company's group of shareholders may favor their company's policy (and so their wealth is maximized) because the dividend policy is appropriate to their tax position and so maximizes their post-tax returns.

4. The choice among the alternatives will depend to a large extent on the nature of the market offering, the target market segment and the product positioning. The factors which might persuade a company to prefer a more exclusive form of distribution include:

- Where the customer needs or expects specialist advice, facilities or service.
- Where the manufacturer and/or distributor would gain from the enhanced image associated with selective/exclusive distribution;
- Where potential sales volume would not warrant more intensive distribution;
- Where the manufacturer wishes to exercise more control over channel members marketing activities;
- Where more intensive distribution might result in conflicts between channel members.

Channels of distribution once selected and established, involve the enterprise in relatively long-term commitments to other major marketing decision. It is important therefore to ensure that the implications of each alternative choice are carefully evaluated.

Selecting the channel members

In developing this part of the distribution plan consideration needs to be given to**:**

- Economic criteria, which will reflect the pattern and levels of costs, sales revenue and profit. As each alternative channel configuration is likely to produce different levels of sales revenue and costs, the best alternative is not necessarily that producing the most or the least respectively, but the one, which produces the best relationship between the two- i, e. profit.
- Control criteria, which relate to the degree of influence, motivation and conflict among channel members. For example, an agent who handles many different manufacturer's lines will probably not be seen favorably by manufacturer because the agent will put his own interests ahead of A's in endeavoring to sell any line- not just A's- and this can lead to friction;
- Adaptive criteria, by which the manufacturer is able to preserve some flexibility in responding to the changing conditions.
- End user considerations, since it would not be helpful to select intermediaries not favored by customers further down the supply chain;

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- Product characteristics, which include the complexity, special application requirements, servicing needs and so forth, which channel members, must be competent to handle;
- Manufacturer's capability and resources, which is reflected in bargaining power and channel control.

Part E: Caselets

Caselet 1

1. As the case indicates, LWIPL has successfully employed marketing strategies to gain market share. Since 2000, it launched a series of innovative products in order to take advantage of certain occasions. In 2000, the company launched the "Millennium series" of Parker Vector roller pens. These pens had the world map inscribed on them. The unique design on these pens helped people to determine the time difference between countries. These pens were priced at Rs.250 each, and became very popular.

In 2001, it launched 'Special Moment', a gift pack consisting of Parker Vector and Parker Beta pens. These pens had the signature of Amitabh Bacchan, the brand ambassador, inscripted on it. Pen collectors were the target customers for these products. These pens were primarily targeted at, who were fond of Parker pens.

In 2002, Parker launched the 'Black and White' range of Parker Vector ball pens which were priced at Rs.145 each. Similarly, in mid 2002, the company launched the 'Football Legends World Cup edition' of Parker Vector pens in order to cash in on the popularity that the event enjoyed.

In December 2002, the company launched the "Gajgamini" range of Parker Sonnet fountain pens. These pens (only 500 pens were released) were named after the paintings created by noted artist MF Hussain and also had his signature inscripted on them. LWIPL priced these pens at Rs.5,000 each. The company benefited immensely by choosing this type of opportunistic marketing strategies.

2. LWIPL invested heavily to upgrade its technology to manufacture microtip pens. These pens were launched to bridge the gap between ball point and fountain pens. This became a unique selling proposition for Pilot pens and they were quite successful. However, these pens launched initially were not refillable. Due to the price conscious nature of middle class people in India, the concept of disposable pens was becoming an issue slowly. This prompted the company to launch a new, refillable variant of these pens. Within four years of launch, the annual sales of Pilot pens had increased ten fold to one million pens.

In 1990, LWIPL decided to launch another product under the 'Pilot' brand name, Luxor 0.5 mm Pilot V5. Priced at Rs.45 each, Pilot targeted the middle and senior level executives. The attractive design of the pen and the superior technology (it had a liquid ink feeder system) used, contributed to the success of the brand. By 1995, the annual sales of Pilot pens had crossed 10 million. LWIPL decided to go for further brand extension in 1997, and launched the Pilot V7 which wrote bolder compared to V5.

In 1996, LWIPL launched Parker pens in India, targeting the upper middle class consumers, senior level executives and bureaucrats. At the time of the launch, the prices range was Rs.90 to Rs.10, 000. Priced at Rs.90, the "Vector" brand of pens was the cheapest in the range. Within four years, "Vector" became the largest selling Parker brand in India.

In 1999, LWIPL launched the 'Papermate' brand of pens in India. These pens were primarily targeted at the school and college students and were priced in the range of Rs.4 to Rs.13. The brand strengthened the presence of LWIPL in the low priced pen segment.

In 2000, LWIPL launched the Parker Beta range, with prices ranging between Rs.50 to Rs.75, targeting the youth. This product was a huge success. The company sold around one million pens within a couple of months of its launch. Thus, the company clearly identified where there was unmet demand and designed its strategies accordingly.

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Caselet 2

1. Hindustan Motors was one of the first companies in the Indian automobile sector, having started car production way back in 1949. Its cars went on to become very popular and the company acquired a strong brand image. HM's market share was as high as 50% till the mid-1980s. At that point of time, the automobile market was a producer's market rather than a consumer's market; therefore, the company was able to sell whatever it produced. Consumers used to wait as long as six months to take delivery of the vehicle. Some of the reasons for the company's success are:

- Lack of strong competition – the only other player was Premier Automobiles with its 'Padmini', a model from the Italian automobile major Fiat's stable
- A captive market in the form of the Indian government
- Immense popularity in the taxi segment
- A strong brand equity
- The 'strong-sturdy-safe' image.

However, things changed with the entry of Maruti Udyog Ltd (MUL) in 1984. MUL became the market leader thanks to its technologically superior and sleek cars. MUL soon acquired over 80% of the market share. With the liberalization of the Indian economy in the 1990s, a host of MNCs entered the market. HM could not withstand this onslaught and its market share dipped to 3.3% in 2001. The company's downfall can be traced to the following factors:

Technology: Before multinationals entered the Indian market, HM was selling whatever it produced. After the entry of MNCs who bought in better technology and huge investments, the market dynamics changed. However, in spite of the growing popularity of technically superior cars, HM neither invested in upgrading its production plants, nor in technological improvements. The fact that the Ambassador launched in 1954 was upgraded only in 1990 shows the complacency and slackness on the part of the company. Analysts also remarked that the company took too long to decide on investing Rs.750 million for the plant's upgradation.

Marketing: Unlike MNCs, HM never went in for major product/corporate advertising campaigns. Apart from a few sporadic efforts, HM's marketing left a lot to be desired. HM also did not pay much attention to its distribution network and failed to ensure dealer participation, which had become very important after liberalization. HM also did not take care of its distribution system since a majority of its sales were to government departments and institutions. Therefore, the company did not invest much in strengthening its distribution network.

Human Resources: HM's plant at Uttarpara was highly overstaffed, which caused a big burden on its financials over the years. According to analysts, the company had 14,000 employees, as against a requirement of just 3,000. Moreover, unionism was very strong at the plant as unions had patronage of the political parties. The militant nature of the unions was the main reason behind the failure of VRS offered by the management on various occasions.

Further, HM was very slow in introducing its models in the market. When competitors introduced models at regular intervals, HM's first new offering, the Lancer came only in 1998. Moreover, its RTV also failed because of technical problems. In the light of the above facts, it would not be too far-fetched to say that the company was responsible for its poor performance and loss of market share.

2. HM discovered that it needed to restructure its operations to survive in the industry and get out of its financial problems. The company appointed consultants McKinsey for a restructuring plan. The following were McKinsey's recommendations:

- Upgrade the technology
- Restructure the marketing and distribution network
- Improve productivity by reengineering on the shop floor

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Though the merger had the potential to create a company with the scale, capital and ambition to make global retailing a reality, some analysts felt that size could prove to be problem when attempting to merge such different cultures.

2. Many analysts were apprehensive about the success of the merger and they doubted whether Well and Reed could smoothly unify their companies. When the merger was announced it was agreed that there would be Co-Chairmen and Co-CEOs. However, analysts were skeptical about the success of such an arrangement, because they felt such arrangements rarely worked. Weill and Reed had two distinct personalities and different styles of functioning. Weill was a cost cutter for whom short-term profits and the stock price are paramount. He managed through personal relationships. He expected and received loyalty from his managers. Reed, however, had a long-term vision for the company and believed in spending money to realize it. He believed in memos and 'processes' for managing the organization.

   Though the merger seemed to be smooth, there were signs of tension between Reed and Weill by mid 1999. Reed started feeling that sharing the top job was tough. Both men were anxious to show progress and in many ways the merger was going smoothly. However, Reed felt that the merged entity was yet to prove itself. Reed carried around a progress checklist of priorities for key areas such as the consumer bank, the corporate bank, and asset management. According to him only asset management made the grade.

   By March 2000, it became clear that the Co-CEO structure of Citigroup was not working well. Its failure can be attributed to the different cultures of the two companies and the differing personalities of the two CEOs. At a board meeting in March 2000, Reed announced his plans to retire as Co-CEO of Citigroup. Analysts felt that Reed may have left Citigroup before a successor had been identified because of problems created by the structure. The Co-CEO structure resulted in slow decision making as the two CEOs found it difficult to arrive at a consensus.

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Model Question Paper III

Time: 3 Hours **Total Points: 200**

Paper I

Part A: Basic Concepts (30 Points)

Answer all the questions. Each question carries one point.

1. The dividend per share paid by Mahindra Rubbers Ltd. is Rs.12.50 and its dividend payout ratio is 25%. If the multiplier is 12, the market price per share as per Graham and Dodd model is

a. Rs.300.00

b. Rs.327.50

c. Rs.350.00

d. Rs.372.50

e. Rs.375.00.

2. Which of the following statements regarding the CPP method of accounting for inflation is/are true?

a. It is aimed at measuring all items in the financial statements in a unit of measurement that represents the same amount of general purchasing power.

b. It attempts to measure the gains or losses that arise from holding financial assets.

c. The figures given on CPP basis are equivalent to the current replacement values.

d. Both (a) and (b) above.

e. Both (a) and (c) above.

3. Which of the following is/are not an assumption of the Baumol model?

i. The cash requirement for the period under consideration is constant and known.

ii. Cash expenses are incurred evenly over the period under consideration.

iii. There are no transaction costs involved in the conversion of securities into cash.

a. Only (i) above.

b. Only (ii) above.

c. Only (iii) above

d. Both (i) and (ii) above.

e. Both (ii) and (iii) above.

4. A firm plans to issue debt and use the proceeds to repurchase one-half of its outstanding stock. Ignoring taxes, transaction costs and bankruptcy costs, which of the following statements is/are true, according to Modigliani and Miller?

a. The firm's stock price will increase.

b. The firm's stock price will decrease.

c. The firm's stock price will be unchanged.

d. Expected earnings per share will be unchanged.

e. Both (c) and (d) above.

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5. Palio Pharma Ltd. furnished the following financial information

EBIT	=	Rs.36 crore
Interest on Debt	=	Rs.4.2 crore
Depreciation	=	Rs.4.8 crore
Annual loan installment	=	Rs.2.8 crore
Tax rate	=	35%

The fixed charges coverage ratio of the company is

a. 3.35
b. 4.23
c. 4.79
d. 5.14
e. 5.83.

6. Which of the following is considered as the best basic requirement that has to be fulfilled by a division to become a profit center?

a. The divisional manager should have sufficient freedom to take decision on a profit-oriented basis for operating decision in regard to purchase, product mix, pricing, inventory etc.
b. The divisional manager must have access to the sources of supply and the markets to make profitable and sound make or buy decision.
c. The inputs of the responsibility center must be capable of a separate measurement.
d. Profit must be treated as the main measure of divisional performance by the top management for evaluating its performance.
e. None of the above.

7. Which of the following can be referred as "the risk of bankruptcy arising from the possibility of a firm not being able to repay its debt on time"?

a. Diversifiable risk.
b. Liquidity risk.
c. Market risk.
d. Financial risk.
e. Exchange risk.

8. Which of the following statements regarding transfer pricing is/are true?

a. Marginal cost pricing is used in presence of capacity constraints.
b. Standard cost basis is better than actual cost basis under cost based pricing system.
c. Under dual pricing, the buying division is charged differently from what is credited to purchasing division.
d. Both (a) and (b) above.
e. Both (b) and (c) above.

9. The common stock outstanding and net income of Global Acer Ltd. are 5,00,000 shares and Rs.40,00,000 respectively. Global Acer Ltd. intends to repurchase 30% of its shares. If the repurchase decision is expected not to affect the net income or P/E ratio and the current stock price is Rs.15.00, the price after the repurchase will be

a. Rs.6.096
b. Rs.8.88
c. Rs.11.53
d. Rs.17.41
e. Rs.21.43.

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10. If the expected inflation rate increases from 4% to 6%, and if the tax rate applicable to the lender is 35%, the nominal interest rate shall rise by

a. 1.3%

b. 2.0%

c. 3.1%

d. 3.4%

e. 6.2%.

11. Mudra Steel earns 12% on the equity and the growth rate of dividends and earnings is 6%. The book value per share is Rs.60. If the cost of equity is 14%, the market price of the shares of Mudra Steel according to the Marakon model is

a. Rs.36

b. Rs.39

c. Rs.45

d. Rs.48

e. Rs.52.

12. According to the Pecking order theory of financing, the preferred order of finance for firms is

a. External equity, debt, preference capital, internal equity

b. Internal equity, debt, preference capital, external capital

c. Debt, preference capital, internal equity, external equity

d. Internal equity, external equity, debt, preference capital

e. External equity, internal equity, debt, preference capital.

13. Which of the following statement (s) is/are true regarding quality costing?

i. A quality-costing system monitors and accumulates the costs incurred by a firm in maintaining or improving product quality.

ii. Quality of design refers to variation in products that have the same functional use.

iii. Total quality control is often associated with just-in-time manufacturing.

a. Only (i) above.

b. Only (ii) above.

c. Both (i) and (ii) above.

d. Both (ii) and (iii) above.

e. All (i), (ii) and (iii) above.

14. When the distinctive competencies of two or more firms complement each other especially well, which of the following growth strategies is most appropriate?

a. Conglomerate diversification.

b. Concentration.

c. Joint venture.

d. Concentric diversification.

e. Integration.

15. When distributors are too expensive, the firm should consider which of the following grand strategies?

a. Liquidation.

b. Backward integration.

c. Concentric diversification.

d. Divestiture.

e. Forward integration.

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16. Establishing long-term objectives and strategies is part of

a. Strategy formulation

b. Strategy implementation

c. Strategy evaluation

d. Environmental scanning

e. Developing a business mission.

17. Food Mart Inc., a domestic retail company having its basic operations in US, is planning to export its frozen food products to an Australian Company Hawk Mart Inc. This is an example of

a. Horizontal integration

b. Backward integration

c. Forward integration

d. Market development

e. Concentric diversification.

18. An effective mission statement answers which of the following questions?

a. What is the purpose of the organizations?

b. What is the company philosophy or self-concept?

c. What technology we have to employ to achieve the objectives?

d. All of the above.

e. Only (a) and (b) above.

19. Poor product quality, coupled with unreliable suppliers, would be categorized under which of the following strategies?

a. WT strategies.

b. WO strategies.

c. ST strategies.

d. SO strategies.

e. None of the above.

20. Which of the following statements is designed to monitor a broad range of events inside and outside the company that are likely to threaten the course of a firm's strategy?

a. Special Alert controls.

b. Strategic surveillance.

c. Implementation control.

d. Premise control.

e. Strategy implementation.

21. The responsibilities of top managers in the business level strategic planning process includes

a. Developing environmental analysis

b. Establishing business objectives

c. Forecasting based on analysis

d. All of the above

e. None of the above.

22. Which of the following organization structures provides control, skills and resources, where and when required?

a. Matrix.

b. Functional.

c. Strategic Business Units.

d. Divisional.

e. Simple.

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23. Which of the following is an important tool for assessing the financial strength of an organization within the industry?

a. Comparative analysis.

b. Time series analysis.

c. Common size statements.

d. Accounting analysis.

e. Market analysis.

24. It is given that the return on equity of company is decreasing while the net profit margin is increasing. If the asset level remains unchanged, which of the following can be inferred conclusively?

a. Sales are falling.

b. Debt has increased.

c. Equity has increased.

d. Sales are increasing.

e. Equity has decreased.

25. Which of the following is/are the short coming(s) of BCG matrix?

i. The matrix ignores the businesses which are having average growth rate.

ii. The matrix is not reliable indicator of relative investment opportunities across business units.

iii. Strategists should assess apart from growth rate and market share variables, the long term attractiveness of the business unit.

a. Only (i) above.

b. Both (i) and (ii) above.

c. Both (ii) and (iii) above.

d. Both (i) and (iii) above.

e. All (i), (ii) and (iii) above.

26. Which of the following is considered as an external factor leading to bankruptcy?

a. Technological obsolescence.

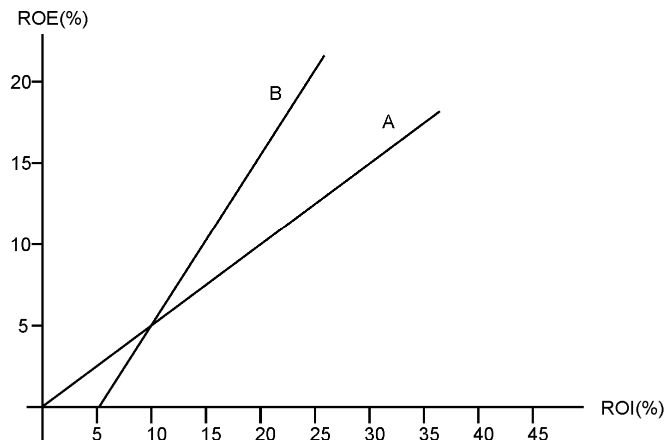
b. Labor unrest.

c. Inadequate funds.

d. Fraudulent practices and misappropriation of funds by the management.

e. None of the above.

27. The following figure shows the relationship between ROI and ROE under alternative capital structures:



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i. Firm under capital structure A is highly levered then firm under capital structure B.

ii. The indifference ROE is the cost of debt.

iii. ROE under capital structure A is higher than ROE under capital structure B when ROI is more than the cost of debt.

Which of the following statements is/are not true?

a. Only (ii) above.

b. Only (iii) above.

c. Both (ii) and (iii) above.

d. Both (i) and (iii) above.

e. All (i), (ii) and (iii) above.

28. Which of the following statements is/are true?

i. A vision becomes more tangible when it is expressed in the form of a mission statement.

ii. A mission statement contains only a few specific directives, broadly outlined as a statement of attitude, outlook and orientation rather than of details and measurable targets.

iii. A strategy is a comprehensive master plan stating how the company will achieve its mission and objectives.

a. Only (i) above.

b. Only (ii) above.

c. Both (i) and (ii) above.

d. Both (ii) and (iii) above.

e. All (i), (ii) and (iii) above.

29. If t_c= Corporate tax rate, t_{ps}= Personal tax rate on equity income and t_{pd} = Personal tax rate on debt income which of the following statements states that the tax advantage of debt will be negative?

a. $(1-t_c)(1-t_{ps}) < (1-t_{pd})$.

b. $(1-t_c)(1-t_{ps}) \leq (1-t_{pd})$.

c. $(1-t_c)(1-t_{ps}) > (1-t_{pd})$.

d. $1-\frac{(1-t_c)(1-t_{ps})}{(1-t_{pd})} = 0$.

e. Tax advantage on debt will never be negative.

30. Which of the following activities constitutes the rational planning process?

i. Identification of gaps between established goals and past performance.

ii. Identifying the resources needed to close the gap between current performance and goals in the future.

iii. Resource distribution.

iv. Monitoring resource utilization to move the organization closer to achieving goals.

a. Both (i) and (ii) above.

b. Both (ii) and (iii) above.

c. Both (iii) and (iv) above.

d. (i), (ii), and (iii) above.

e. All (i), (ii), (iii) and (iv) above.

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Part B: Problems (50 Points)

1. The following data is available for Deccan Carpets Ltd.

Annual yield on securities = 8%

Fixed cost per transaction = Rs.500

Standard Deviation of change in daily cash balance = Rs.160.00.

Assuming a year consists of 360 days, you are **required** to find out the spread between Upper Limit (UL) and Lower Limit (LL) using Miller and Orr model.

(5 points)

2. The details of Earnings Per Share (EPS) and Dividend Per Share (DPS) of Hindustan Aluminum for the past 6 years are as under:

Year	1998	1999	2000	2001	2002	2003
EPS	12.5	13.2	14.3	15.5	14.8	14.5
DPS	5.0	5.25	5.6	5.9	5.9	6.0

Linter model for dividend payment for aluminium industry is of the following form:

$D_t = a + cr\ EPS_t + (1–c)\ D_{t–1}$

Where a is regression constant and the other symbols used are in their standard form using multiple regression analysis.

You are **required** to

i. Find the regression equation.

ii. Comment on the dividend behavior exhibited by Hindustan Aluminium.

(9 + 2 = 11 points)

3. Rishi Cements Ltd. have experienced cyclical free cash flow over last decade. The free cash flow repeats over a period of 5 years as under:

(Rs. in crore)

Year Ending March 31st	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
FCF	7	4	1	–2	3	7	4	1	–2	3	7

In future the trend is expected to remain the same. The cost of capital of the firm is 15%.

You are required to find the value of the firm as on 1.04.2003.

(5 points)

4. Mayura Motors Ltd., a manufacturer of diesel generators furnishes the following information:

EBIT	Rs.40 lakh
Tax rate	35%
Debt Outstanding	Rs.20 lakh
Rate of Interest	10%
Ke	15%
No. of shares outstanding (N)	6,00,000
Book value per share	Rs.10

Since Mayura's product market is stable and the company expects no growth, all earnings are paidout as dividends. The debt consists of perpetual bonds.

Mayura Motors Ltd., is proposing to raise debt of Rs.80 lakh and utilize the new debt to buy back some of its shares at the current market price. The new debt will be raised at an interest of 12% p.a. Assume that after the buyback, EBIT will remain constant and cost of equity will rise to 17%.

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You are **required** to

a. Calculate the buy back price and number of shares that can be bought.

b. Suggest whether Mayura Motors Ltd., should change its capital structure. Substantiate your answer with calculations.

(4 + 3 = 7 points)

5. Amrutha Leathers Ltd. manufactures foam, carpets and upholstery in its three divisions. Its operating statement for the financial year 2002-2003 showing the performance of these divisions is furnished below:

(Rs. in '000)

Particulars	Manufacturing Divisions			Total
	Foam	Carpets	Upholstery	
Sales revenue	1,600(*)	1,400	1,200	4,000
Manufacturing costs:				
Variable	1,200	700	680	2,580
Fixed (Traceable)	-	100	20	120
	1,200	800	700	2,700
Gross Profit	**400**	**600**	**500**	**1,300**
Expenses				
Administration	134	116	172	422
Selling	202	210	232	644
	336	326	404	1,066(**)
Net Income	**64**	**274**	**96**	**234**
Division Ranking	3rd	1st	2nd	

* Sales include foam transferred to the Upholstery division at its manufacturing cost of Rs.2,00,000.

** Common expenses of Rs.1,30,000 and Rs.1,00,000 on account of administration and selling respectively stand apportioned to these divisions at 10% of gross profit in case of administration and 2.5% of sales in case of selling expenses. Balance of Rs.8,36,000 of the expenses are traceable to respective divisions.

The manager of the foam division is not satisfied with the above approach of presenting operating performance. In his opinion his division is best among all the divisions. He requests the management for preparation of revised operating statement using contribution approach and showing internal transfer at market price.

You are **required** to:

a. Price the internal transfer at the market price and prepare the revised operating statement using contribution approach.

b. Compute contribution margin ratio and operating income ratio to show comparative profitability of these divisions and rank theh the light of your answerein sub-part (a) above. Further, offer your comments on the analysis made by the manager of foam division.

c. State why the contribution approach and pricing ofrnal transfers at market price are more appropriate in realistic assessment of the performance of various divisions.

(6 + 3 + 2 = 11 points)

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6. The balance sheet and the income statement of Heritage Corporation for the year ended March 31st 2003 are as follows:

Balance Sheet as on 31st March, 2003

Liabilities	Amount (Rs.)	Assets	Amount (Rs.)
Equity share capital (10,00,000 shares @ Rs.10 each)	1,00,00,000	Fixed Assets	1,20,00,000
General Reserve	50,00,000	Current Assets	80,00,000
12% Debentures	25,00,000		
Current Liabilities	25,00,000		
Total Liabilities	2,00,00,000	Total Assets	2,00,00,000

Income Statement for the year ending 31st March 2003

	Rs.
Sales	7,50,00,000
Less: Total operating cost	6,75,00,000
EBIT	75,00,000
Interest on debenture	3,00,000
Profit before tax	72,00,000
Less Taxes @ 35%	25,20,000
Profit after tax	46,80,000
Number of shares (N)	10,00,000
EPS	Rs.4.68

The company is planning to achieve the target growth rate of 25%. The external funds, if any needed, will be raised in the form of debt carrying an interest of 14% and equity which will be issued at a discount of 25% to its current market price. The cost of capital is 12% and the return on investment is 15%.

The company expects in the coming year to have the following probability distribution of EBIT:

EBIT (Rs. in lakh)	Probability (%)
70	0.2
80	0.3
90	0.4
100	0.1

Assume the company maintains the net profit margin ratio and operating cost to sales ratio. The current target dividend pay out ratio is 0.6. Currently, the share is traded at its intrinsic value as per Walter Approach.

You are **required** to

a. Determine the external funds required to achieve target sales growth of 25%.

b. Determine the debt-equity ratio of the external funds required at which the EPS of the company is Rs.5.62 and find out the probability of getting the EPS greater than Rs.5.62.

(3 + 8 = 11 points)

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Part C: Applied Theory (20 Points)

1. Corporate decisions are affected by a large number of variables. Many-a-times, the inter linkages between these variables, and their resultant effect on the decision is extremely complex. Decision support models are used as a tool to spell-out the relationships clearly in order to help the management to arrive at the optimal decisions. Discuss the major steps involved in the process of building decision support models.

(10 points)

2. Strategic control focuses on monitoring and evaluating the strategic management process to ensure that it functions in right direction. Discuss the various types of strategic controls used in the organization.

(10 points)

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Paper II

Part D: Case Study (50 Points)

Read the case carefully and answer the following questions.

1. Analyse and comment on the capital structure of Morepen Laboratories Limited.

   (8 points)

2. Identify the Morepen Laboratories Limited policy on dividend payments and comment on it.

   (6 points)

3. Calculate the Z-score of the company for the current year and state your inferences. Does Alman's Z-score have any practical significance in the Indian Context. Justify your answer.

   (9 points)

4. Assuming that the additional information regarding reconstruction provided are duly approved and sanctioned, pass the journal entries to give effect and show the company's post reconstruction balance sheet for the year ending 2003.

   (8 points)

5. Carry out the value chain analysis of Morepen Laboratories.

   (10 points)

6. Basing on the information of industry and Morepen Laboratories Limited formulate the future strategy for Morepen Laboratories.

   (9 points)

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INDUSTRY SCENARIO

Indian Pharma industry has historically been concentrating on reverse engineering patented drugs and selling them locally for 8 to 15 percent of what they cost elsewhere. This strategy on a long-term basis appears unsustainable for impending regulatory and demographic changes, thus forcing Indian companies to compete against global ones according to global rules. Thus, it is the right time for the Indian pharmaceutical industry to forge either strategic alliances or partnerships or joint ventures with preferred suppliers and life sciences companies.

Morepen Laboratories

Incorporated as Morepen Laboratories Pvt Ltd., in Dec.'84, it was converted in Mar.'92 to a public limited company known as Morepen Laboratories Limited (MLL). It was initially set-up to manufacture ampicillin, a bulk drug. Today, it manufactures a variety of life-saving drugs and their intermediates.

Morepen today is the second largest generic manufacturer in the world for Loratadine. A non sedative anti-histamine, Loratadine is the fourth largest drug in the world with a market size of $ 3 billion, growing at a steady pace of 31%.

Besides focussing on the local market for formulations, Morepen has established itself as a leading Indian company in the global generic business. Today Morepen is a professionally managed, R&D based company, engaged in the manufacturing and marketing range of health care products including Generic Bulk Drugs, Formulation Dosage Forms, Consumer Care Products, Speciality Products and Herbal Products.

The company exports to over 50 countries including the highly regulated markets of USA, Western Europe and Canada. Morepen has three state-of-the-art manufacturing facilities in Parwanoo, Baddi & Gurgaon.

Morepen is consistently engaged in technology development and manufacture of new molecules which are launched in International markets as potential bulk drugs.

The company has been aggressively expanding its product basket and has recently launched drugs such as Duclor, Klarim and Futiza. Having entered global markets, the company is further enhancing its global presence. Morepen has established international marketing network and an office in USA and Canada. The company's participation in prestigious international pharmaceutical expositions such as Cphl, PhlA, PhiUS, FCE etc., has evoked keen business interest from Europe, USA, South America and Asia Pacific respectively.

The company has a strategic manufacturing joint venture with Ameritek Inc, USA to introduce range of rapid test kits under the brand name of 'dBest-Morepen' for clinical diagnosis of diseases.

Further, the company has tied up with many multinational Generic Companies to market its products in the developed and regulated markets viz. USA, Canada and European markets after the expiry of patents.

MLL, has also tied up with an international group for brand development and positioning for its foray into the OTC segment. It also plans to launch products in the OTC segment in antacids, cough, fever, multi-vitamins and natural products.

Morepen laboratories has defined its growth path through a constant move up the value chain. This path has been designed to move closer to the end user of its produce i.e., consumer. A consumer research was launched to study consumer attitudes to developing a brand that could meet consumer expectations, and so the brand Dr. Morepen was born. The research for the slogan that, in a simple manner, explained the core values that Dr. Morepen stood for ended with the line "Health in your hands". This line indicates that Dr. Morepen operates in the area of health. However, it is a brand that allows you to decide how you would handle your health, the sentiment of empowerment. Today, Dr. Morepen stands for a vibrant, dynamic and modern brand that is in turn with today lifestyle.

In the first quarter of 2002-2003 the emphasis has already shifted to the promotion of the product portfolio, in line with strategy. As a consequence there has been a heightened awareness of the su-brand while reinforcing of the value of Dr. Morepen.

Enhancing Shareholder Value

Morepen objective is to deliver consistent and superior returns to shareholders. To this end Morepen has developed a healthy portfolio of shons brands and achieved the position of market leadership as the first Indian company to win USFDA (United States Food and Drugs Administration Approval) for its manufacturing facility for Loratadine. Its impact on the company's bottom line will be tremendous. The company's stakeholders have appreciated this and as a consequence market capitalization has increased threefold since the last financial year.

Already the company has ported impressive growth in turnover – a 38% increase over the last financial year, exports have registered a 9% growth and are expected to leverage Morepen's profitability further with the new focus on global markets. The adoption of quality systems according to the strict GMP guide lines, standard operating procedures, Method of Analysis, specification of raw materials and API (Active Pharmaceutical Ingredients) are steps that will propel Morepen towards a healthy organization, a healthy financial future and a healthy world.

Operations

Morepen had another successful year with a growth of 18.39% in the overall turnover at Rs.53,412 lakh from Rs. 43564 lakh for the year ended 31st March, 2002. Total exports during the year under review stood at Rs.6,278 lakh as against Rs.4,295 lakh, representing an increase of 46.16% over the last year. Profit before tax has registered a growth of 9.06% at Rs. 8,665 lakh from Rs.7,940 lakh, while Profit after tax stood at Rs.5,400 lakh, down from Rs.7,320 lakh of the previous year. The current year saw the introduction of deferred tax, which amounted to Rs. 3,265 lakh, to that extent the Profit after tax is lower. The operating performance of the company continues to be strong with an EBITDA margin of 34.27% (previous year 32.37%).

The working of the Company has seen significant shift of focus to new product categories in most of its business areas: Global Generics, branded formulations, Fast Moving Health Goods (FMHG) besides new launches in the Diagnostic products/applications. There has been a consistent increasing shift towards higher value added products, higher operating efficiencies and containment of costs across all levels. The distribution system has seen extended penetration across the country; this will support our future aspirations in healthcare management in all walks of life. In order to further enhance the Company's position as a focused market driven organization, a subsidiary Company, Doctor Morepen Limited has been established and has commenced operations in the FMHG segment.

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During the year, the Company was once again conferred the Express Pharma Pulse Award, recognizing it as the fastest growing formulation Company in its category while acknowledging its overall performance based on market share, growth, new products and sales.

After having established a strong foothold in the pharmaceutical industry, Morepen aspired to set a new precedent and establish its position as a leading Company in the field of Clinical diagnostic and self-health-ware range. To achieve these objectives, a new division " Medipath" was launched, which will focus on exploring and developing the business with a core strategy of consistently offering unique and high end technologies to its customers backed-up by an impeccable service and customer support systems thereby generating long–term customer relationship.

GLOBAL GENERICS

There has been a significant expansion in the global generic business with an enhanced product portfolio. Morepen has always maintained a good track record of providing high product quality of bulk drugs and proactive customer service. These strengths have been drawn upon to increase the market size of self manufactured bulk drugs such as Loratadine, Desloratadine, Atorvastatin Calcium, Sultamicillin base, Sultamicillin tosylate, Zafirlukast, Fexofenadine and also to develop contract manufacturers for a number of high volume bulk drugs such as Amoxycillin, Ampicillin, Cloxacillin Sodium, Ciprofloxacin, Norfloxacin, Ofloxacin etc.

Drugs with a market of over USD 55 billions will be coming out of patent in the next few years. There lies tremendous scope of opportunities in this area. To develop strategic affiliations for accelerated growth of the Company, particularly aimed at the US market, a joint venture has been set–up with DrugMax, Inc. DrugMax, Inc. is a leading pharmaceutical distribution company in the USA with an extensive domestic sales network. The objective of the new entity, MorepenMax, is to file and obtain ANDA approvals for launch and distribution of new products of Morepen in the US market. These initiatives would provide a platform to seize growth opportunities in the US market and strengthen Morepen's efforts towards globalization.

RESEARCH & DEVELOPMENT

The thrust areas for R&D in bulk drugs are development of non-infringing process technologies, development of new polymorphs and cost reduction. The major achievements in this direction include development of non-infringing process for Pioglitazone, an antidiabetic product. This process has been developed to address the highly regulated market of USA by filing DMF by the end of this year. A novel non-infringing process of amorphous form of Atorvastatin Calcium, a cholesterol reducing agent has been developed. A new polymorph of Atorvastatin Calcium has also been developed. This has led to two PCT patent filings to the credit of Morepen. In addition, the R&D team is very active in developing non-infringing manufacturing process of Fexofenadine and Montelukast, an antiallergic drug and that of Gatifloxacin and Moxifloxacin, which are new generation antibacterial agents. Another area of focus is the development of new dosage forms for launch in the domestic market and the development of novel formulations, which are patentable. The major achievement in this direction is the development for topical use in case of skin infections and also development of a novel antibacterial gel using co-trimoxazole; two PCT applications have been filed for patent protection of these discoveries. Another Indian patent has been filed on the development of a process for a stable, fixed dose pharmaceutical composition of antibiotics containing lactic acid bacillus. Ten new products have been developed by in-house R&D team which have been launched in the market by Medicus & Dr. Morepen Divisions; more than thirty products have been already developed which will be launched in due course of time. Significant development work has gone into the introduction of C-Sip in different ethinic flavors such as Narangi, Nimbu-Pani and Aampanna etc. All the flavors of C-Sip have been well accepted and appreciated by consumers-Aampanna flavor being special one.

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Special efforts are underway on the development of dosage forms for the US generics market. Fifteen products have been short listed for filing ANDAs during the next two years and state-of-the-art manufacturing facilities are being created at the Baddi site.

Continued International Expansion

The challenge of growth will be met by exploiting opportunities in international markets. Having established its quality standards, Morepen has won overseas recognition. A technical dossier for Cisapride, Sultamyeillin Tosylate and Sultamycillin Base has been compiled and provided to prospective buyers from Europe and Canada.

Focus on Home Markets

Morepen's success flows from concentration on markets it knows and understands. With a mass focus on home market, Morepen is building strong brands with strategic penetration in therapeutic segments. The future of antibiotic therapy may well be the Morepan's powerful antibacterial Saltum a result of Morepen's careful research.

Doing the right thing at the right time has been Morepen's strategy. Xecof, a cough syrup in the unique sachet pack with just the right dosage measured out in a hygienic pack has revolutionized the cough syrup's market.

Human Resources

The company owes its success to its people and strongly believes that competent employees alone can help in creating a crating edge organization and in this behalf lot of efforts are put in hiring competent professionals from leading organizations and also nurturing talent within. Recently to ensure that the capabilities of its employees are harnessed in a focused way, the organization has been structured into Strategic Business Units (SBUs). A corporate management team comprising of the SBUs heads and the functional heads have been constituted to review the functioning of the organization. Each of the SBUs also has its own management team which reviews SBU functioning. This structuring would remove bureaucracy and provide empowerment to employees at all level.

We are in the process of benchmarking our policies and charting out policies that interweave the drives, behaviors, aptitude and needs of our people with that of the organization. We are placing a strong emphasis on building a culture that focuses on performance, building trust, openers and candor in the organization. In this behalf, the company have initiated the exercise of profiling the competency requirement of the various positions in the organizations and matching the same with the capabilities of our people. This initiative would help the Morepen in organizational capability building exercise by introducing focused need based organizational and individual development program.

Looking Ahead

Looking ahead, Morepen is under no illusion as to the competitive conditions they face. There is, therefore, no relaxation in Morepen's drive for excellence. The competition of Morepen's state of the art project at Baddi as per the USFDA guidelines reflects the relentless determination to be the best sprawling over 28 acres of land, the world class infrastructure at Baddi is a composite Pharma Complex capable of manufacturing Fine Chemicals, Bulk Drug Intermediaries, Formulations, Consumer Care products and future products conforming to Morepen's vision and mission for the new millennium.

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Income and Expenditure – Dr.Morepen Laboratories Limited

(Rs. in crore)

	2002-03	2001-02	2000-01	1999-00	1998-99
INCOME					
Sales Turnover	500.18	426.27	325.94	251.4	184.62
Other Income	19.76	11.63	6.73	5.10	1.15
Stock Adjustments	14.18	-2.26	-2.40	-1.36	7.92
Total Income	534.12	435.64	330.27	255.14	193.69
EXPENDITURE					
Raw Materials	279.39	241.91	193.06	165.65	130.47
Power & Fuel Cost	3.30	2.48	1.83	1.34	0.87
Other Manufacturing Expenses	6.14	4.84	6.50	7.02	5.97
Employee Cost	13.81	8.62	5.95	4.46	3.92
Selling and Administration Expenses	41.53	22.34	15.26	8.53	6.28
Miscellaneous Expenses	6.68	8.56	7.37	5.21	5.23
Profit before Interest, Depreciation & Tax	183.27	146.89	100.3	62.93	40.95
Interest & Financial Charges	66.28	44.93	34.62	20.61	13.68
Profit before Depreciation & Tax	116.99	101.96	65.68	42.32	27.27
Depreciation	30.34	22.56	14.75	7.95	3.87
Profit Before Tax	86.65	79.4	50.93	34.37	23.4
Tax	32.65	6.20	0	0	0
Profit After Tax	54.00	73.20	50.93	34.37	23.40
Adjustment below Net Profit	-0.28	-0.32	-0.05	0	0
P & L Balance brought forward	1.46	0.88	1.62	1.32	0.54
Appropriations	52.32	72.3	51.62	34.07	22.62
P & L Bal. carried down	2.86	1.46	0.88	1.62	1.32
Equity Dividend	5.43	6.33	5.58	4.69	4.05
Preference Dividend	4.98	5.05	5.34	3.98	1.81
Corporate Dividend Tax	0.54	2.55	1.31	0.87	0.58
Equity Dividend (%)	30	35	35	30	25
Face value per share (Rs.)	2.00	2.00	10.00	10.00	10.00

Balance Sheet – Dr. Morepen Laboratories Limited

(Rs. in crore)

Particulars	2002-03	2001-02	2000-01	1999-00	1998-99
SOURCES OF FUNDS					
Share Capital					
Equity Share Capital	18.09	18.09	18.09	15.57	15.57
Reserves & Surplus	381.33	416.13	357.18	165.23	140.29
Total Shareholders Funds	**399.42**	**434.22**	**375.27**	**180.80**	**155.86**
Preference Share Capital	30.80	37.60	38.90	33.90	24.90
Secured Loans	457.88	274.48	215.88	155.56	95.22
Unsecured Loans	144.13	211.27	117.7	53.02	38.08
Total Debt	**602.01**	**485.75**	**333.58**	**208.58**	**133.3**
Total Liabilities	**1032.23**	**957.57**	**747.75**	**423.28**	**314.06**
APPLICATION OF FUNDS					
Gross Block	727.28	553.84	387.5	288.17	161.4
Less: Accum. Depreciation	84.74	54.42	31.85	17.11	9.16
Net Block	**642.54**	**499.42**	**355.65**	**271.06**	**152.24**
Capital Work-in-Progress	31.86	29.17	32.73	13.72	28.3
Investments	75.58	120.77	152.09	3.8	5.24

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Particulars	2002-03	2001-02	2000-01	1999-00	1998-99
Current Assets, Loans & Advances					
Inventories	110.96	78.7	55.01	63.96	66.1
Sundry Debtors	142.95	101.49	76.11	53.63	41.43
Cash and Bank Balance	56.17	89.01	66.61	10.93	9.56
Loans and Advances	130.87	85.94	56.28	37.1	31.43
Less: Current Liab. & Prov.					
Current Liabilities	155.04	39.54	42.85	29.91	21.72
Provisions	14.13	9.21	7.29	5.96	4.99
Net Current Assets	271.78	306.39	203.87	129.75	121.81
Miscellaneous Expenses not w/o	10.47	1.82	3.41	4.95	6.47
Total Assets	**1032.23**	**957.57**	**747.75**	**423.28**	**314.06**
Contingent Liabilities	59.42	20.85	34.23	27.34	26.11

Share Prices –Morepen Laboratories Limited

(Rs.)

Financial Year	High	Low
2002-03	24.00	12.10
2001-02	58.60	52.10
2000-01	109.40	74.60
1999-00	234.00	160.20
1998-99	38.20	25.60

With a view to reconstruction of the company, the following proposals are being considered.

- To write off all miscellaneous expenses.
- To reduce the equity shares by Re.0.50 paise each.
- Unsecured loans to be written off to the extent of 2.5%.
- The balance of miscellaneous account should be written off against the current year's profit.
- The current market price of an equity share is Rs.13.10.

Part E: Caselets (50 Points)

Caselet 1

Read the following caselet carefully and answer the following questions:

1. No one predict an industry's cycle precisely and any single forecast of performance may lead to enormous conclusions. Given this, suggest a methodology for valuation of cyclical companies.

(9 points)

2. Discuss what should the mangers do to reduce cyclicality or to exploit it.

(7 points)

Companies in industries prone to significant swings in profitability present special difficulties for mangers and investors trying to understand how they should be valued. In extreme cases, companies in these so called cyclical industries-airline travel, chemicals, paper, and steel, for example – challenge the fundamental principles of valuation, particularly when their shares behave in ways that appear unrelated to the discounted value of their underlying cash flows. The DCF values is far less volatile than the underlying cash flows. Indeed, there is almost no volatility in the DCF value because no single year's performance affects it significantly. In the real world, of course, the share prices of cyclical companies are less stable.

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On the assumption that the market values of companies are linked to consensus earnings forecasts, when these consensus earnings forecasts were examined for clues it was found that these forecasts appeared to ignore cyclicality entirely by almost always showing an upward trend, regardless of whether a company was at the peak or the trough of a cycle. Earnings forecasts generally have a positive bias. Sometimes this is attributed to the pressures faced by equity analysts at investment banks. Analysts might fear that a company subjected to negative commentary would cut-off their access or that a pessimistic forecast about a company that is a client of the bank they work for could damage relations between the two. In light of these, it is reasonable to conclude that analysts as a group are unable or unwilling to predict the business cycle for these companies. Business cycles, and particularly their inflection points, are hard for any one to predict. Given this, how the market ought to behave? Should it be able to predict the cycle and thus avoid fluctuations in share prices? However, that might be asking too much; at any point, a company or industry could break out it its cycle and move to a new one that is higher or lower.

Caselet 2

Read the following caselet carefully and answer the following questions:

1. “The promise of reengineering is not empty, it can actually deliver revolutionary process improvements”. In this context, what are the factors that has to be identified by the managers before taking up the process of reengineering.

(8 points)

2. The caselet says that “companies often squander their energies on attractive-looking projects that fail to produce bottom-line results”. In this context, discuss the causes for such failures and also the measures that a company should take to avoid such mishaps.

(9 points)

In today’s scenario every one seems to be fascinated to the virtues of strategic cost reduction. In all, too many companies, reengineering has been simultaneously a great success and a great failure. After months, even years, of careful redesign, these companies achieve dramatic improvements in individual processes only to watch overall results decline. By now, paradoxical outcomes of this kind have become almost commonplace. A computer company reengineers its finance department, reducing process costs by 34 percent, yet operating income stalls. An insurer cuts claims-process time by 44 percent, yet profits drop. Managers proclaim a 20 percent cost reduction, a 50 percent process-time reduction, a 25 percent quality improvement, yet in the same period, business-unit costs increase and profits decline.

In short, too many companies squander management attention and other resources on projects that look like winners but fail to produce bottom-line results for the business unit as a whole.

The fact is that how difficult redesigns actually are to plan and implement and, more important, how often they fail to achieve real business-unit impact. They are two factors – breadth and depth – that are critical in translating short-term, narrow-focus process improvements into long-term profits. First, the process to be redesigned must be broadly based on cost or customer value in order to improve performance across the entire business unit. And the redesign must penetrate to a company’s core, fundamentally changing six crucial organizational elements. These depth levers include roles and responsibilities; measurements and incentives; organizational structure; information technology; shared values; and skills.

However, a reengineering project – like any major change program – can produce lasting results only if senior executives invest their time and energy. A large-scale reengineering extracts extraordinary effort at all levels of an organization. Without strong leadership from top management, the psychological and political disruptions that accompany such radical change can sabotage the project. Inevitably, managers and employees may feel that their turf, jobs and organizational equilibrium are under attack. But top-level managers can overcome opposition to the new design, if they approach reengineering as a painful but necessary disruption of the status quo.

Most process reengineering efforts have in fact had little measurable impact on the overall business unit. A few common missteps emerge. On the one hand, redesign projects often aim at processes that are too narrow, and change only one or two of the depth levers. On the other hand, even with sufficient depth, efforts still focus on a process that is too narrowly defined and therefore has little discernible impact on overall performance. Still more distressing, many managers never learn that their reengineering efforts do not have measurable impact. They analyze

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improvements relative to the process being redesigned rather than the business unit as a whole, or never develop performance tracking mechanisms to measure results.

Caselet 3

Read the following caselet carefully and answer the following questions:

1. What are the industry future prospects? Demand projections envisage a nine percent increase in the demand for passenger cars, but one wonders whether this demand can be met. Discuss the steps Government has to take to meet this demand.

(8 points)

2. The caselet says that "Maruti Udyog Limited is unique of its kind, not only maintaining its growth both in terms of production and supply despite all the hiccups, but also increasing its market share in the automobile sector over a period of years". List out the various strategic factors which helped Maruti Udyog Limited to establish itself as a market leader in the automobile industry during such a short course of time.

(9 points)

The last few years have seen rapid development in the automobile industry in India. The passenger car market has come a long way and a greater choice is available to prospective owners. In comparison with the kind of cars available in developed countries, India's passenger cars may appear primitive even today, when a much wider choice is available than in earlier years. Until Maruti Udyog Limited (MUL) came out with 800 cc car, the only cars visible on the Indian roads were Premiers, Ambassadors and few Standard Gazelles. Once MUL launched its three-cylinder car, there was a rush to book it, and it was considered distinctly prestigious to own once.

There is no doubt that the passenger car market in this country has come a long way since the time when there were long waiting lists for even the antiquated Premiers and Ambassadors. There is much greater choice available to prospective owners, manufacturers are striving for greater driving and seating comfort and fuel efficiency. The pre-1984 cocks of the walk, the Birla group company – Hindustan Motors (HM) and Premier Automobiles (PAL), have been overtaken by the state-owned MUL which has blitzed the market. In a short span of seven years, the erstwhile two-member oligopoly has been shattered, and MUL has become the un-disputed No.1. In fact, the recent statistics says that, three out of every four cars produced in India emerge from Maruti's factory in Gurgaon, near Delhi.

In all fairness, one should add the name of Tata Engineering (TE) to the list of passenger car makers, for the dieselized two-ton Tatamobile that the company launched in 1989, though technically a LCV, is being increasingly used as a passenger car. Apart from this TE rolled out number of passenger cars and LCV on the roads of Indian market. Other players in the market are Fork Ikon, Santro, Octavia to name a few.

Maruti Udyog Limited is unique of its kind, not only maintaining its growth both in terms of production and supply despite all the hiccups, but also increasing its market share in the automobile sector over a period of years, Palio from PAL, Production figures of the manufacturers over the last five years are revealing. While MUL's production has been increasing by leaps and bounds, the competitors of MUL's have also been steadily increasing the number of cars produced in the country. While the share of MUL in the total installed capacity is 44 percent, it contributed more than 70 percent in terms of production and sales for the last five years, the other players in the market shared the remaining. It is an amazing statistic that 71 percent of all cars sold in India last year were Marutis, while MUL sells 98 percent of whatever it produces within two months of production and still has a waiting list for some of its vehicles, the other manufacturers take longer to sell.

For a long time, owning a personal four-wheeler was considered a luxury in India, and a limited road network with poor road surface did not help matters much. Production showed only a very gradual upward curve from the 1950s until the early 1980s before Maruti came into the scene.

The 1980s brought a sea change in the industry. With the government following a policy of liberalization, several foreign manufacturers got a toehold in the country, signing collaboration agreements to bring their products into India. With Maruti literally flooding the market with passenger cars, the other manufacturers had also to try and keep pace by introducing new and attractive models.

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Model Question Paper III

Suggested Answers

Paper I

Part A: Basic Concepts

1. ***(c)*** Payout ratio = 25%

EPS = Rs.50

Share price m = $\left(\dfrac{4D+R}{3}\right)$

$$m\left(D+\frac{E}{3}\right)=12\times\left[12.5+\frac{50}{3}\right]=\text{Rs.}350.$$

2. ***(d)*** The following are the basic factors which work under the CPP method of accounting for inflation i.e., (i) It is aimed at measuring all items in the financial statements in a unit of measurement that represents the same amount of general purchasing power and (ii) it attempts to measure the gains or losses that arise from holding financial assets.

3. ***(c)*** One of the limitations of the Baumol model is that, there are no transaction costs involved in the conversion of securities into cash.

4. ***(c)*** According to Modigliani and Millers when a firm plans to issue debt and use the proceeds to repurchase one-half of its outstanding stock then the firm's stock prices will be unchanged.

5. ***(c)*** Fixed charges coverage ratio $=\dfrac{EBIT+D}{I+\dfrac{LR}{(1-t)}}$

$$\frac{36+4.8}{4.2+\dfrac{2.8}{(1-0.35)}}=\frac{40.8}{8.51}=4.79.$$

6. ***(a)*** The divisional manager should have sufficient freedom to take decision on a profit oriented basis for operating decision in regard to purchase, product mix, pricing etc., this is considered as the best basic requirement that has to be fulfilled by a division to become a profit centre.

7. ***(d)*** The risk of bankruptcy arising from the possibility of a firm not being able to repay its debt on time can be referred as financial risk. Whereas diversifiable risk is the portion of a security's risk that can be eliminated by diversification, market risk is that part of total risk which cannot be eliminated by diversification.

8. ***(e)*** Under transfer pricing standard cost basis is better than actual cost basis when the calculation is based on cost based pricing system and under dual pricing system of transfer pricing, the buying division is charged differently from what is credited to purchasing division.

9. ***(e)*** No. of shares repurchased = 0.30 × 5,00,000 = 1,50,000

$$EPS_0=\frac{NI}{\text{No. of shares}}=\frac{\text{Rs.}40{,}00{,}000}{\text{Rs.}5{,}00{,}000}=\text{Rs.}8.00$$

$$\text{Current P/E ratio}=\frac{P_0}{EPS_0}=\frac{\text{Rs.}15.00}{\text{Rs.}8.00}=1.875$$

$$EPS_1=\frac{\text{Rs.}40{,}00{,}000}{(5{,}00{,}000-1{,}50{,}000)}=\frac{\text{Rs.}40{,}00{,}000}{3{,}50{,}000}=\text{Rs.}11.42$$

The price after repurchase = p_1 = EPS_1 × P/E_1 =11.42 × 1.875 = Rs.21.428 (or) Rs.21.43.

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10. *(c)* The increase in the nominal rate of interest must be higher than the increase in the rate of inflation, if the interest income is subject to tax. This is necessary for maintaining the real state of interest. The increase in nominal rate is given by

$$\Delta r = \frac{(\text{Inflation rate after increase} - \text{Inflation rate before increase})}{(1 - t_r)}$$

$\Delta r = (6 - 4) / (1 - .35)$

$\Delta r = 2 / .65 = 3.076\%$ or 3.1%

11. *(c)* $\frac{B(r-g)}{K-g}$

$= \frac{60(0.12 - 0.06)}{(0.14 - 0.06)}$

$= \frac{3.6}{0.08} = \text{Rs.}45.$

12. *(b)* As per Pecking order theory of financings, the preferred order of finance for firms are as follows: Internal equity, debt, preference capital and external equity.

13. *(e)* The following statement are true

i. A quality-costing system monitors and accumulates the costs incurred by a firm in maintaining or improver's product quality;

ii. Quality of design refers to variations in products that have the same functional use; and

iii. Total quality control often associated with just-in-time manufacturing.

14. *(c)* When the distinctive competencies of two or more firms complement each other especially well, than the joint venture strategy could be most appropriate.

15. *(e)* When distributors are too expensive, the firm should consider using forward integration strategy.

16. *(a)* Strategy formulation establishes long-term objectives and strategies.

17. *(d)* The concept of market development states that a domestic company starts its exporting of goods to other countries.

18. *(e)* An effective mission statement answers the following: (i) What is the purpose of the organization? and (ii) What is the company's policy or self-concept?

19. *(a)* Poor product quality, coupled with unreliable suppliers states that the firm is under Weakness and Threat (WT) strategies.

20. *(b)* Strategic surveillance is designed specifically to monitor a broad range of events inside and outside the company that are likely to threaten the course of a firm's strategy.

21. *(d)* The responsibilities of top managers in the business level strategic planning process includes (i) Developing environmental analysis, (ii) Establishing business objectives and (iii) Forecasting based on analysis.

22. *(a)* Matrix structures can be used to provide control skills and resources where and when required.

23. *(a)* Comparative analysis is an important tool for assessing the financial strength of an organization within the industry.

24. *(c)* It is given that the return on equity of company is decreasing while the net profit margin is increasing. It the asset level remains unchanged, it is stated that the firm equity has been increased.

25. *(e)* The following are the short comings of BCG matrix i.e. (i) The matrix ignores business which are having average growth rate, (ii) The matrix is not a reliable indicator of relative investment opportunities across business unit and (iii) Strategists should assess apart from growth rate and market share variables, the long-term attractiveness of the business unit.

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26. *(c)* Inadequate funds is consider as an external factor leading to bankruptcy.

27. *(c)* The relationship between ROI and ROE under alternative capital structure will not state the indifference ROE is the cost of debt and ROE under existing capital structure will be higher than ROE under alternative capital structure when ROI is more than the cost of debt.

28. *(e)* The following statement are true i.e. A vision becomes more tangible when it is expressed in the form of mission statement; A mission statement contains only a few specific directives, broadly outlined as a statement of attitude outlook and orientation rather than of details and measurable targets; and A strategy is a comprehensive master plan stating how the company will achieve its mission and objectives.

29. *(c)* Tax advantage on debt will be negative only when $(1-t_c)(1-t_{ps}) > (1-t_{pd})$

i.e. The product of residual of corporate tax rate and personal tax rate on equity income should be greater than the residual of personal tax rate on debt income.

30. *(e)* The following activities constitutes the rational planning process: (i) identification of gaps between established goals and poor performance; (ii) identifying the resources needed to close the gap between current performance and goals in the future; (iii) resource distribution and (iv) monitoring resource utilization to move the organization closer to achieving goals.

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Part B : Problems

1. Spread = UL – LL

= 3RP –2LL –LL

= 3 (RP – LL)

$$= 3\left[\left(\frac{3b\sigma^2}{4i}\right)^{1/3} + LL - LL\right]$$

On substituting the values

$$= i = \frac{8}{360} = 0.0222\% = 0.000222$$

b = Rs.500

$\sigma^2 = (160)^2 = 25600$

$$\Rightarrow \text{Spread} = 3\left[\left(\frac{3\times 500\times 25600}{4\times 0.000222}\right)^{1/3}\right] = \text{Rs.}10{,}529.97$$

i.e. Rs.10,530

2. a. As per the given regression model,

$D_t = c\ r\ EPS_t + (1-c)\ D_{t-1}$

Where the symbols are in their standard use

Year	Y (D_t)	X_1 (EPS_t)	X_2 (D_{t-1})	$X_1.Y$	$X_2.Y$	$X_1.X_2$	X_1^2	X_2^2	Y^2
1999	5.25	13.2	5.0	69.30	26.25	66.00	174.24	25.00	27.56
2000	5.6	14.3	5.25	80.08	29.40	75.08	204.49	27.56	31.36
2001	5.9	15.5	5.60	91.45	33.04	86.80	240.25	31.36	34.81
2002	5.9	14.8	5.90	87.32	34.81	87.32	219.04	34.81	34.81
2003	6.0	14.5	5.90	87.00	35.40	85.55	210.25	34.81	36.00
	28.65	ΣX_1 =72.3	ΣX_2 =27.65	415.15	158.9	400.75	1048.27	153.54	164.54

$\Sigma Y \quad = n\,a + b_1\,\Sigma X_1 + b_2\,\Sigma X_2$

$\Sigma X_1 Y = a\ \Sigma X_1 + b_1\ \Sigma X_1^2 + b_2\ \Sigma X_1 X_2$

$\Sigma X_2 Y = a\ \Sigma X_2 + b_1\ \Sigma X_1 X_2 + b_2\ \Sigma X_2^2$

$28.65 = 5a + 72.3b_1 + 27.65\ b_2$ – (I)

$415.15 = 72.3a + 1048.27\ b_1 + 400.75\ b_2$ – (II)

$158.9 = 27.65a + 400.75\ b_1 + 153.54\ b_2$ – (III)

(i) × 72.3 – (ii) × 5

$\Rightarrow$ $2071.40 - 2075.8 = 0 + (5227.3 - 5241.4)\ b_1 + (1999.1 - 2003.8)\ b_2$

$\Rightarrow$ $14.1\ b_1 + 4.7\ b_2 = +\ 4.4$ – (IV)

(II) × 27.65 – (III) × 72.3

$\Rightarrow$ $11478.9 - 11488.5 = 0 + (28984.7 - 28974.2)b_1 + (11080.7 - 11100.9)b_2$

i.e. $10.5\ b_1 - 20.2\ b_2 = -9.6$ – (V)

(IV) × 20.2 + (V) × 4.7 $(+284.82 + 49.35)\ b_1 + 0 = 88.9 - 45.12$

$\Rightarrow$ $334.17\ b_1 = 43.78$

$\Rightarrow$ $b_1 = +\ 0.1310$

Substitute the value in (IV),

$$b_2 = \frac{4.4 - 14.1 \times 0.1310}{4.7} = \frac{4.4}{4.7} = 0.543$$

Substitute b_1 and b_2 in (I),a $= (28.65 - 72.3 \times 0.131 - 27.65 \times 0.5432) / 5$

$= 4.159/5 = 0.832$

$Y = a + b_1\ x_1 + b_2\ x_2$

$DPS_t = 0.832 + 0.1310\ EPS_t + 0.5432\ D_{t-1}$

b. The above equation indicates that the firm maintains stable dividend policy and defensive in nature.

3. Free cash flow scenario for next 5 years

Rs.in crore

2004	2005	2006	2007	2008
4	1	–2	3	7

P.V of explicit free cash flow up to 2008

$$= \frac{4}{1.15} + \frac{1}{(1.15)^2} + \frac{-2}{(1.15)^3} + \frac{3}{(1.15)^4} + \frac{7}{(1.15)^5}$$

$= 3.48 + 0.75 - 1.32 + 1.72 + 3.48 = 8.12$

P.V of free cash flow of all period considering the cyclical nature of the cash flow

= 8.12 + 8.12 PVIF (15%, 5 yrs) + 8.12 PVIF (15%, 10yrs) + 8.12 PVIF (15%, 15yrs) + . . .

$$= 8.12\left[1 + 0.497 + (0.497)^2 + (0.497)^3 + ...\right]$$

$$= 8.12 \times \frac{1}{1-r} = \frac{8.12}{1-0.497}$$

= Rs.16.14 crore.

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4. (a) Statement showing Calculation of EPS and Price (P_o) under existing plan

EBIT	Rs.40,00,000
Less: Interest	Rs.2,00,000
Earnings Before Taxes	**Rs.38,00,000**
Less: Taxes @ 35%	Rs.13,30,000
Earnings After Taxes	**Rs.24,70,000**
No. of Shares outstanding (N)	6,00,000
EPS	Rs.4.12
K_e	15%
P_o (Rs.4.12/0.15)	Rs.27.47

(b) If the company decides to increase debt by Rs.80,00,000 the company may buy back (Rs.80,00,000/Rs.27.47) = 2,91,226 shares. Therefore, the remaining number of shares would be (6,00,000 – 2,91,226) = 3,08,774. The market price of share may be ascertain as follows:

EBIT	Rs.40,00,000
Less: Interest @ 12% on Rs. 80 lakhs	Rs.11,60,000
Earnings Before Taxes	**Rs.28,40,000**
Less: Taxes @ 35%	Rs.9,94,000
Earnings After Taxes	**Rs.18,46,000**
No. of Outstanding Shares (N)	3,08,774
EPS	Rs.5.98
K_e	17%
P_o (Rs.5.98/0.17)	Rs.35.17

As the price is expected to go up from Rs.27.47 to Rs.35.17, the company may change its capital structure by raising debt and retiring some shares.

5. (a) Revised Operating Statement (Using Contribution approach)

(Amount in Rs.)

Division	Foam	Carpets	Upholstery	Total
Sales Revenue	1,680*	1400	1,200	4,080
Less: Variable Mfg. Costs	1200	700	760**	2660
Contribution (A)	480	700	440	1420
Traceable Costs:				
Fixed Mfg. Costs	-	100	20	120
Administration Expenses	94	76	122	292
Selling Expenses	162	180	202	544
Total (B)	256	356	344	956
Operating Income A-B	224	344	96	464
Less: Common Expenses				230
Net Income				234

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(b) Computation of contribution margin ('000)

$$\text{Contribution Margin Ratio } \% = \frac{\text{Contribution}}{\text{Sales}} \times 100$$

Foam (Rs.480/Rs.1,680)× 100	28.57%	III Rank
Carpets (Rs.700/Rs.1,200) × 100	58.33%	I Rank
Upholstery (Rs.440/Rs.1,200)	36.67%	II Rank

Contribution of Net Contribution Ratio (Rs.'000)

$$\text{Net Contribution Ratio } (\%) \text{ (or) Operating Income Ratio } = \frac{\text{Net contribution}}{\text{Sales}} \text{ x } 100.$$

Foam (Rs.224/Rs.1,680)× 100	13.33%	II Rank
Carpets (Rs.344/Rs.1,200) × 100	28.67%	I Rank
Upholstery (Rs.440/Rs.1,200)	8%	III Rank

It is observed from the above analysis that Foam division's manager argument is in correct when we look at the calculation which shows that even though contribution margin ratio of foam division is lower, the divisions ranking is only second based on the Net Contribution Ratio.

(c) The use of contribution approach for reporting is more realistic for assessing the performance of various divisions as it considers variable and traceable costs only and avoids common costs while finding out profitability. This approach enable the management to rightly interpret the information. Further, pricing of internal transfers at market price will give due credit to specific profits center, i.e. transferor.

Working notes:

1. Computation of Sales revenue from foam division: (Rs.000)

Sales of Foam Division to outside customers	(Rs.1,600 – Rs.200)	Rs.1,400
Less: Variable mfg. costs	(Rs.1,200 – Rs.200)	Rs.1,000
		Rs.400

Mark-up on outside sale (Rs.400/Rs.1,000) × 100 = 40%

Transfer Price of Foam to Upholstery Division (Rs. 200 ×1.4)	Rs.280
Sales of Foam Division to outside customers	Rs.1,400
	Rs.1,680*

2. Variable Mfg. Cost of Upholstery Division (Rs.000)

= (Rs.680 – Rs.200 + Rs.280) = Rs.760**

3. **Computation of Traceable Administration Expenses**

Division	Foam	Carpets	Upholstery	Total
Administration Expenses	134	116	172	422
Less:Common Expenses (10% of Gross Profit)	40	40	50	130
Traceable Administration Expenses	94	76	122	292

4. **Computation of Traceable Selling Expenses**

Division	Foam	Carpets	Upholstery	Total
Selling Expenses	202	210	232	644
Less: Common Expenses (2.5% of sales)	40	30	30	100
Traceable Selling Expenses	162	180	202	544

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6. (a) $EFR = \frac{\Delta}{S_o}\Delta_S - \frac{L}{S_o}\Delta_s - ms_1(1-d)$

Where Δ_s = Rs.1,87.50 lakh

S_1 = Rs.937.50 lakh

$m = \frac{46.8}{750} = 6.24\%$

d = 0.6

$EFA = \frac{200}{750}\times 187.50 - \frac{25}{750}\times 187.50 - 0.0624\times 937.50\times 0.40$

= 50 – 6.25 – 23.4 = Rs.20.34 lakh

(b) Let the debt raised be Rs. x lakh

Equity = (20.35 – x) lakh

New EBIT = 93.75 lakh

Interest = 3 + 0.14x

EAT = 58.9875 – 0.091x

No. of shares $= \frac{(20.35 - x)}{32.175*} + 1001$

= 0.6325 – 0.0311x + 100l

= (10.6325 – 0.0311x) lakh

$EPS = \frac{58.9875 - 0.091x}{10.6325 - 0.0311x} = 5.62$

58.9875– 0.091x = 59.75465 – 0.174782x

58.9875 + 0.08 3782x = 59.75465

0.083782x = 0.76715

$x = \frac{0.76715}{0.083782}$ = Rs.9.16 lakh

x = 9.16 = Debt

Equity = 20.35 – 9.16 = 11.16 lakh

Debt / equity ratio = 0.82

* As per walter approach $= \frac{D + (E-D)r/k}{k}$

$= \frac{2.808 + 1.872\times\frac{0.15}{0.12}}{0.12} = 42.90$

Discount @ 25% $= \left(42.90\times\frac{25}{100}\right) - 42.90$ = Rs.32.175

Expected EBIT = Rs.84 lakh

$\sigma_{EBIT} = 9.165$

Required EBIT = Rs.93.75 lakh

$Z = \frac{x-\mu}{\sigma} = \frac{93.75 - 84}{9.165}$

$Z = \frac{9.75}{9.165} = 1.0638$

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By referring normal distribution tables the probability will be 0.3554

The probability of getting on EPS greater than Rs.5.62 = 0.5 – 0.3554

= 0.1446 (or) 14.46%.

Part C: Applied Theory

1. THE MODELING PROCESS

The following are the major steps in the process of using a model to arrive at the optimal decision:

- Feasibility study
- Model construction
- Compatibility of the model with the tools used
- Model validation
- Implementation
- Model revision
- Documentation.

Feasibility Study

The foremost step in developing a model is to ascertain the feasibility of a model assisting the decisionmaking process. The various points that are required to be considered are

Whether the decision under consideration is a one-time process, or is required to be taken as a routing measure.

- The suitability of the area in which the decision is required to be made, to be supported by a model.
- The possibility of all the relevant variable being unambiguously identified.
- The possibility of all the variables being built-in into a single model.
- The expected effectiveness of the model.
- The acceptability of a model replacing human judgment to the management.
- The possibility of obtaining the required date on an ongoing basis.
- The possibility of integrating the model with the normal decision-making process.
- The costs involved with setting up and running the model, and its comparision with the expected benefits.

If it is feasible to construct an efficient and effective model for the decision process under consideration, and if the model can be easily integrated with the process, the firm can proceed to the next step of constructing the model.

Model Construction

The construction of the model depends on a number of factors. Some of these are

- The decision to be made using the model
- The issues that are relevant for making the decision
- The way in which these issues and factors affect the decision
- The external factors that restrict the decision making process.

Depending on these factors, the input requirement for the model is identified and the numerical and theoretical relationship between variable are specified. This is followed by development of the structure of the model.

Model Compatibility

Once the model is in place, it needs to be made compatible to the tools to be used to implement it. For example, if a particular model is to be solved using computers, the model needs to be programmed and converted to a language that the computer understands.

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Model Validation

A number of test runs are conducted on the model to check whether it produces reasonable accurate results. The test runs may use actual past data of the input variables, and the results generated by the model compared to the actual results. Alternatively, the model may be tested by using results. Alternatively, the model may be tested probability distributions. Test running a model checks the effectiveness of the structure of the model, as well as its predictive ability.

Implementation

The implementation of a model includes integrating it with the normal decision-making process. Further, it needs to be ensured that the results generated by the model are relevant enough for the decision-making to take them into consideration while making a decision.

Mode Revision

No model remains useful for an indefinite period. The relationship between different variables that forms a basis for the model may change over a period of time. External factors affecting a model may also change. Use of the model over a period may provide an insight into its drawbacks. It is necessary that such changes are noted and the model periodically revised to accommodate them. Unless a model is continuously updated, it may lose its relevance.

Documentation

Documentation is way of institutionalization of the knowledge created during the process of developing and installing a model. It involves making detailed, systematic notes at all the stages of the process. The records should be maintained right for the stage when the need for the model was felt, detailing the factors that gave rise to the need. The various ideas considered at different stages needs to be documented along with the reasons for their acceptance of rejection. The various problems faced during the development and implementation of the model, together with their solution should also form a part of the records. Documentation also helps in proper communication between the members of the team working on the development of the model. In addition, it makes the process of revision the model less tedious.

While developing the implementing models, certain issues need to be kept in mind. It is not just necessary to specify the objectives of the model, it is also necessary to build the relative importance of the different objectives into model. For example, the objective may be to maximize the profits of the firm, while restricting the debt taken by it to a certain percentage of the total assets. The model should specify the objective(maximum profits or limited debt) that would be held supreme, if there were a clash between the two. Another important point to be remembered is that the model should preferable focus on some key aspects, rather than be a collection of all relevant and irrelevant data. A focused model is more likely to generate effective decision.

8. ESTABLISHING STRATEGIC CONTROLS

Strategic control focuses on monitoring and evaluating the strategic management process to ensure that it functions in the right direction. In other words, strategic control is concerned with tracking the strategy as it is being implemented, detecting problems or changes in underlying premises, and making necessary adjustments. The purpose of strategic control is to answer the questions such as:

- Are the organization's internal strengths still holding good?
- Are its internal weaknesses still present?
- Has the organization added other internal strengths?
- Does it have other weakness?
- Are the organization's threats still existing and are there any new threats?
- Are the decisions consistent with the organizational policy?
- Are these sufficient resources to achieve the objectives?
- Are the organizational vision, mission and objectives appropriate to the changing environment?

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Thus, strategic control provides feedback about the various steps of strategic management. It enables management to find out whether the strategic management processes are appropriate, compatible and functioning in the desirable direction. Sometimes, strategic control may initiate changes in objectives as well. The four basic types of strategic controls are:

1. Premise control
2. Implementation control
3. Strategic surveillance
4. Special alert control.

These four types of strategic controls are discussed below. The nature of these four strategic control is summarized.

Premise Control

Every strategy is based on predicted conditions or assumptions. These predictions or assumptions are referred to as planning premises, and a firm's strategy is designed around these predicted conditions. Premise control helps to check systematically and continuously whether or not the premises set during the planning and implementation process are still valid. If a premise is not longer valid, than the strategy may have to be changed Premises are primarily concerned with two types of factors. They are:

- **Environmental Factors:** Environmental factors exercise considerable influence over the success of a strategy. Example of environmental factors are inflation, technology, interest rate, government regulation, demographic/social changes, etc. A company has little or no control over such factors and strategies are usually based on key premises about these factors.
- **Industry Factors:** Industry factors affect the performance of companies in a given industry. A few such factors about which strategic assumptions could be made are competitors, suppliers, substitutes barriers to entry, etc. These factors differ among industries, so a company should be aware of the factors that influence success in its particular industry.

Various premises are made about numerous industry and environmental variables. Tracking every premise is unnecessary, expensive and time consuming. So managers should select only those premises that are likely to change and those that would have a major impact on the company and its strategy. After key premises are identified, they should be monitored, and responsibility should be assigned to the persons/departments who are qualified sources of information. Also, premises should be updated(new predications) based on updated information. Finally, key areas of the strategy that are likely to be influenced by the predicted changes should be identified. This is done so that adjustments necessitated by a revised premise can be determined and initiated. For example, senior managers should be alerted about changes in a competitor's pricing policies in order to determine whether the revised pricing or other strategy adjustments are necessary or not. In the same way managers have to be alerted about technological changes like the development of the web, which enable many companies to market their products internationally without even knowing their customer. Such strategic directions enabled these companies to gain a competitive advantage over their competitors.

Implementation Control

The action phase of strategic management is located in a series of steps, programs and moves undertaken over a period of time to implement the strategy. In this phase, programs are undertaken, people are added or reassigned, and resources are mobilized. In other words, managers convert broad strategic plans into concrete actions and results for specific units and individuals as they go about implementing the strategy. These actions take place over an intended period of time designed to achieve long-term objectives.

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The strategic control undertaken within the context is known as implementation control. Implementation control determines whether or not the overall strategy should be changed in light of the unfolding events and results associated with incremental steps and actions that implement the overall strategy. There are two types of implementation control: Monitoring strategic thrusts and milestone reviews.

- **Monitoring Strategic Thrusts:** Implementing broad strategies involves undertaking several new strategic projects that represent part of what needs to be done if the overall strategy is to be accomplished. Through these projects or thrusts, managers can obtain feedback that help determine whether the overall strategy is progressing as planned or whether it needs to be adjusted or changed
- **Milestone Reviews:** Managers often identify the critical milestones that will occur over the time period when the strategy is being implemented. These milestones may be critical events or major resource allocations. In such cases, a milestone review involves a full–scale reassessment of the strategy and the advisability of continuing or refocusing the direction of the company. Thus, the critical purpose of a milestone review is to undertake a through review of a firm's strategy so as to control the company's future.

Strategic Surveillance

Strategic surveillance is designed to monitor a broad range of events inside and outside the company that are likely to threaten the course of a firm's strategy. The basic idea is that some form of general monitoring of multiple information sources should be encouraged. The specific intent of strategic surveillance is to uncover important, Yet unanticipated information. It must be kept unfocussed as much as possible and should be designed as a loose "environment scanning" activity. Trade magazines, trade conferences, intended and unintended observations are all examples of sources of strategic surveillance. Thus, the purpose of strategic surveillance is to provide an ongoing vigilance of daily operations so as to uncover information they may prove relevant to the firm's strategy.

Special Alert Control

A special alert control reflects that need to thoroughly reconsider the firm's basic strategy based on a sudden, unexpected event. Such an occurrence should trigger an immediate and intense reassessment of the company's strategy and its current strategic situation. Many firms develop crisis teams to handle the initial response and coordination needed when faced with unforeseen occurrences. Sometime, when unforeseen occurrences have an immediate effect on the firm's strategy, companies develop contingency plans along with crisis teams to respond to such circumstances.

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Paper – II

Part D: Case Study

1. The following computations are made for analyzing the capital structure of Morepen Laboratories.

(Rs. in crore)

	2002-2003	2001-2002	2000-2001	1999-2000	1998-1999
Total Debt	632.81	523.35	372.48	242.48	158.20
Shareholders fund	399.42	434.22	375.27	180.80	155.86
EBIT	152.93	124.33	85.55	54.98	37.08
Interest	66.28	44.93	34.62	20.61	13.68
D/E ratio	1.58	1.21	0.99	1.34	1.02
Interest coverage	2.31	2.77	2.47	2.67	2.71

Comments:

- The total debt of MLL has been increased by nearly 4 times during the period 1998-1999 to 2002-2003. Subsequently this will increase the liability to pay interest. Whereas, the equity has raised to the extent of slightly over 2.5 times. Thus, the firm is relying more on the outsiders funds.
- The leverage between debt and equity has increased to the greater extent.
- The increase in EBIT is a direct result of increase in sales during the aforesaid period.
- The interest coverage ratio has been consistent. Morepen laboratories EBIT can easily sustained the interest payment obligations. It seems that the ability of the firm to meet the interest obligations seems goods. This conclusion has been arrived by observing the values of interest coverage ratio.
- Over the period MLL slowly increased the debt proportion, but was able to meet the financial burden (clearly seen from steady interest coverage ratio).

2.

Particulars	2002-2003	2001-2002	2000-2001	1999-2000	1998-1999
Dividends (Rs. in crore)	5.43	6.33	5.58	4.69	4.05
No. of shares (N)	18.09/2=9.045	18.09/2=9.045	18.09/10=1.809	15.57/10=1.557	15.57/10=1.557
DPS	0.60	0.70	0.62	3.01	2.60
EPS (Rs.)	5.36	7.25	24.48	18.96	13.49
Dividend payout ratio(%)	11.19	9.65	2.53	15.87	19.27

- The dividend payout ratio has been maintained by MLL is very inconsistent over the period 1998-2003. It means that MLL has other financial obligations that has to be met prior to payment of dividends.
- During the years 1998-1999 and 1999-2000, the DPS MLL decrease but later on from the financial year 2000-2001 it varied with little variations it happens sometimes because, the market conditions do effect the investment decision of the firm. For instance, though a firm has profitable investment opportunities, the bad market conditions may not allow it to mobilize the funds. In such cases the firm will have to depend on the retained earnings and have a very low dividend per share.

From the analysis of Dividend payout ratio it can be inferred that, may be Morepen laboratories is in need of funds because of that it lowered the Dividend payout ratio. In actual practice there is no standard guidelines are their as to what percentage of earnings should be declared as dividends. But consistency in payment of dividends is important from both sharesholder and company point of view.

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3. The average value market price of the share

Particulars\ years	2002-2003	2001-2002	2000-2001	1999-2000	1998-1999
AV market price (Rs.)	18.05	55.35	92.00	197.10	31.90
Market value of equity (Rs. in crore)	163.26	500.64	166.43	306.88	49.67

The various ratios required for Z–score are calculated as follows:

Particulars	2002-2003	2001-2002	2000-2001	1999-2000	1998-1999
$X_1 = \frac{WC}{TA}$	0.263	0.321	0.273	0.311	0.388
$X_2 = \frac{RE}{TA}$	0.370	0.435	0.478	0.390	0.447
$X_3 = \frac{EBIT}{TA}$	0.178	0.153	0.134	0.149	0.130
$X_4 = \frac{MV}{BV\ of\ debt}$	0.26	0.96	0.45	1.27	0.31
$X_5 = \frac{S}{TA}$	0.485	0.445	0.436	0.594	0.588

Z- score $= 1.2\ X_1 + 1.4\ X_2 + 3.3\ X_3 + 0.6\ X_4 + 1.0\ X_5$

Z-2002-2003 = 1.2 (0.263) + 1.4 (0.37) + 3.3 (0.178) + 0.6 (0.26) + 1.0 (0.485)
= 2.06

Z-2001-2002 = 1.2 (0.321) + 1.4 (0.435) + 3.3 (0.153) + 0.6 (0.96) + 1.0 (0.445) = 2.52

Z-2000-2001 = 1.2 (0.273) + 1.4 (0.478) + 3.3 (0.134) + 0.6 (0.45) + 1.0 (0.436) = 3.00

Z-1999-2000 = 1.2 (0.311) + 1.4 (0.39) + 3.3 (0.149) + 0.6 (1.27) + 1.0 (0.594) = 2.77

Z-1998-1999 = 1.2 (0.388) + 1.4 (0.447) + 3.3 (0.13) + 0.6 (0.31) + 1.0 (0.588) = 2.86

- The Z- score has been increased from 2.86(1998-99) to 3.00(2000-2001) because of increase in retained earnings during the year 2000-2001.
- MLL is regarded as a healthy company only during the year 2000-2001. But during other years, it has been identified under the head area of ignorance because the Z-score has been less then 2.99.
- Another factor which work against MLL is all the variables has been increased over a period of time, but they increase non- Linearly. Because of this the Z-score is more fluctuating in nature.

Altman's Z-score practical significance in Indian context :

- This model has been developed way back in 1977, that too taking long-range prediction. From Indian companies point of view and taking current scenerio into consideration it is in the short-term fluctuation will take place and company will be classified as risk within no time. Long-term forecasting and prediction is not more a valuation crieteria atleast from Indian context.
- Another point to be noted is that Altman's has taken only seven variables and five ratios. But as of today their are other variables which will have direct impact on the firm. These variables changes from situation to situation, industry to industy and company to company. The type of environment in which the company is operating also matters a lot.

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4. Journal entries in the books of Morepen Laboratories

(Rs. in lakhs)

Particulars	Debit	Credit
Share capital a/c Dr	4.52	
To Reconstruction a/c		4.52
(Being the reduction in the price of equity share by Re. 0.50 paisa on 9.045 lakh shares)		
Unsecured loans a/c Dr	3.60	
To Reconstruction a/c		3.60
(Being reduction of unsecured loans by 0.025)		
Profit and loss a/c Dr	2.35	
To Reconstruction a/c		2.35
(Being the amount of reconstruction account used to write off the credit balance of profit and loss account)		

Balance Sheet of Morepen Laboratories as on 31st March, 2003

(Rs. in crore)

Liabilities	Amount	Assets	Amount
Share Capital	13.57	Net Block	642.54
(9.045 equity shares or Rs.1.50)			
Reserves & Surplus	378.98	Capital work-in-progress	31.86
Total Shareholders Funds	**392.55**	Investments	75.58
Preference share capital	30.80		
Secured Loans	457.88	Net Current Assets	271.78
Unsecured Loans	140.53		
Total Debt	**598.41**		
Total Liabilities	1021.76	Total Assets	1021.76

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5. A value chain is a linked set of value-creating activities beginning with basic input, moving to a series of value added activities involved in producing and marketing a product or service, and ending with the distributors getting the final goods in to the hands of ultimate consumer. Morepen Laboratories Ltd. has defined its growth path through a constant move-up to the value chain. The path has been designed to move closer to the end users of its products i.e. consumers.

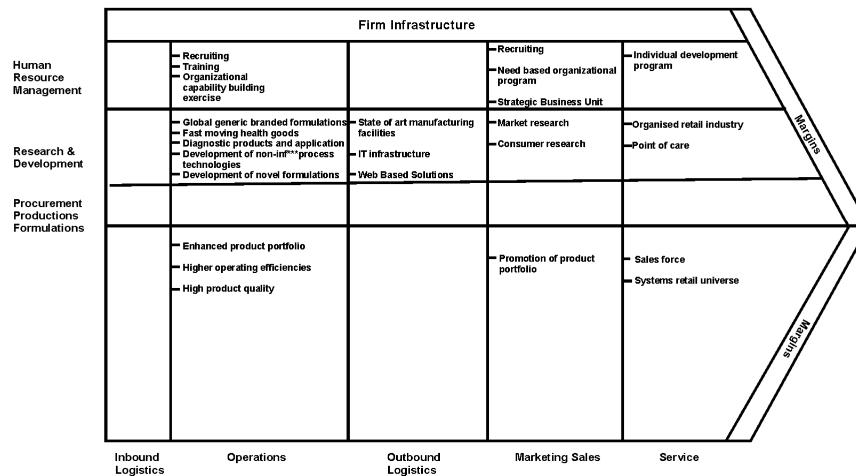
Identifying value activities

Primary Activities

These activities includes Research & development, operation, production and formulations, marketing & sales and service.

Support services: The inputs are provided by the support service that allow the primary activities to take place.

Value Chain Analysis of Morepen Laboratories Limited



The following diagram depict the value chain analysis of Morepen Laboratories Ltd. with relevant observations.

- To ensure that the capabilities of its employees are harnessed in a focused way, the organization has been structured into Strategic Business Units (SBUs) . A corporate management team comprising of Strategic Business Unit heads and the functional heads have been constituted to review the functioning of the organization under the category of human resource management.
- Its infrastructure has been the focus for strengthening the information flow and currently the company is working on web based solution to make the operations more efficient and interactive.
- State of-the-art technology to be offered to the target market (upper middle class consumer) under the brand name "Home Health". This will create the value chain between Research and Development and Logistics.
- A consumer research was launched to study consumer attitudes to health.
- As a continuation of the corporate desire to move closer to the consumer, Morepen has implemented its initiative of entering the organized retailed industry which will have an impact on service it is providing to its customers.

In the recent year MLL shifted its emphasis to the promotion of the product portfolio, inline with strategy. As a consequence there has been a heightened awareness of the sub-brand while reinforcing of the values of Morepen laboratories.

MLL has identified a major potential in the areas of 'point of care' which offers a range of rapid test for all laboratory set-ups.

6. In view of the recent changes in the pharmaceutical industry the future strategy for Morepen Laboratories can be formulated as follows making some assumptions and presumptions:

1. Morepen can venture into multi-faceted business areas from high value bulk drug manufacturing to branded generics, diagnostics and now fast moving health goods with its large infrastructure of distribution and logistics. Because of its well-connected network across the country, systems can been put in place to ensure adequate internal controls and periodic system audit can be undertaken. Further, to strengthen the movement of stocks, debtors' collections and keep a close monitoring of overheads, efforts can be directed towards to update the information technology infrastructure to bring in online management information system. Besides, self-assessment questionnaire can be framed for evaluation of various business processes and systems.

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2. Over the last two years, Morepen has been exploring new horizons beyond the Bulk Drug manufacturing base and has been looking for moving up the value chain and making efforts in setting up a business model, establishing its reach to the ultimate consumer. This has, to a great extent, will help Morepen to understand the new dimensions of business which is much beyond the traditional Pharma business.
3. To align with the changing business scenario, health awareness, consumer expectations etc., the company can launch a number of related products. The success may be very encouraging and the current volumes and value indicates a significant growth prospects in the near future.
4. 'Branding' has always been assuming a great significance across all industry sectors to promote awareness of products and services, in order to achieve premium against un-branded competition, and/or to increase market share. However, branding in the pharmaceutical industry faces different conditions to that of other sectors, primarily due to various regulatory reasons. The scope of opportunities is very huge and the upside is large. It is also believed that switching an off patent product to OTC may generate greater profit than developing a replacement molecule.
5. Since with the growing awareness of Health Management, many Pharma companies have started venturing into health management areas and hence this would surely bring in fierce competition. In such an environment, a nimble early mover will have a head start. Morepen should initiate an opportunity of this to take an early advantage.

Part E: Caselets

Caselet 1

1. No one can predict an industry's life cycle precisely, and any single forecast of performance has to be wrong. But managers and investors can benefits by explicitly following the probabilistic approach to valuing cyclical companies. This approach avoids the traps of a single forecast and makes it possible to explore a wider range of outcomes and their implications.

The following method of valuing cyclical companies involves creating two scenarios. This approach provides an estimated of a company's value and scenarios an estimate that puts boundaries on the valuations. Managers can use the boundaries to think about how they should modify their strategies and possible ways of responding to signals that one scenario was more likely to materialize than another.

Step 1

Construct and value the "normal-cycle" scenario using information about past cycles. Using information about past earnings cycle pay particular attention to the long-term line of operating profits, cash flow, and return on invested capital because this will affect the valuation. Make sure the continuous value is base on a "normalized" level of profit–that is, on the company's long–term flow trend line.

Step 2

Construct and value a "new trend line scenario" based on recent performance. Again, focus most on the long-term trend line because it will have the greatest impact on value.

Step 3

Develop an economic rationale for each scenario, considering factors such as growth in demand, technological changes that will affect the balance of supply and demand, and the entry or exit of companies into the industry.

Step 4

Assign probabilities to the scenarios and calculate then weighted value, basing it on your analysis of the likelihood of the events leading to each of them.

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2. Managers have detailed information about their markets and might thus be expected to do a better job than the stock market at predicting the cycle and reacting appropriately. However, managers do exactly the opposite and exacerbate the problem. Cyclical companies often commit themselves to big capital spending projects just when prices are high and the cycle is hitting its peak. They then proceed to retrench when prices are low. Some develop forecasts that are quite similar to those issuing form equity analysts: upward sloping, regardless of where in the cycle the company is. In doing so, these companies send wrong signals to the stock market.

Rather than spreading confusion, managers should learn to expoit their superior knowledge. They could first improve the timing of capital expenditures and then follow–up with a strategy of issuing shares at the peak of the cycle and repurchasing them at the trough. The most aggressive managers could take this one step further and adopt a trading approach acquiring assets at the bottom of the cycle and selling them at the top. In this way, a typical cyclical industry could more than double its returns.

Caselet 2

1. In general the following factors influences the managers to take up the process of reengineering.

- **Identify breadth levers:** Companies must first identify the activities to include in the process being redesigned that are critical for value creation in the overall business unit. A process can be as narrowly defined as a single activity in a single function or as broadly defined as the entire business system for the business unit. At one end of the spectrum were companies that redesigned the narrowest processes, usually a single activity within a single function, middle-of-the-road projects reengineered intra-functional or cross-functional process and at the far end were companies that redesigned one more processes that comprised most of the critical activities in the business unit.
- **Interchanging depth levers:** The successful redesign of a broad process requires the complete restructuring of the key drivers. An effective restructuring requires a clean-slate approach to process redesign. Only then can companies avoid the classic reengineering pitfall trying to fix the status – GUO. If the redesign plans are sufficiently broad, all the old support systems will become obsolete – from IT systems to employee skills. Starting from scratch, companies can plan and build the new infrastructure required to realize the new design.
- **Committing leadership to change:** Even with sufficient breadth and depth, a reengineering project will fail without the full commitment of senior executives. In the most successful redesigns managers made few compromises and were generous with resources. They saw implementation not as a once-and-for-all effort but as a series of waves washing over the organization for a period of years, leaving a system for continuous improvement in place. Most importantly, these executives invested their own time in the project.

2. The following are the few causes for failures:

- **Measure only the plan:** Though most companies invest a lot of resources in estimating the effects of a redesign on cost, quality, and time before implementation, they rarely follow through with a comprehensive measurement system that can track the new process's performance as it is actually being rolled out. Without this kind of measurement system, it is impossible to tell if and why implementation is succeeding or failing. A good tracking system should measure location-specific results and individual employee performance.
- **Overlook communication:** Companies always underestimate the level of communication that must occur during the implementation stage. They tend to use only one method of communication, like memos, speeches, or PR videos. More often than not, they neglect the more time-consuming, but effective small-group format in which employees can give feedback and air their concerns. It is essential to create a comprehensive communications program that uses a variety of methods of communication. It helps to assign a top-level manager to develop and implement an ongoing communication programs.

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- **Settle for the status GUO:** Companies generally strive to develop redesigns that are radically new. But, more often than not, they never translate their aspirations into reality. Most companies have a difficult time thinking outside their own skill level, organizational structures, or system constraints. Moreover, companies that do come up with innovative approaches find them watered down by political infighting during this implementation stage. Incentives and information technology, in particular, can be politically sensitive areas.
- **Assign average performers:** Companies tend to enlist average performers most often from headquarters – for the project. The reason is that performance in the business unit will falter if they assign top performers to the redesign full time.

Measures that a company should take to avoid such mishaps:

1. Set an aggressive performance target. The target must span the entire business unit to ensure sufficient breadth.
2. Commit 20 percent to 50 percent of the CEO's time to the project.
3. Conduct a comprehensive review of customer needs, economic leverage points and market trends.
4. Assign an additional senior executive to be responsible for implementation.
5. The senior executive should test the design's overall impact as well as the implementation process, while at the same time building enthusiasm for full implementation.

Caselet 3

1. For a long time, owning a personal four-wheeler was considered a luxury in India, and a limited road network with poor road surface did not help matters much. Production showed only a very gradual upward curve from the 1950s until the early 1980s before Maruti came into the scene.

Inspite of general recession and inflation, steep decline in car prices with the government sharply reducing duties and taxes the demand for passenger cars increased enormously.

The automobile industry is facing severe crisis in terms of both technically and functionally to meet the demand requirement. The government as well the industry should find out solutions to the following problems to meet the demand projections and make the automobile more prospective.

1. All is not smooth sailing for the automotive industry, the continuous depreciation of the rupee vis-à-vis foreign currencies has made steel even costlier. The increase in excise on steel and pig iron has also jacked up costs. Taxes, including customs duties, contribute to two-thirds of the total vehicle price.
2. Another factor acting as a drag on the automobile industry to meet the growing demand of customers is that, its growth is intrinsically linked to the growth of the ancillary units producing components. More than 50 percent of the components that go into the finished products are manufactured basically by ancillary units. These ancillary units are unable to keep pace, either technologically or financially, with the needs of the automobile industry.
3. The government should take policy initiatives to improve the technology, productivity and competitiveness of this sector. The authorities should remember that the automobile industry has, the world over, spearheaded a nation's economic development and established its international competitiveness.
4. A strong domestic manufacturing base is a prerequisite for successful exports and it is necessary to accumulate surplus to build-up the superstructure. Towards this end, the industry has accorded priority to producing high-quality, fuel-efficient, safe and environment friendly vehicles of international standards.

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2. The following strategic factors that helped Maruti Udyog Limited to become a market leader within a very short span of time:

- To provide fuel efficient, low-cost vehicles, which were reliable and of high quality
- Maruti has transformed the concept of after sales service in the Indian automobile industry. The company made sure that the relationship with the customer does not end with the purchase of a vehicle. It has built–up an extensive network of showrooms, dealer workshops, and authorized service stations, to ensure that no matter where the customer is they are never far away from a Maruti Authorised Service Station.
- Reducing the cost of manufacturing through superior practices, enhanced focus on quality and emphasis on 'doing it right first time' on the shop floor.
- Reducing the cost of components through aggressive localization, value analysis and value engineering and better inventory management.

MUL has used IT to enhance efficiency of operations on the one hand and improve customer interface on the other. It provided benefits across the value chain. Major areas of IT implementation were as follows:

– Demand Planning and Management: By capturing and integrating various demand related information, this system will enable better consensus forecasts at various levels of product mix.

– Streamlining the warehouse and operations of the spare parts business.

– Extranet connecting all dealerships provided a competitive edge and support for New Business Initiatives.

– Customer Call centers should be added to the existing network so that customers and prospective customers are able to interact with the company through a toll free telephone number.

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Model Question Paper IV

Time: 3 Hours **Total Points: 200**

Paper I

Part A: Basic Concepts (30 Points)

Answer all the questions. Each question carries one point.

1. The Marakon approach to valuation of firms is based on market-to-book ratio model. According to this approach, shareholders wealth

a. Increases with the increase in the ratio of market value to book value of the firm

b. Decreases with the increase in growth rate

c. Increases only if return on equity is greater than cost of equity

d. None of the above

e. Both (a) and (c) above.

2. Which of the following factors will have an adverse effect on the value of firm as per Alcar model, if other factors remain same?

a. Rate of growth of sales.

b. Incremental investment in fixed assets.

c. Value growth duration.

d. Operating profit margin.

e. None of the above.

3. The required rate of return is the return shareholders demand

a. For the value of common stock by looking at its current dividend and making assumptions about any future dividends that it may pay

b. For the valuation of stock on the assumption that dividends are received at the end of the period

c. To compensate for the time value of money tied-up in their investments and the certainty of the future cash flows from these investments

d. To compensate the time value of money tied-up in their investment and the uncertainty of the future cash flows from these investments

e. Both (a) and (c) above.

4. Which of the following is/are not valid assumption(s) of capital market equilibrium approach to the theory of capital structure?

a. The ratio of debt to equity of a firm can be changed by issuing debt to repurchase stock or issuing stock to pay–off debt.

b. The firm has a policy of retaining 100 percent of its earnings.

c. The expected values of the subjective probability distribution of expected future operating earnings for each company are the same for all investors in the market.

d. The operating earnings of the firm are neither expected to grow nor decline.

e. Both (b) and (d) above.

5. Which of the following is/are the reasons that made Activity Based Costing (ABC) an important cost management tool?

a. It helps in capturing the overhead costs which miss our attention in traditional costing.

b. Profitability of products and services is more accurately measured.

c. As global competition increases, product mix, pricing and other decisions require better product cost information.

d. Both (a) and (b) above.

e. Both (b) and (c) above.

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Use the following information to solve problems 6 and 7

The balance sheet (based on market values) of Reebop, which has 1,000 outstanding shares is as follows:

Balance Sheet Based on Market Values

Liabilities	Rs.	Assets	Rs.
Equity	60,000	Cash	10,000
		Other Assets	50,000
	60,000		60,000

6. Reebop has declared a dividend of Rs.3 per share. The stock goes ex-dividend tomorrow. What will be its ex-dividend price? (Assume no taxes)

a. Rs. 54.00.

b. Rs. 56.00.

c. Rs. 57.00.

d. Rs. 59.40.

e. Rs. 63.00.

7. Assume capital gains are not taxed but dividends are taxed @ 30% and taxes are withheld when dividends are paid. If Reebop is going to pay a dividend of Rs.4, what is the ex-dividend price?

a. Rs. 55.20.

b. Rs. 57.20.

c. Rs. 62.40.

d. Rs. 64.80.

e. None of the above.

8. Which of the following is not an assumption of Black and Scholes model of option pricing?

a. The stock pays no dividend.

b. There are no restrictions or penalties for short selling.

c. The risk-free interest rate is known with certainty.

d. There are no transaction costs and taxes.

e. The stock price is continuous and follows standard normal distribution.

9. According to the trade-off theory, while choosing the debt-equity ratio, financial managers often look at the trade-off between

a. The tax shelter provided by uncommitted reserves and debt service coverage ratio.

b. The profitability of the company and its debt component in capital structure.

c. The interest coverage ratio and cash flow coverage ratio.

d. The tax shelter provided by debt and the cost of financial distress.

e. None of the above.

10. Which of the following is not a key internal device for minimizing agency costs?

a. Separation of management and control.

b. Managerial labor market.

c. Internal monitoring.

d. Management compensation contracts.

e. None of the above.

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11. If the financial markets are efficient and all available information is reflected in the price of the security, then the true estimate of the value is

a. The realization value of the security

b. Difficult for the investor to estimate

c. The realization value or the book value, whichever is higher

d. The market price of the security

e. None of the above.

12. Option (Call and Put) valuation and warrant valuation differ in one fundamental respect. Which of the following is the difference?

a. With the exercise of an option, there is an increase in the number of shares of the company or in its networth. With the exercise of a warrant, however, the number of shares decreases and there is a cash outflow to the firm.

b. With the exercise of an option, there is no change in the number of shares of the company or in its networth. With the exercise of a warrant, however, the number of shares increases and there is a cash infusion into the firm.

c. With the exercise of an option, there is a decrease in the number of shares of the company or in its networth. With the exercise of a warrant, however, the number of shares increases and there is a cash infusion into the firm.

d. With the exercise of an option, there is no change in the number of shares of the company or in its networth. With the exercise of a warrant, however, the number of shares decreases.

e. None of the above.

13. According to RBI, which of the following conditions have to be satisfied by a SSI unit to be classified as sick unit?

i. The Principal or interest in respect of any of its borrowal accounts has to remain overdue for periods exceeding 2½ years.

ii. The Principal or interest in respect of any of its borrowal accounts has to remain overdue for periods exceeding 2 years.

iii. There should be erosion in networth due to accumulated cash losses to the extent of 50 percent or more of its peak networth during the preceding 2 accounting years.

iv. There should be erosion in networth due to accumulated cash losses to the extent of 50 percent or more of its peak networth during the preceding 3 accounting years.

a. Only (i) above

b. Both (i) and (iii) above

c. Both (ii) and (iii) above

d. Both (i) and (iv) above

e. Both (ii) and (iv) above.

14. Which of the following statements is/are not correct with respect to different methods of fixing transfer pricing of a product?

a. Cost price based transfer prices for inter-divisional transactions can be based on actual costs or standard cost.

b. Market price based transfer prices induces the producing divisional manager to have an efficient control on production costs, as excess costs cannot be passed on to the buying division.

c. Market price based transfer prices requires observations of wide range of market prices for almost identical products or components.

d. Under dual pricing the profit contributions of the division effectively measures the divisional performance.

e. None of the above.

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15. From the information given below, what is the upper control limit as per Miller and Orr model? (Assume 360 days in a year.)

Lower limit of cash balance	Rs.25,000
Annual yield on securities	10%
Fixed transaction cost	Rs.800
Variance of change in daily cash balance	40,000

a. Rs.37,560.
b. Rs.38,260.
c. Rs.38,560.
d. Rs.38,955.
e. Rs.39,260.

16. The difference between the pre-strategy and post-strategy value of the business is referred to as

a. Market value added
b. Economic value added
c. Strategy value added
d. Owner's value added
e. Differential value added.

17. Cultural, legal-political, and economic conditions may dictate different optimum operating practices from one country to another. This leads to adoption of

a. Multi-domestic strategy.
b. Global strategy.
c. Nationalistic strategy.
d. Transnational strategy.
e. Regional strategy.

18. Which of these decision-making modes is characterized by reactive solutions to existing problems, rather than a proactive search for new opportunities?

a. Entrepreneurial mode.
b. Planning mode.
c. Adaptive mode.
d. Logical instrumentalism mode.
e. Operative mode.

19. Which component in a mission statement represents an organization's basic beliefs, values, aspirations, and ethical priorities?

a. Philosophy.
b. Self-concept.
c. Concern for public image.
d. Culture.
e. Technology.

20. Which of the following gives the company the reason for its existence?

a. Mission.
b. Objectives.
c. Strategy.
d. Policies.
e. Programs.

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21. Consider the following, which decide the strategies and tactics for an organization:

i. Vision

ii. Plans

iii. Goals

iv. Mission

Which of the following is correct when the above are arranged in ascending order?

a. (i), (ii), (iii) and (iv) above.

b. (i), (iv), (ii) and (iii) above.

c. (i), (iv), (iii) and (ii) above.

d. (iv), (i), (ii) and (iii) above.

e. (iv), (i), (iii) and (ii) above.

22. Which of the following responsibilities of business comes under "Should Do" category?

a. Economic.

b. Legal.

c. Ethical.

d. Discretionary.

e. Both (a) and (b) above.

23. Which of the following features of a market encourages the firms to enter the market?

a. High competitive advantage, high risk, high market attractiveness.

b. Low competitive advantage, low risk, high market attractiveness.

c. High competitive advantage, high risk, high exit barrier.

d. Low competitive advantage, high risk, high market attractiveness.

e. High competitive advantage, low risk, high market attractiveness.

24. Which of the following strategies is not a defensive strategy?

a. Harvest.

b. Turnaround.

c. Divestiture.

d. Bankruptcy.

e. Concentration.

25. As per BCG matrix, SBUs whose relative competitive position (market share) is high, and market growth rate is low, are known as

a. Stars

b. Dogs

c. Cash cows

d. Question marks

e. Generation.

26. As divisional operations overweigh, firms encounter difficulty in controlling the structure due to sheer diversity, size and increasing number of units. In this situation the recommended organization structure(s) is/are

a. Functional

b. Divisional

c. Strategic Business Unit (SBU)

d. Matrix

e. Both (b) and (c) above.

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27. Which of the following does not support the contingency approach to strategic choice?

a. A downturn in the economy.

b. A labor strike.

c. A technological break through.

d. Change in firm's management.

e. Shortage of critical material.

28. Which of the following statements is/are correct with regard to competitive scope of the value chain?

i. In segment scope, the buyers are served by a variety of products.

ii. The extent to which activities are performed by independent firm instead of in-house is analyzed under vertical scope.

iii. In industry scope the firms view with a coordinated strategy in the range of related industries.

a. Only (i) above

b. Only (ii) above

c. Both (i) and (iii) above

d. Both (ii) and (iii) above

e. All of (i), (ii) and (iii) above.

29. If a firm believes in and prefers an internal emphasis for maximizing strengths, which of the following alternative strategies hold considerable promise in Quadrant III of the Strategy and Selection Matrix?

a. Concentration.

b. Market development.

c. Product development.

d. Innovation.

e. All of the above.

30. Which of the following statements regarding leverage ratio is/are correct?

a. Reduction of interest expenses increases the times interest earned ratio.

b. Increase in spontaneous liabilities does not have impact on total debt-equity ratio.

c. Increase in lease obligations increases fixed charge coverage ratio.

d. Decrease in leverage ratio improves profitability.

e. Both (a) and (d) above.

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Part B: Problems (50 Points)

1. M/s. Calico Infotech Inc is currently engaged in manufacturing four products. Details of the four products and relevant information are given below:

Particulars	Product			
	Stereo headphones	External Modem	UPS	Foot pedals
Output in Units	120	100	80	120
Cost per unit:				
Direct Material (Rs.)	40	50	30	60
Direct Labor (Rs.)	28	21	14	21
Machine Hours (per unit)	4	3	2	3

All the four products are usually produced in production runs of 20 units and sold in batches of 10 units each.

The production overhead is currently absorbed by using machine hour rate, and the total of the production overhead for the period has been analysed as follows;

Particulars	Amount (Rs.)
Machine Department Cost (rent, business rates, depreciation and supervision)	10,430
Set-up cost	5,250
Stores consumables	3,600
Inspection / quality control	2,100
Materials handling and dispatch	4,620
	26,000

You have ascertained the following 'Cost Drivers' to be used for the overhead costs:

Cost	Cost Drivers
Set-up costs	No. of production runs
Stores & consumables	Requisition raised
Inspection/quality control	No. of production runs
Materials handled and dispatch	Orders executed

The number of requisitions raised on the stores was 20 for each product and the number of orders executed was 42, each order being a batch of 10 units of a product.

You are required to find out:

a. The total costs for each product if all overhead costs are absorbed on the basis of machine hour.

b. The total costs for each product using Activity-Based Costing.

c. The differences in the unit product costs from the figures in sub-para (a) and (b) above, and comment on any conclusions which may be drawn on profit implications.

(2 + 6 + 4 = 12 points)

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2. M/s. Galgotia Infotech Limited expects with some degree of certainty to generate the following net income and to have the following capital expenditure during the next five years:

(in Rs. thousands)

Year	1	2	3	4	5
Net Income (PAT)	2000	1500	2500	2300	1800
Capital Expenditure	1000	1500	2000	1500	2000

The company currently has 1 million shares of common stock outstanding and pay dividends of Re.1 per share.

You are required to determine

a. Dividend paid and external borrowing required in each year if dividend policy is treated as a residual decision. The company maintains the D/E ratio of 2:1.

b. The amount of external borrowing in each year that will be necessary if the present dividend per share is maintained.

c. Dividend per share and the amounts of external borrowing that will be necessary if a dividend payout ratio of 50 percent is maintained.

d. Under which of the three dividend policies are (i) aggregate dividends maximized (ii) external borrowing minimized?

(2 + 2 + 2 + 1 = 7 points)

3. M/s. Bharat Forge and Gear Company has Rs 7.4 million in long-term debt. The details of the same are as follows:

Particulars	Amount (Rs. '000)
15% regular bonds, Rs.1,00,000 p.a payable towards principal	2,400
13% first mortgage bonds, Rs.1,50,000 p.a payable towards principal	3,000
18% subordinated debentures with a maturity of 10 years	2,000
	7,400

Bharat's common stock has a book value of Rs 8.3 million and a market value of Rs.6.0 million. The corporate tax rate is 35 percent. Bharat is in a cyclical business and its expected EBIT is Rs.2.0 million with a standard deviation of Rs.1.5 million. The average debt-to-equity ratio of other companies in the industry is 0.47.

Required:

a. Determine the times interest earned and the debt-service coverage of the company at the expected EBIT.

b. What are the probabilities these two ratios will go below one-to-one?

c. Does Bharat has too much debt? Substantiate.

(4 + 3 + 2 = 9 points)

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4. The extract of balance sheets and income statements of M/s. Ford Company over the last 3 years are as follows:

(Rs. in thousands)

Particulars	2001	2002	2003
Cash	561	387	202
Receivable	1963	2870	4051
Inventories	2031	2613	3287
Current Assets	4555	5870	7540
Net Fixed Assets	2581	4430	4364
Total Assets	**7136**	**10300**	**11904**
Payable	1862	2944	3613
Accruals	301	516	587
Bank loan	250	900	1050
Current Liabilities	2413	4360	5250
Long-term debt	500	1000	950
Shareholders equity	4223	4940	5704
Particulars	2001	2002	2003
Total Liabilities and equity	7136	10300	11904
Sales	11863	14952	16349
Cost of goods sold	8537	11124	12016
Selling, general and administrative expenses	2349	2659	2993
Profit before taxes	977	1169	1340
Taxes	390	452	576
Profit after taxes	587	717	764

You are required to:

a. i. Prepare common size statement and

ii. Perform index analysis.

b. Evaluate trends in the company's financial condition and performance.

(8 + 2 = 10 points)

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5. The following is an extract from the financial statements of M/s. Ganguly Ltd., prepared in historical cost accounting method:

Income Statement for the year ended December 31, 2002

Particulars	Rs. in '000
Sales Revenue	1,500
Opening Stock	150
Purchases	1,200
Cost of Goods Sold	1,150
Depreciation	50
Operating Expenses	200

Balance Sheet as on December 31, 2002

Particulars	Rs. in '000
Plant & Machinery	500
Accumulated Depreciation	100
Closing Inventory	200
Accounts Receivable	160
Cash at Bank	40
Equity Capital	400
Reserves & Surplus	300
Accounts Payable	100

The plant & machinery was purchased on January 01, 2001 and is to be depreciated over its estimated useful life of 10 years using SLM. The balance of the reserves & surplus was Rs.2 crore at the beginning of the year 2002. Inventory turnover on an average is two months.

The applicable price indices are given below:

Period	Inventory	Fixed Assets
31-12-2002	142	104
31-12-2001	-	90
01-01-2001	-	80
Average for 2002	130	96
Average for Nov/Dec'01	120	-
Average for Nov/Dec'02	140	-

You are required to reconstruct the financial statements as per the CCA method. Ignore MWCA (Monetary Working Capital Adjustment) and Gearing adjustment. All workings should form part of your answer.

(12 points)

Part C: Applied Theory (20 Points)

1. "A firm faced with imminent bankruptcy has two alternatives to choose from: Reorganization or liquidation." Discuss the various facets of liquidation approach.

(10 points)

2. Changes involve actions based on a carefully thought out process that anticipates future difficulties, threats and opportunities. Discuss the various steps involved in the change process.

(10 points)

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Paper II

Part D: Case Study (50 Points)

Read the case carefully and answer the following questions:

1. Comment on the implications of the recent budget proposals on the profitability of Cement Industry.

(10 points)

2. Determine the free cash flows for ACC for the years 2000, 2001 and 2002.

(8 points)

3. Determine the duration of weighted operating cycle of ACC Ltd. for the year ended 31/03/02 and comment in comparison to the industry data. Make suitable assumptions wherever necessary and state them.

(14 points)

4. Determine the value of equity of ACC as on 31-03-02 using Black and Scholes model. The standard deviation of asset values and continuously compounding risk-free interest rate may be taken as 35% and 8% respectively. Market price of the assets is expected to be more than book value by 10%.

(8 points)

5. Comment on the long-term strategy for ACC from the given information on industry and company.

(10 points)

One of the oldest of brick and mortar industries, the Indian cement sector is now hogging the limelight as leading players are gearing to face the new economy. The cement produced by the industry is regarded as a world-class product made by indigenous technology at competitive prices. However, the cement sector has undergone a veritable metamorphosis after the decontrol. Further, it witnessed a blistering pace of growth in the succeeding years and now the industry is estimated to have a turnover of Rs.25,000 crore.

Virtually thrown open to market forces, the sector stands witnesses to large-scale consolidation moves via. acquisitions, mergers or hostile takeovers. With MNCs eyeing for a pie in the growing Indian cement market, the competitive milieu is ready for a change.

Industry Structure

India is world's second largest cement producing country, next only to China (America closely catching up).

As of Mar '02, there are 124 large cement plants belonging to 54 companies, with an installed capacity of 135.03 million tonne. Of these, 54 plants have a capacity of one million tonne or more. In addition there are over 300 mini plants with a total installed capacity of about 11.10 million tonne. A plant is categorized as mini plant if its capacity is less than 1.98 lakh tonne.

The top five industry groups - Birla group, Larsen & Toubro, Gujarat Ambuja, India Cements and Jaiprakash Industries (through its subsidiary Jaypee Rewa Cement) controls over 60% of the total cement capacity.

The Birla group controls 22%, while Gujarat Ambuja (including ACC's 10%) controls 17% whereas L & T controls for about 12.6% and India Cements group control about 5.34% of the installed capacity of cement in India.

Region-wise cement production

Region	% of production
Western	40
Southern	31
Rest of India	29

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Cost Dynamics

Limestone, coal, freight, electricity and furnace oil are the major cost factors. As per standard input-output norms, to produce one tonne of cement, 1.5 tonne of limestone, 0.25 tone of coal, 120 kwh of power and 0.05 tonne of gypsum are required. [1]

As for as limestone is concerned, the major cost is the royalty paid to the central government and cess levies on royalties charged by the state governments.

Coal constitutes around 35-40% of the production cost of cement. India's coal has low calorific value and high ash content. As the cost per calorie of imported coal compares favorably with domestic coal, the industry also resorts to import.

Cement is power-intensive, electricity charges accounting for nearly 16% of the operating costs. As state governments usually supply power, the tariff varies from state to state and location to locations. Rising power costs and frequent power cuts have forced major players in the sector to set-up captive power plants.

With freight costs at 15% of the cost, plants are ideally located closer to the lime-stone quarries. However, this results in substantial differential in prices within the country.

As the cement industry is highly capital-intensive, leading players have leveraged on their balance sheets and have huge loan exposure. The total debt exposure of Indian cement industry is about Rs.15,000 crore. Hence, a small increase in their interest cost will severely affect their bottom lines. Likewise, excise duty on cement at present is Rs.350 per tonne for large plants fetching a revenue of over Rs.3,200 crore to the central exchequer.

Rationalization of Supplies

Rationalization of supplies to improve cement realizations worked quite well in FY 2000-01. However, of late this does not work, as almost all the major players has increased their capacity. Hence, they would prefer to increase the production and dispatches, and thereby their capacity utilization, to get the maximum benefit out of the increasing demand.

In the 15 months ended June '02, the capacity of large plants have increased by 12.76% to 137.03 million tonne. But demand during this period had grown only by single digits, thereby putting pressure on capacity utilization.

The southern region has been the worst hit, though this region had the privilege of higher prices earlier due to rationalization of supplies. Of late, the cement prices have softened in south and have virtually crashed in Andhra Pradesh and Tamilnadu. Some local brands are available around Rs. 100 per 50-kg bag in Chennai, while established brands are offered at around Rs. 120 per bag as against Rs. 130-140 per bag in Mumbai.

Current Scenario

Cement production by large plants increased by 9.0% to 9.56 million tonne in Jan '03 from 8.77 million tonne in Jan '02. The cement dispatches during this period increased by 9.8% to 9.63 million tonne.

The cumulative cement production for the ten months ended Jan '03 increased by 9.6% to 91.15 million tonne while the dispatches during this period grew by 9.3% to 90.99 million tonne. In the twelve months ended Jan '03, the cement production increased by 10.7% to 99.70 million tonne, while dispatches grew by 10.2% to 99.90 million tonne.

Grasim Industries started year 2003 with impressive 32.04% increase in cement dispatches in Jan '03 to 10.86 lakh tonne, while its production grew by 28.72% to 10.85 lakh tonne.

Gujarat Ambuja followed suit, with 23.8% increase in dispatches to 8.47 lakh tonne and 28.8% growth in production to 8.54 lakh tonne during this period. Ambuja Cement Eastern reported 7% rise in production and 20% surge in dispatches to 1.36 lakh tonne and 1.39 lakh tonne in Jan '03 over Jan '02. During this period, Ambuja Cement Rajasthan reported remarkable 43% jump in production and dispatches to 1.52 lakh tonne and 1.50 lakh tonne respectively. As a result, the cement production and dispatches of Ambuja

[1] The above case is prepared only for the purpose of examination and not to illustrate either effective or ineffective performance of the company. The case contains real information adapted and combined with other information to generate discussion or analysis on the desired topics.

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group rose by 27% and 26% to 11.42 lakh tonne and 11.36 lakh tonne respectively in Jan '03 over the corresponding previous year period.

ACC reported 11.68% rise in dispatches to 11.95 lakh tonne while its production grew by 9.07% to 11.54 lakh tonne. L & T reported 11.6% increase in dispatches to 9.6 lakh tonne while its production came down by 1.05% to 9.4 lakh tonne.

There has been a spurt in the demand for white cement compared to total, the requirement for it is insignificant but the margins are higher. The major producers for white cement are Grasim and JK Corp.

Cement industry turned around in FY 2001-02 with a spectacular 9.34% growth in production to 102.35 million tonne. During the above period, dispatches (including exports) went up by 9.6% to 102.41 million tonne. In contrast, the year 2000-01 witnessed one of the worst periods for the Industry in the past decade, in terms of demand growth, recording a negative growth in dispatches (excluding exports) by 2.04% to 90.17 million tonnes.

The industry hopes that the cement sales to increase to 110 million tonne in FY 2002-03. The industry expects that the government will buy 6 million tonne for its road projects in the next two years, while reconstruction activity in Gujarat consumes 0.7 million tonne per month. Further, the growth in demand from rural sector for housing is also encouraging.

The capacity additions for eleven months ended Feb'02 was 13.51 million tonne, representing 11.11% of the capacity as of Mar '01. Of this, while green field additions were 7.4 million tonne, while brown field expansions were 6.91 million tonne while capacity deration was 0.8 million tonne. As a result, the capacity of large cement plants zoomed from 121.52 million tonne in Mar '01 to 135.03 million tonne in Feb '02.

Region wise, cement production grew by 11% in North, 10% in East, 9% each in South and West and by 6% in Central region in the eleven months ended Feb '02. On the other hand, cement consumption showed different trends. While Eastern region recorded a spectacular 19% growth in cement consumption, Northern Region recorded 14% growth in the ten months ended Jan '02. During the above period, Western region matched All India growth rate of 8% while Southern region trailed with 7% growth whereas Central Region recorded 3% fall in cement consumption.

CRISIL has projected that the demand growth will be the least in the Southern Region at 6.9% compared to 9.4% in North, 8.4% in east and 7.8% in west between 2001-02 and 2003-04. During the above period, the overall demand for cement is expected to grow by 8% p.a.

Value Addition

RMC (ready Mix Concentrate) is gaining market acceptability, giving hope for better margins and major players are quick into action. Slag cement like fly ash cement and steel slag cement, and blended cements, cement wherein the costs are comparatively less, also improve margins.

Of late, the share of RMC and blended cements in the total cement demand is steadily, albeit slowly, increasing, with concerted focus on such products by the industry majors on account of their increased margins. For instance, the share of Portland Pozzolona Cement (PPC) increased from 26% in 2000-01 to 35% in the quarter ended June '02.

However, the concept of RMC has caught up well in south. Companies like India Cements, Madras Cements and Chettinad Cements are focusing more on RMC to improve margins. India Cements has doubled its RMC capacity from 35198 Cubic Metres (cu.M) per annum to 72,000 cu.M p.a recently and plans to further expand its RMC business in phases across the southern states. Likewise, Chettinad Cements has commissioned 30 cu.M per hour capacity RMC plant in Madukarai in Tamilnadu.

Exports

The cement exports fell marginally by 3.8% to 2.02 million tonne during the eight months ended Nov '02 over the corresponding previous half year period. However, export of clinker surged by 91.3 to 1.97 million tonne. Together, the export of cement and clinker registered 27.5% rise to 3.99 million tonne during the above period.

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The cement exports increased by 7.9% to 3.38 million tonnes in FY 2001-02, while clinker exports during this period fell by 11.6% to 1.76 million tonnes. As a result, the cement and clinker exports (together) increased marginally by 0.3% to 5.14 million tonnes during the above period.

The Union Budget 2002 has reduced the customs duty on Cement from 25% to 20%. Due to various infrastructure bottlenecks and the transport and handling problems, this is not likely to trigger large-scale cement imports. Nevertheless, it is likely to act as a dampener to sharp increase in domestic cement prices.

Critical Success Factors

Better cost control, lowering debt-equity ratio caused by funding of acquisitions and greenfield projects primarily through borrowings and better capacity utilization are critical success factors.

Freight and transport costs being significant in cement industry, efficient logistics management is equally critical.

With power and fuel costs exceeding 21% of the sales, units with captive power plants have a distinct advantage. This is particularly because of unreliable supply from SEBs, that comes at a huge cost, as against reliable and relatively low cost captive power plants.

With growing interests shown by MNCs in the Indian market, the competitive milieu is shifting towards companies with deep pockets who can absorb temporary losses.

Demand Drivers

India's per capita consumption is about 90 kg compared to the world average of 250 kg. This implies great growth potential for the domestic industry.

With 60% of the demand coming from the housing sector, the fortunes of cement industry are closely linked to it. Demand will also improve due to new infrastructure projects like ports, roads and highways.

The roadways and highways project in general, and the golden quadrilateral project in particular, has generated significant demand for cement in the last couple of years and continues to propell demand for FY 2002-03 also.

With nearly Rs.8,00,000 crore worth of investments likely in electricity generation in the coming decade, the overall prospects of the growth in demand appears bright.

Mergers and Acquisitions

The Aditya Birla group has acquired 14.48% stake in L & T and in Oct '02 decided to make an open offer to acquire further 20% stake at Rs.190 per share. Other significant M & A in the cement industry includes the acquisition by MNC Lafarge of Tisco's 1.7 million tonnes p.a. (mtpa) cement division, the hostile take over of 1.8 mtpa Rasi Cements by India Cement, the picking up of a strategic stake in ACC by Gujarat Ambuja and the acquisition of 1.4 mtpa Narmada Cement by Larsen & Toubro (L&T).

In Dec '01, ACC bought 50% stake in Eternit Everest from Belgium based Etex group @ Rs. 22 per share. With this acquisition, Eternit Everest became a subsidiary of ACC as the latters stake in the former has increased to 76%. ACC need not make an open offer to public, as the change in shareholding is between the promoters.

In Jan '02, India Cements decided to sell its 94.7% stake (held along with its subsidiary ICL Securities) in Sri Vishnu Cements for Rs. 147.3 per share aggregating Rs.349 cr to Zuari Cement.

Future Outlook

The industry is forging ahead with spectacular spurt in demand, which is likely to remain in double digits in FY 2002-03, though some in the industry peg it at 8%. Even this growth rate is spectacular, and the industry has witnessed significant gains in terms of operating costs due to higher capacity utilization.

The industry's efforts in terms of consolidation, branding, blending, RMC and more important, strict cost control would retain its core strength, which will get further strengthened by improvement in realizations, which are likely in Sept-Oct'02. Meanwhile, it's merry time for another round of consolidation, with both domestic and foreign majors on an acquisition spree.

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Statistics

Cement and Clinker Exports

(Million Tonnes)

	Cement	Clinker	Total
Apr-Nov'02	2.02	1.97	3.99
Apr-Nov'01	2.1	1.03	3.13
% Change	–3.8%	91.3%	27.5%

Cement Production & Dispatches by Large Cement Plants

(Million Tonnes)

Month*	**Production**	**% Change**	**Dispatches**	**% Change**
April	9.42	10.56	9.58	11.53
May	9.87	9.67	9.69	7.55
June	9.31	3.91	9.36	4
July	9.13	24.05	9.09	27.49
August	8.28	12.2	8.16	8.66
September	8.3	0.24	8.46	3.42
October	8.87	6.48	8.74	4.3
November	8.84	6	8.77	5.41
Total	72.01	8.84	71.86	8.68

Totals may not tally due to rounding off *in 2002; # over corresponding previous year period.

Source : Cement Manufacturers Association

(million tonne)

Capacity Additions by Large Cement Plants	
Installed Capacity as of Mar'01	121.52
Green field capacity additions in FY 2001-02	7.40
Brown field capacity expansions in FY 2001-02	6.91
Gross Capacity as of Mar '02	135.83
Less : Deration of capacity in FY 2001-02	0.80
Net capacity as of Mar '02	135.03
Capacity addition in FY 2002-03 upto Sept '02	3.20
Gross Capacity as of Sept '02	138.23
Less : Deration of capacity in Sept'02	0.70
Installed Capacity as of Sept 2002	137.53

Source : Cement Manufacturers Association.

Cement: Production and Dispatches by Large Plants

(million tonne)

Year/Month	April	May	June	July	August	September	October	Total
Production								
2002	9.42	9.87	9.31	9.13	8.28	8.30	8.87	63.17
2001	8.52	9.00	8.96	7.36	7.38	8.28	8.33	57.83
% Change	10.56	9.67	3.91	24.05	12.20	0.24	6.48	9.23
Dispatches								
2002	9.58	9.69	9.36	9.09	8.16	8.46	8.74	63.09
2001	8.59	9.01	9.00	7.13	7.51	8.18	8.38	57.81
% Change	11.53	7.55	4.00	27.49	8.66	3.42	4.30	9.13

Notes :
1. % Change is for the relevant month of 2002 over the previous year;
2. The mode of dispatches primarily consists of rail (36%) and road (64%) respectively.

Source : Cement Manufacturers Association.

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Cement and Clinker exports

('000 tonne)

Year	Cement	% Change	Clinker	% Change	Total	% Change
1999-00	1948.88	0	1192.53	0	3141.41	0
2000-01	3136.29	61	1991	67	5127.29	63
2001-02	3382.87	7.9	1760.7	–11.6	5143.57	0.3
Apr-Sept'02	1560.00	–2.5	1190	85.9	2750.00	22.8

Source : Cement Manufacturers Association.

Budget proposals

- Excise duty on grey cement increased by Rs.50 to Rs.400 and on clinker to Rs.200 per tonne.
- CST has been reduced from 4% to 2%.
- Basic Import duty on white cement reduced from 30% to 25%.
- Fresh projects worth Rs.6000 crore for roadways, airport and seaways. Of this 48 new road projects with a total length of over 10000 kilometers will be initiated at a cost of Rs.40000 crore, and 25% thereof will be cement concrete roads.
- Reduction in railway freight by 3.6% in cement and on clinkers by 3.7% announced in the Railway Budget.

Change in duty structure

Particulars	Excise Duty	
	Proposed	Existing
Cement – Large Plants	Rs. 400 per tonne	Rs. 350 per tonne
Cement – Mini Cement Plants	Rs. 250 per tonne	Rs. 200 per tonne
Clinker – Large Plants	Rs. 250 per tonne	Rs. 200 per tonne
Cement cleared in bulk	Rs. 382 per tonne	Rs. 332 per tonne
	Basic Customs Duty	
White Cement	25%	30%

Budget Projections for 45 cement companies under organized sector:

(Rs. in crore)

Particulars	Proposed	Existing
Avg realization (estimated)	2160.71	2160.71
Specific Excise Duty	400.00	350.00
CST to be levied on :	2560.71	2510.71
CST on the above	51.21	100.43
Total Invoice Value	2611.92	2611.14

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Cement Industries Ratios

Year	Latest	2002	2001	2000	1999	1998
No of Companies	49	16	19	25	28	31
Debt-equity Ratio	2.23	2.14	2.01	1.75	1.66	1.54
Long-term Debt-equity Ratio	1.79	1.7	1.56	1.36	1.37	1.28
Current Ratio	0.8	0.77	0.81	0.93	1.16	1.27
Turnover Ratios						
Fixed Assets	0.84	0.83	0.86	0.88	0.9	0.94
Inventory	9.27	9.29	8.87	8.77	7.99	6.79
Debtors	16.16	16.99	15.1	12.93	11.63	11.58
Interest Cover Ratio	1.13	1.39	0.97	0.36	0.65	0.7
PBIDTM (%)	15.13	15.51	14.6	9.7	11.67	10.99
PBITM (%)	8.96	9.5	8.72	3.44	5.98	5.89
PBDTM (%)	7.17	8.69	5.63	0.13	2.43	2.53
Cash Profit Margin (%)	6.4	7.85	5.4	0	2.33	2.43
Aggregated Profit after Tax margin (%)	0.23	1.83	–0.48	–6.26	–3.36	–2.67

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Associated Cement Companies

Associated Cement Companies (ACC) came into existence consequent to the amalgamation of ten cement companies in 1936. ACC mainly manufactures and markets cement, refractories and refractory products and provides consultancy and engineering services.

In January 1999, the company came out with the rights issue of equity shares of Rs. 10 each at a premium of Rs. 45 per equity share in ratio of 1:4 to raise funds for capital expenditure on modernization/expansion of existing plants and creation of new capacity at Wadi. Also, in Nov. 1999, it commenced commercial production of captive power plants with capacity of 25 MW each at Jamul and Kymore.

In 2000, Tata group has exited from the company by divesting their 14% equity stake in favor of Gujarat Ambuja group. Notably, Gujarat Ambuja group is the most efficient and aggressive cement group in India. The disinvestment was done in phases at Rs.370 per share. ACC has completed the modernization and expansion of the Chanda and Madukkarai cement plants for increasing their capacities to around 1 MTPA each. These plants started production from 1 September 2000 and 1 October 2000 respectively. The de-bottlenecking at Chanda, Gagal and Madukarrai plants have added 1 MT to ACC's installed capacity.

During the quarter ended Mar. 2001, the company commissioned its new Wadi plant of 2.6 MTPA, which is the largest kiln in the country. With the commissioning of this plant, ACC's installed capacity of cement is the highest in the industry at 15.3 million tonnes.

Also, the construction of a 15–MW thermal power plant at Chanda Cement Works is progressing satisfactorily and will be completed as per schedule. ACC also plans to have a similar power plant of 15 MW at Madukkarai.

ACC has decided to put on hold its plans to set–up five new Ready Mix Concrete (RMC) plants. Instead, it has decided to consolidate the existing 13 RMC units and to go in for a capacity expansion of these operational units.

The company, along with the Tatas, has decided to exit from the ailing business at Floatglass India. ACC holds around 13% stake in that company. Asahi Glass of Japan, a co-promoter and the single largest stakeholder, has agreed to buy their stakes. The sale of the equity stake, stake in preference capital as well as non-compete fee will fetch Rs.19.9 crore to ACC.

ACC, which had one of the worst cost structures, has made substantial progress in reducing cost. This efforts along with better price realization in cement industry have helped the company to post a turnaround in the FY 2000-01.

In Feb. 2002, consequent upon the transfer of shares from Etex Group to the company, Eternit Everest has become a subsidiary of the company w.e.f. 12.02.02. The company now holds 76.01% of the total equity shares of Eternit Everest Ltd.

Balance Sheet of ACC as on 31st March

(Rs. in crore)

Particulars	2002	2001	2000	1999	1998
SOURCES OF FUNDS :					
Share Capital	170.99	170.88	170.88	136.84	136.83
Reserves & Surplus	848.82	980.86	961.96	889.22	856.05
Total Shareholders Funds	1019.81	1151.74	1132.84	1026.06	992.88
Secured Loans	1105.4	1171.48	1028.71	953.12	1116.82
Unsecured Loans	484.73	547.48	458.63	484.42	366.03
Total Debt	1590.13	1718.96	1487.34	1437.54	1482.85
Capital Employed	**2609.94**	**2870.7**	**2620.18**	**2463.6**	**2475.73**
APPLICATION OF FUNDS :					
Gross Block	3326.06	2815.03	2693.39	2193.65	1845.29
Less: Accum. Depreciation	1106.96	947.52	820.25	702.6	638.63
Net Block	2219.1	1867.51	1873.14	1491.05	1206.66
Capital Work-in-Progress	97.62	430.72	162.97	403.81	620.28
Investments	175.34	181.48	172.21	146.72	189.46
Current Assets, Loans & Advances					
Inventories*	300.12	312.8	293.99	236.9	278.83
Sundry Debtors	216.5	247.63	257.45	274.84	260.79
Cash and Bank Balance	27.49	27.95	32.78	51.15	65.58
Loans and Advances	398.91	319.1	321.54	303.89	280.3
Less: Current Liab. & Prov.					
Current Liabilities**	791.47	503.36	527.56	435.35	431.34
Provisions	107.26	83.18	53.54	53.06	30.73
Net Current Assets	44.29	320.94	324.66	378.37	423.43
Miscellaneous Expenses not w/o	73.59	70.05	87.2	43.65	35.9
Capital Deployed	**2609.94**	**2870.7**	**2620.18**	**2463.6**	**2475.73**
Contingent Liabilities	75.88	95.76	118.26	121.81	59.05

* Inventory consists of 40% of raw material, 40% of W-I-P and balance of finished goods.

** 25% of current liabilities consists of creditors.

Profit and Loss account of ACC for the year ending 31st March

(Rs. in crore)

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Particulars	2002	2001	2000	1999	1998
INCOME :					
Sales Turnover	3239.91	2959.03	2701.81	2609.06	2400.38
Other Income	82.53	72.73	58.61	138.38	84.35
Stock Adjustments	-8.97	6.44	52.45	-29.63	14.75
Total Income	3313.47	3038.2	2812.87	2717.81	2499.48
EXPENDITURE :					
Raw Materials	850.11	841.3	800.19	694.44	669.35
Excise Duty	429.28	382.66	378.42	343.62	344.6
Power & Fuel Cost	324.14	309.12	350.88	299.66	276.99
Other Manufacturing Expenses	228.82	218.72	220.5	196.84	204.21
Employee Cost	210.28	195.04	198.97	187.27	171.48
Selling and Administration Expenses	650.46	582.23	538.96	560.15	538.55
Miscellaneous Expenses	158.2	146.54	97.52	105.28	74.21
Profit before Interest, Depreciation & Tax	462.18	362.59	227.43	330.55	220.09
Interest & Financial Charges	146.71	170.18	161.77	162.45	119.14
Profit before Depreciation & Tax	315.47	192.41	65.66	168.1	100.95
Depreciation	151.14	141.28	124.51	103.76	85.51
Profit Before Tax	164.33	51.13	-58.85	64.34	15.44
Tax	33.9	3.65	0	7.5	2
Profit After Tax	130.43	47.48	-58.85	56.84	13.44
Adjustment below Net Profit	0	9.69	0	0.21	0
P & L Balance brought forward	7.12	2.66	41.7	40.77	56.32
Appropriations	116.39	52.71	-19.81	56.12	28.99
P & L Bal. carried down	21.16	7.12	2.66	41.7	40.77
Equity Dividend	51.24	34.14	15.65	20.49	20.55
Corporate Dividend Tax	0	3.48	3.45	2.26	2.06
Equity Dividend (%)	30	20	10	15	15
Earning Per Share (Rs.) (Unit Curr.)	7.63	2.57	0	39.89	8.32
Book Value (Unit Curr.)	59.64	67.4	66.29	749.82	725.63
Extraordinary Items	-19.08	-35.46	14.68	9.85	13.75

Part E: Caselets (50 Points)

Caselet 1

Read the following caselet carefully and answer the following questions:

1. The caselet suggests that at present DCF methodology of valuing a company is being given prominence over standard valuation metrics like P/E ratios. In this context, discuss the limitations of DCF.

   (9 points)

2. DCF provides investors a good picture of key drivers of the company. It has also been argued that DCF is less prone to any ambitious accounting trick. However, the scope still exists for manipulations under DCF route. Do you agree? Discuss.

   (7 points)

It's a time when financial statements have come under intense study. For an executive making an investment choice was never more complex. Market analysts have been centering on simpler methods of making judgments about the performance of the companies they cover. So-called upcoming techniques of analysis have taken a back seat and now the interest is in favor of the time-tested candidate, the Discounted Cash Flow (DCF) approach. Analysts use the DCF to determine the current value of a company according to the estimated future cash flows of the company.

DCF methodology has gained prominence thanks to the recent spate of inappropriate calculations of revenues and capital expenses as reported by the corporate bigwigs. Quality of earning has fallen prey to the managerial greed. With heightened concerns over the quality of reporting and reliability of standard valuation metrics like P/E ratios, investors have found the cash flow methods transparent enough to their satisfaction. Infact, DCF has found favor not only with the street advisors, but also among bankers and other FIs. It provides investors a good picture of the key drivers of the company; expected growth in operating earnings, capital efficiency, balance sheet capital structure, cost of equity and

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debt, and expected duration of growth. It is harder to fool the cash register thus DCF is less prone to any ambitious accounting trick.

DCF analysis suggests that changes in long-term growth rates have the greatest impact on a company's prospects. Even a minor change in the interest rates can make a big difference. Consider the numbers generated by a DCF model. Sun Microsystems, which recently was traded on the market at $3.25, is valued at almost $5.50, which makes its price of $3.25 a steal. The model assumes a long-term growth rate of 13.0%. If we cut the growth rate assumption by 25%, Sun's share valuation falls to $3.20. If we raise the growth rate variable by 25%, the shares go up to $7.50. Similarly, raising interest rates by one percentage point pushes the share value to $3.55; a one-percent fall in interest rates boosts the value to about $7.70. There is a wind of caution here. The DCF method does not come without challenges.

Caselet 2

Read the following caselet carefully and answer the following questions

1. The caselet suggest that good corporate governance practices increase the market value of a company. The analysis of the survey in the caselet points out towards the practices which are rated high on the scorecard. On this basis develop a code for good corporate governance for Indian corporates.

(9 points)

2. Many factors contribute to good governance, some are difficult to quantify. Nevertheless, several useful indications of a well-governed company are available to shareholder. Assume yourself as a shareholder and state which factors would you consider.

(8 points)

Does good governance pay? In theory, it should increase the market valuation of companies by improving their financial performance, reducing the risk that boards will make self-serving decisions, and generally raising investor confidence. Indeed, surveys suggest that institutional investors will pay as much as 28% more for the shares of well-governed companies in emerging markets. Do such investors practice what they preach? To find out looked at 188 companies from six emerging markets — India, Malaysia, Mexico, South Korea, Taiwan, and Turkey — and tested the link between the market valuation and the corporate governance practices of these companies in 2001.

We rated the performance of each company against some key components of corporate governance and used explicit, objective criteria for every component to ensure consistent ratings. The information on which we based the ratings came from public and proprietary sources as well as annual reports. If, for example, half of the members of the board of a company were truly independent — that is, if they had no business connections to it — the company rated a top mark of 2 on our scorecard. By contrast, companies with fewer independent directors scored either a 1 or a 0.

After we aggregated the ratings for each company into a single metric of governance, we tested the relationship of this score with the market valuation of the company as measured by its price-to-book ratio on the local stock exchange at the end of its 1999 fiscal year. To account for systematic differences in corporate valuations and governance among nations, we expressed the price-to-book ratio and corporate governance score of each company as the percentage by which they differed from its national and industry averages.

Even after allowing for the effect of characteristics such as financial performance (measured by returns on equity) and size on valuations, we found that companies with better corporate governance did have higher price-to-book ratios, indicating that investors will pay a premium for shares in a well-governed company. Moreover, the reward for good corporate governance is large. By moving from worst to best in corporate governance, companies in our sample could expect, on average, to experience roughly a 10% to 12% increase in their market valuation — a result underscoring the importance investors attach to these attributes. The market value of a Mexican food processor, for example, stood at $158 mn on December 31, 1999. Onerous anti-takeover rules gave the company the lowest score on one measure of governance. If the company adopted less onerous defenses, our

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model predicts that capital markets would raise its valuation by close to 12%. Thus, improving corporate governance could be a strategy for leapfrogging competitors in financial markets.

Average scores on various components of corporate governance diverged among countries — a fact suggesting that companies in different tones should focus on different components. For example, Malaysian, South Korean, and Taiwanese companies, reflecting the concerted effort to improve their corporate governance after the 1997 Asian crisis, had the highest average scores for board oversight and shareholder rights. In many ways, South Korea led the governance-reform efforts. Among other things, the country's government required major banks and conglomerates to appoint a majority of outside directors, to define transparent board responsibilities, and to establish committees ensuring the independent oversight of board activities. It also removed ceilings on foreign ownership, thus intensifying competition, and lowered the size threshold for any group of shareholders seeking to sue a board they believe has failed to protect their interests. A South Korean organization, People's Solidarity for Participatory Democracy, subsequently challenged major companies, such as Samsung Electronics and SK Telecom.

Although Mexican companies had generally poor scores on board responsibilities and shareholder rights, they had among the highest average scores on transparency, which includes accounting standards, disclosure, and auditing. In our sample, Mexican companies were the most likely to be cross-listed on US exchanges and thus obliged to comply with tough US Securities and Exchange Commission regulations on financial reporting — a standard that most other companies in emerging markets have yet to meet. Moreover, recent reforms in Mexican capital-markets legislation will likely promote higher standards of corporate governance in precisely those areas in which Mexico had previously lagged behind.

Companies in emerging markets often claim that Western corporate-governance standards don't apply to them. Our results, however, show that investors the world over are looking for high standards of good governance and will pay a premium for shares in companies that meet them. Enron's collapse is a worrisome sign that some US companies too fail to meet those standards. But high standards of corporate governance are crucial to the value of companies, especially in emerging markets.

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Caselet 3

Read the following caselet carefully and answer the following questions

1. Centralization is one of the ways to be effective in cutting procurement cost. However, blind centralization is often undermined by non-compliance. Discuss how the problem of non-compliance can be addressed.

(8 points)

2. Improving value chain has become a priority for all organizations. With reference to the caselet, what steps should be taken by an organization to overcome structural and payment problems?

(9 points)

If increasing sales or cutting production costs is considered to be the most effective way of improving the profits, then it is a wrong perception. Though these initiatives would benefit the company, they would be dwarfed by the benefits caused by incremental profitability caused by the effective purchase-to-pay process. The key inefficiencies in this cycle include complex purchasing structures, unregulated tangles of supplier relationship, unguided procurement process and non-professional tendency at the time of negotiations of payment terms. Though centralization is one of the ways that can help resolve this issue to a certain extent, blind centralization is often undermined by non-compliance. A center-led approach, however, can place strategic responsibility for purchasing at the center, whilst leaving day-to-day transactions in the hands of staff "on the ground".

Inefficiencies in purchase-to-pay processes typically stem from the sprawling, unregulated tangle of supplier relationships built up over the years. At the front-end, procurement processes that are unguided by common principles spawn duplication and fragmentation. At

the back-end, payment terms are neglected by non-professional buyers during negotiation or end up being overruled by systems errors.

Structural Problems

Fragmentation — It is unsurprising that purchasing processes should be fragmented in so many organizations. After all, what have stationary supplies, industrial chemicals required for widget production and the regional sales team's annual golf day got to do with each other? Very little, but the sheer diversity in the range and frequency of purchases should not obscure the fact that duplication of effort costs money. Fragmentation of purchasing responsibility puts sourcing decisions, perhaps for identical supplies, in the hands of too many staff. As a result, the firm not only fails to leverage its full purchasing power with suppliers, it also misses out on the opportunity to negotiate professionally.

Lack of focus — It is generally accepted that 60%-70% of a firm's individual purchases will cost below $5,000, and this may be equivalent to as little as 3% or 4% of its overall spend. Handling these small value purchases quickly and efficiently, e.g., via use of purchasing cards, leaves the firm with more time to concentrate their resources on ensuring they get best value on the bigger ticket items. Even if the firm does not benefit from as keener pricing as previously on smaller purchases, it will still be better off due to the bigger savings it can make by focusing resources on those suppliers that account for 96% or 97% of its purchasing costs.

Control and discipline **—** If there is no recognized process for dealing with a new procurement need, any number of different channels may be used by different units within a company to make very similar purchases. Furthermore, companies that establish authorized, often centralized, channels for procurement do not always take the necessary steps to ensure that these are used — or even understood — by local staff who subsequently revert on tried and tested methods. For firms that do not ensure prescribed channels are used, the result is fragmentation by the back door.

Payment Problems

Early payment **—** Paying suppliers before you are contractually obliged may occur for a number of reasons. The payment terms used in ERP or accounting systems may not square with those agreed with the supplier, perhaps due to inputting errors. Terms quoted in invoices may also be incorrect because the supplier has quoted its standard terms on the invoice rather than those specifically agreed with your firm. In either case, human error can be reduced by improved policies and procedures.

Default terms — Many firms' ERP/accounting systems use 'default' payment terms to trigger a supplier payment automatically if none have been entered, either due to an oversight or because supplier negotiations are incomplete. If the default terms are set below the firm's preferred terms, perhaps even at zero, a payment may be triggered prematurely, even as soon as an invoice is received. Setting default terms at — or above — your firm's standard terms avoids early payment. In the latter case, it can also be the catalyst for a supplier to conclude unfinished negotiations on payment terms.

Lack of focus during negotiations — Fragmentation of responsibility for procurement often means that sourcing decisions are handed to managers who nevertheless do not possess the appropriate negotiating skills. Clawing back responsibility from such staff — who may enjoy the perks and the prestige of spending the firm's money — is a serious structural challenge, but often a necessary one as managers are unlikely to be able to secure the discounts negotiated by procurement professionals. Such specialists pay particular attention to many aspects of the deal such as the supplier/salesman's motivation. For example, finding out that an IT equipment salesman does not receive commission on the maintenance aspect of the contract can cut the overall contract price without reducing the value of the deal to the salesman. Similarly, a salesman who needs to make a deal to meet his quarterly targets will be a flexible negotiator before, but not after, his quarterly end. The time required to collect the information to negotiate effectively is simply not available to most staff that currently make purchasing decisions. In itself, professional negotiation can knock 1% – 2% off the value of higher-value purchases.

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Model Question Paper IV

Suggested Answers

Paper I

Part A: Basic Concepts

1. ***(e)*** According to Marakon approach which is based on a market-to-book ratio model, shareholder wealth will increase with the increase of market value over the book value of the firm's equity and it increases only if return on equity is greater than cost of equity.

2. ***(b)*** Incremental investment in fixed assets will have an adverse effect on the value of firm as per Alcar model, only if other factors remain same.

3. ***(d)*** The required rate of return is the return shareholders demand to compensate them for the time value of money tied–up in their investment and the uncertainty of the future cash flows from these investments.

4. ***(b)*** The firm which will have a policy of retaining 100 percent of its earnings is not a valid assumption of capital market equilibrium approach to the theory of capital structure.

5. ***(e)*** The following are the basic reasons which made Activity Based Costing (ABC) an important cost management tool (viz.) profitability of products and services is more accurately measured and as global competition increases, product mix pricing and other decisions require better product cost information.

6. ***(c)*** Since the balance sheet shows market values, the stock is worth $\left(\frac{\text{Rs.}60,000}{1,000}\right)$ = Rs.60 per share today (cum dividend). The ex-dividend price will be (Rs.60 – Rs.3) Rs.57. Once the dividend is paid, Reebop has Rs.3,000 less cash, so total equity is worth Rs.57,000 or $\left(\frac{\text{Rs.}57,000}{1,000}\right)$ = Rs.57 per share.

7. ***(b)*** The price will decrease by the after-tax amount of the dividend, or [Rs.4.00 × (1 – 0.30)] = Rs.2.80. The ex-dividend price will be (Rs.60.00 – Rs.2.80) = Rs.57.20.

8. ***(e)*** The following are the assumptions of Black and Scholes model of option pricing viz (i) The stock pays no dividend (ii) There are no restrictions or penalties for short selling (iii) The risk-free interest rate is known with certainty (iv) There are no transaction costs and taxes. Whereas, the stock price is continuous and follows standard normal distribution is not an valid assumption of Black and Scholes model of option pricing.

9. ***(d)*** According to the trade–off theory, while choosing the debt-equity ratio, financial managers often look at the trade-off between the tax shelter provided by debt and the cost of financial distress.

10. ***(b)*** The key internal devices for containing agency costs are (i) Separation of management and control, (ii) Internal monitoring, and (iii) Management compensation contracts. Whereas, managerial labor market is not an internal device for containing agency costs.

11. ***(d)*** If the financial markets are efficient, all available information is reflected in the price of the security then the market price of the security is the market's best estimate of the value of that security.

12. ***(b)*** The difference between option (call and put) valuation and warrant valuation is as follows: With the exercise of an option, there is no change in the number of shares of stock of the company or in its networth. With the exercise of a warrant, however, the number of shares increases and there is a cash infusion into the firm.

13. ***(b)*** As per RBI a SSI unit will be declared sick when (i) Principal or interest in respect of any of its borrowal accounts has remained overdue for periods exceeding $2\frac{1}{2}$ years and (ii) There should be erosion in networth due to accumulated cash losses to the extent of 50 percent or more of its peak networth during the preceding 2(two) accounting years.

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14. ***(c)*** While fixing transfer price of a product based on market price we check whether the free market exist for the product.

15. ***(b)***

$$RP = 3\sqrt{\frac{3b\sigma 2}{4I}} + LL$$

$$I = \frac{10}{360} = 0.0278\%$$

$$= 3\sqrt{\frac{3 \times 800 \times 40,000}{4 \times 0.000278}} + 25,000$$

$$= 29,420.$$

$$VL = 3RP - 2LL$$

$$= 3(29420) - 2(2 \times 25,000)$$

$$= 38,260.$$

16. ***(c)*** The difference between the pre-strategy and post-strategy value of the business is referred to as strategy value added, EVA can be defined as post tax profit before interest total cost of capital including notional cost of reserves, whereas, OVA is defined as (Profit after tax, Before interest + Inflationary asset – Appreciation + Appreciation in the value of brands and human resources) – (Actual cost of equity capital + Actual cost of borrowing + Appropriate opportunity cost of reserves), and e-market value added can be defined as market capitalization at the beginning of the year, lost but not the least differential value added which we do not use commonly in a finance context. All these definitions are taken from the standard books and journals.

17. ***(a)*** Cultural, legal-political and economic condition may dictate different operating practices from one country to another. This leads to adoption of Multi-domestic strategy.

18. ***(c)*** Adaptive mode is a basic decision-making mode which is characterized by reactive solution to existing problems, rather than a proactive search for new opportunities.

19. ***(a)*** Philosophy component in a mission statement that represents are organization's basic beliefs, values, aspirations and ethical priorities.

20. ***(a)*** Mission is a basic reason that gives company the reason for its existence.

21. ***(b)*** An organization's strategy formulation helps to obtain information from the environment and it helps in deciding an organization vision, mission, objectives and goals.

22. ***(c)*** Ethical responsibilities of business comes under 'should do' category.

23. ***(e)*** High competitive advantage, low risk, high market attractiveness are the features of a market which encourage the firms to enter the market.

24. ***(e)*** Concentrated growth is a strategy of a firm that directs its resources to the profitable growth of a single product, in a single market, with a single dominant technology. Because of this is not a defensive strategy is not a defensive strategy.

25. ***(c)*** As per BCG matrix, SBU, & whose relative competitive position (market share) is high, and market growth rate is low, are known as cash cows.

26. ***(c)*** As divisional operations overweigh, firm encounter difficulty in controlling the structure due to sheer diversity, size and increasing number of units. In this situation the recommended organization structures is Strategic Business Unit (SBU).

27. ***(d)*** Change in firms management does not support the contingency approach to strategic choice.

28. ***(c)*** The following statements are correct with regard to competitive scope of the value chain i.e., the segment scope, the buyers are served by a variety of products and in industry scope the firms view with a coordinated strategy in the range of related industries.

29. ***(e)*** If a firm believes in and prefers an internal emphasis for maximizing strengths, the following alternative strategies hold considerable promise in Quadrant III of strategy and selection matrix i.e., concentration, market development, product development and innovation.

30. ***(a)*** Reduction of interest expenses increases the times interest earned ratio is directly related to leverage ratio.

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Part B: Problems

1. a. Calculations showing overheads assigned on an Machine Hour Rate Basis

Total overheads = Machine Department Cost + Set-up costs + Stores consumables + Inspection/quality control + Materials handling and dispatch

= 10430 + 5250 + 3600 + 2100 + 4620 = 26,000

Machine Hours = (Output in units) × (Machine Hours per unit)

Product Stereo headphones	=	120 × 4	=	480
Product External Modem	=	100 × 3	=	300
Product UPS	=	80 × 2	=	160
Product Foot Pedals	=	120 × 3	=	360
Total Machine Hours				1,300

$$\text{Machine Hour Rate} = \frac{\text{Total Overheads}}{\text{Total Machine Hours}}$$

$$= \frac{\text{Rs. }26{,}000}{1{,}300} = \text{Rs.20 per MHR}$$

Statement showing cost per unit per product

(Rs.)

Particulars	Products				Total
	Stereo headphones	External Modem	UPS	Foot Pedals	
Direct Material	40	50	30	60	180
Direct Labor	28	21	14	21	84
Overheads absorbed (Machine Hour Rate × Machine Hour per unit)	80	60	40	60	240
Cost per unit	148	131	84	141	504
Total cost per product (Cost per unit × Output in units)	17760	13100	6720	16920	54500

b. Calculations showing overheads assigned on ABC Basis

Application rate of cost driver for overheads

i. $$\text{Machine Department} = \frac{\text{Machine department cost}}{\text{Total machine hrs}} = \frac{10{,}430}{1{,}300}$$

= Rs.8.0231 per machine hour rate

ii. $$\text{Set-up costs} = \frac{\text{Total set-up cost}}{\text{No. of production runs}}$$

$$\text{No. of production runs} = \frac{\text{Total number of output units of all products}}{\text{No. of requisition raised for each product}} = \frac{420}{20} = 21$$

$$\text{Set-up Costs} = \frac{5250}{21} = \text{Rs.250 per production run}$$

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iii. Stores & Consumables $= \dfrac{\text{Total stores} + \text{Commodity cost}}{\text{No. of requisitions raised}}$

$= \dfrac{3600}{20 \times 4}$ = Rs.45 per requisition

iv. Inspection/QC $= \dfrac{\text{Inspection / QC cost}}{\text{No. of production runs}}$

$= \dfrac{2100}{21}$ = Rs.100 per production run

v. Materials handling and dispatch $= \dfrac{\text{Material handling and dispatch cost}}{\text{No. of orders executed}}$

$= \dfrac{4620}{42}$ = Rs.110 orders executed.

Particulars	Products				Total
	Stereo headphones	External Modem	UPS	Foot Pedals	
Number of Production Runs	6	5	4	6	21
Number of stores requisition	20	20	20	20	80
No. of Sales order (deduced from information)	12	10	8	12	42

Calculations of the cost per unit and the total costs of each product

(Rs.)

Particulars	Products			
	Stereo headphones	External Modem	UPS	Foot Pedals
Direct Material	40.00	50.00	30.00	60.00
Direct Labor	28.00	21.00	14.00	21.00
Overheads:				
i. Machine Department (MHR)	32.09	24.07	16.05	24.07
ii. Set-up costs	12.50	12.50	12.50	12.50
iii. Stores receiving	7.50	9.00	11.25	7.50
iv. Inspection/QC	5.00	5.00	5.00	5.00
v. Materials handling and dispatch	11.00	11.00	11.00	11.00
Total overheads	68.09	61.57	55.80	50.02
Cost per unit	**136.09**	**132.57**	**99.80**	**141.07**
Total cost per product	16,331.08	13,256.92	7983.69	16928.31

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c. Statement showing differences between unit cost and total cost with respect to MHR and ABC methods of costing

(Rs.)

Particulars	Total cost	Products			
		Stereo headphones	External Modem	UPS	Foot Pedals
Unit costs - MHR	–	148.00	131.00	84.00	141.00
- ABC	–	136.09	132.57	99.80	141.07
Differences	–	11.91	(1.57)	(15.80)	(0.07)
Total costs - MHR	54500	17,760.00	13100.00	6720.00	16920.00
- ABC	54500	16,331.08	13256.92	7983.69	16928.31
Differences		1428.92	(156.92)	(1263.69)	(8.31)
Overheads per unit - MHR	–	80.00	60.00	40.00	60.00
- ABC	–	68.09	61.57	55.80	60.07
Overheads as % age of total cost					
- MHR	–	54.05	45.80	47.62	42.55
- ABC	–	50.03	46.44	55.91	42.58

Comment:

i. The conclusions to be drawn from this analysis is that in terms of units and in total, there are significant differences between the cost assigned by the two methods we have used. In general terms, products Stereo headphones and UPS give rise to the largest differences in costs, whereas product External Modem and Foot Pedalas are significantly different.

ii. Depending upon the market that this organization is operating in, the cost differences might have serious consequences for pricing and profit. In a highly competitive market, this organization could now adjust its prices and be more competitive, in terms of product Stereo headphones particularly.

iii. Product UPS represents a problem in that, if prices are based on product cost, the selling price of this product would now have to be increased. The evidence to date suggests that even though Activity Based Costing has revealed cost differences, the marketing department often feels it difficult to translate such changes into price changes.

iv. Furthermore, there is the possibility, assuming this organization is already profitable, that it may notice little difference to its profitability in the short to medium-term providing the product mix remains as it is at the moment. Any big change in the product mix could have serious implications for organizational profitability. Substantial changes to the product mix involving products Stereo headphones and UPS would have the greatest impact, of course 1.

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2. Statement showing requirement of external borrowing under different plans

(Rs. in'000)

Particulars	Years					Total
	1	2	3	4	5	
Dividends paid						
i. Net income (PAT)	2000	1500	2500	2300	1800	
ii. Capital Expenditure	1000	1500	2000	1500	2000	
iii. Equity Investment regd. (for maintaining D/E)	333	500	667	500	667	
a. Residual Policy						
iv. Dividend (i) – (iii)	1667	1000	1833	1800	1133	7433
v. External Borrowing regd. (ii) – (iii)	667	1000	1333	1000	1333	5333

Particulars	Years 1	2	3	4	5	Total
b. Maintaining Present DPS						
vi. Dividend	1000	1000	1000	1000	1000	5000
vii. External Borrower regd. [(ii) – {(i) – (vi)}]	0	1000	500	200	1200	2900
c. Maintaining 150% Payout Ratio						
viii. Dividend [(i) – 0.5)]	1000	750	1250	1150	900	5050
ix. External Borrowing regd.[(ii) – {(i) – viii}]	0	750	750	350	1100	2950

d. Dividend is maximized in Residual policy and external borrowing is minimized in maintaining present DPS.

3. a. **Total Annual Interest**

(in '000)

i. 15% on regular bonds (2400 × .15) = Rs. 360

ii. 13% on first mortgage bonds (3000 × .13) = Rs. 390

iii. 18% on subordinated debentures (2000 × .18) = Rs. 360

Rs.1,110

Total annual principal payments ('000) = Rs. 100 + Rs. 150
= Rs. 250

Grossed up principal payments using effective tax rates ('000)

$$= \frac{\text{Rs. } 250}{(1-0.35)} = \text{Rs. } 384.62$$

$$\text{Times interest earned} = \frac{\text{EBIT}}{\text{Interest}} = \frac{\text{Rs. } 2000}{\text{Rs. } 1{,}110} = 1.80$$

$$\text{ebt service coverage} = \frac{\text{Rs. } 2000}{\text{Rs. } 1{,}110 + 384.62} = 1.34$$

b. Deviation from mean before ratio is one-to-one

Times interest earned = Rs. 2,000 – Rs. 1,110 = Rs. 890

Debt-service coverage = Rs. 2,000 – Rs. 1494.62 = Rs. 505.38

Standardizing the deviation and using Table C we get

Particulars	Times Interest Earned	Debt service coverage
Standard deviation ratio	890/1500	505.35/1500
Standard deviation	.593	.336
Probability of occurrence from the probability tables	.28	.34

The probabilities that the two ratios will be less than one-to-one are approximately 28 percent and 40 percent. These probabilities assume the distribution of possible EBITs is normal.

c. There is a substantial probability, 40 percent, that the company will fail to cover its interest and principal payments.

Its debt ratio of .89 (Rs.7.4 million/Rs.8.3 million) is much higher than the industry norm of .47

Its book value of debt to market value of stock ratio is even higher.

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Although the information is limited, based on what we have, it would appear that Torstein has too much debt. However, other factors, such as liquidity may mitigate against this conclusion.

4. a. **Statement showing Common size Analysis**

i.

(in %)

Particulars	2001	2002	2003
Cash	7.9	3.8	1.7
Receivable	27.5	27.8	34.0
Inventories	28.4	25.4	27.6
Current Assets	63.8	57.0	63.3
Net Fixed Assets	36.2	43.0	36.7
Total Assets	100.0	100.0	100.0
Payable	26.1	28.6	30.4
Accruals	4.2	5.0	4.9
Bank loan	3.5	8.7	8.8
Current Liabilities	33.8	42.3	44.1
Long-term debt	7.0	9.7	8.0
Shareholders equity	59.2	48.0	47.9
Total liabilities and equity	100.0	100.0	100.0
Sales	100.0	100.0	100.0
Cost of goods sold	72.0	74.4	73.5
Selling, general and administrative expenses	19.8	17.8	18.3
Profit before taxes	8.2	7.8	18.3
Taxes	3.3	3.0	3.5
Profit after taxes	4.9	4.8	4.7

b. **Comment**

The common size analysis shows that receivable are growing faster than total assets and current assets, while cash declined dramatically as percentage of both.

Net fixed assets surged in 2002, but then fell back as a percentage of the total to almost the 2001 percentage. The absolute amounts suggest that the company spent less than its depreciation on fixed assets in 2003.

With respect to financing, shareholders equity has not kept up, so the company has had to use somewhat more debt percentage wise.

Bank loans and long-term debt also increased sharply in 2002, no doubt to finance the bulge in net fixed assets. The bank loan remained about the same in 2003 as a percentage of total liabilities and equity, while long-term debt declined as a percentage.

Profit after taxes slipped slightly as a percentage of sales over the 3 years. In 2002, this decline was a result of the cost of goods sold, as expenses and taxes declined as a percentage of sales. In 2003, cost of goods sold declined as a percentage of sales, but this was more than offset by increases in expenses and taxes as percentages of sales.

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a. **Statement showing financial performance of using Index Analysis**

ii.

(in %)

Particulars	2001	2002	2003
Cash	100.0	69.0	36.0
Receivable	100.0	146.2	206.4
Inventories	100.0	128.7	161.8
Current Assets	100.0	128.9	165.5
Net Fixed Assets	100.0	171.6	169.1
Total Assets	100.0	144.3	166.8
Payable	100.0	158.1	194.0
Accruals	100.0	171.4	195.0
Bank loan	100.0	360.0	420.0
Current Liabilities	100.0	180.7	217.6
Long-term debt	100.0	200.0	190.0
Shareholders equity	100.0	117.0	135.1
Total liabilities and equity	100.0	144.3	166.8
Sales	100.0	126.0	137.8
Cost of goods sold	100.0	130.3	140.8
Selling, general and administrative expenses	100.0	113.2	127.4
Profit before taxes	100.0	119.7	137.2
Taxes	100.0	115.9	147.7
Profit after taxes	100.0	122.2	130.2

b. **Comments**

Index analysis shows much the same picture. Cash declined faster than total assets and current assets, and receivables increased faster than these two bench marks.

Inventories fluctuated, but were about the same percentage wise to total assets in 2003 as they were in 2001.

Net fixed assets increased more sharply than total assets in 2002 and then fell back into line in 2003.

The sharp increase in bank loans in 2002 and 2003 and the sharp increase in long-term debt in 2002 are evident.

Equity increased less than total assets, so debt increased more percentage wise.

With respect to profitability, net profits increased less than sales, for the reasons indicated earlier.

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5. Working Notes:

	Particulars	Rs.
i.	Cost of Sales Adjustment (COSA)	
	Current cost of opening stock (Rs.1,50,000 x 130/120)	1,62,500
	Purchases	12,00,000
		13,62,500
	Less:	
	Current cost of closing stock (Rs.2,00,000 x 130/140)	1,85,714
	Current cost of sales	11,76,786
	Less: Historical cost of sales	11,50,000
	Cost of sales adjustment	26,786
ii.	Depreciation adjustment	
	Current cost depreciation (Rs.50,000 x 104/80)	65,000
	Less: Historical cost depreciation	50,000
	Depreciation adjustment	15,000
iii.	Backlog depreciation:	
	Current cost depreciation on 5,00,000 × $\frac{104}{80}$ i.e., Rs.6,50,000 for the year 2001	65,000
	Historical cost depreciation on Rs.5,00,000 for the year 2001	50,000
	Backlog depreciation debited to the Current Cost Reserve	15,000
	Historical cost depreciation for 2001 and 2002	1,00,000
	Backlog depreciation	15,000
	Depreciation adjustment	15,000
	Total credit to the plant & machinery account	1,30,000
iv.	Valuation of inventory as on December 31, 2002	
	= Rs. 2,00,000 x 142/140 = Rs.2,02,857 rounded to Rs.2,03,000	
v.	Plant & Machinery:	
	Current cost as on December 31, 2002 (Rs.5,00,000 x 104/80)	6,50,000
	Less: Historical cost of the fixed asset	5,00,000
	Difference credited to the Current Cost Reserve	1,50,000
vi.	Net block of fixed assets as per current cost method	5,20,000
	Net block of fixed assets as per historical cost method	4,00,000
	Difference	1,20,000
	Add: Depreciation adjustment	15,000
	Credit to the Current Cost Reserve on account of fixed assets	1,35,000
	The same can also be computed in this manner:	
	Gross increase in the value of the plant & machinery	1,50,000
	Less: Backlog depreciation	15,000
	Credit to the Current Cost Reserve on account of fixed assets	1,35,000
vii.	Current Cost Reserve:	
	Credits	
	Plant & machinery (Increase in value)	1,50,000
	Cost of sales adjustment	27,000
	Revaluation of closing inventory (2,03,000 – 2,00,000)	3,000
	Debits	1,80,000
	Provision for backlog depreciation	15,000
	Credit balance c/f	1,65,000

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Income Statement for the year ended December 31, 2002

Particulars	Rs.
Sales revenue	15,00,000
Net profit as per historical cost method	1,00,000
Less:	
Cost of sales adjustment	27,000
Depreciation	15,000
Current cost adjustments	42,000
Current cost profit for the year 2002	58,000

Balance Sheet as on December 31, 2002

Liabilities	Rs.	Assets	Rs.
Equity Capital	4,00,000	Plant & Machinery	6,50,000
		Less: Depreciation	1,30,000
Current Cost Reserve	1,65,000		5,20,000
Reserves as on 01-01-02	2,00,000	Closing Stock	2,03,000
Current Cost profit	58,000	Accounts Receivable	1,60,000
Accounts Payable	1,00,000	Cash at Bank	40,000
	9,23,000		9,23,000

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Part C: Applied Theory

1. Liquidation

A firm is faced with liquidation when it is established that there is no hope of bringing about a turnaround and coming out of financial crisis. Liquidation requires the firm to dispose its claims and settle liabilities on a priority basis.

Section 425 of the Companies Act, 1956 gives the ways in which a company may be liquidated:

i. Compulsory winding up under the court order.

ii. Voluntary winding up; (a) members voluntary winding up and (b) creditors voluntary winding up.

iii. Voluntary winding up under supervision of the court.

Section 433 of the Companies Act, 1956 gives the circumstances under which a company be wound up by an order of the court:

Compulsory Winding Up

- If the company passes a special resolution to wind–up by the court.
- If the firm fails in holding the statutory meeting or in delivering the statutory report to the registrar.
- If the firm fails to commence business within a year from its incorporation.
- Reduction in members of the company, below seven in case of a public company and below two in case of private company.
- If it is unable to pay its debts.
- When the court is of opinion that it is just and equitable that the firm be wound up.

In all the above cases, the court reserves the discretionary power to order for a wind–up or direct the firm to take remedial action.

The following are the steps involved in liquidation by court order:

i. A petition is made by the company or creditors or shareholders or the registrar or the central government for winding up. This is dealt with in terms of Section 439 of the Companies Act.

ii. The court orders for a hearing of the winding up petition and takes a decision on the issue (Section 443).

iii. The court appoints the official liquidator after informing the company about the appointment so as to enable it to make its representation (Section 450).

iv. The court sends the winding up order to the registrar and the official liquidator. The petitioner has to file with the registrar, within thirty days, a certified copy of the order (Sections 444 and 445).

v. Within twenty-one days of the order a statement of the affairs of the company has to be made. It should show the assets of the company, showing separately cash in hand and at bank and negotiable securities, its debts and liabilities, the names and addresses of the creditors indicating the amount of secured/unsecured debts, the debts due to the company and the names and addresses of the persons from whom they are due and the amount likely to be realized (Section 454).

vi. Within six months of the order, the official liquidator is required to submit a preliminary report to the court showing the amount of issued and paid-up capital and the estimated amount of assets and liabilities, the causes of failure and whether any further enquiry is desirable into the matters of the firm (Section 455).

vii. The liquidator then sells the immovable and movable property and auctionable claims of the company, by public auction or by private contract. He raises money on the security of the assets of the company, by public auction or by private contract. He raises money on the security of the assets of the company if required and do all that is necessary for winding up the affairs for the company and distributing its assets (Section 457).

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viii. The order of priority in which the distribution is done is given below:

  i. Revenues, taxes, cesses etc.
  ii. Wages or salary
  iii. Holiday remuneration of an employee
  iv. Contribution to ESI
  v. Compensation under WCA, 1923
  vi. Dues from provident fund, pension fund
  vii. Expenses of investigation.

Voluntary Liquidation

Voluntary liquidation is a form of liquidation under which the firm and creditors come up with a creative plan to dispose off the liabilities in a manner that makes sense to everybody involved. This happens when the firm realizes that there is no hope of turnaround and liquidation is the only option that either occurs without the involvement of the court or under the supervision of the court.

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Voluntary winding up is of two kinds:

- **Members voluntary winding up (Section 489)**

  In this case the majority of the directors declare that the company has no debts or will be able to pay its debts in full, within a certain period, not exceeding three years from commencing of winding up. The declaration must be delivered to the Registrar for registration, accompanied by a copy of the auditors' report, profit and loss account and the balance sheet of the company. A liquidator is appointed and his remuneration is fixed by the company. The liquidator has to inform the Registrar of his appointment within thirty days and publish the fact in the official gazette. On the appointment of the liquidator, all the powers of the board of directors cease. The liquidator summons a creditors' meeting and winding up procedure starts. Once the affairs of the company are fully wound up, the liquidator makes a statement of the accounts of winding up. He calls a general meeting of the company and sends the accounts to the Registrar, who registers the documents and the company is deemed to be dissolved.

- **Creditors Winding Up (Section 499)**

  In this case, the company calls a meeting of its creditors. The full statement of the position of the company's affairs and a list of the creditors of the company and the estimated amount of their claims is laid down in the meeting. A copy of the resolution passed at the creditors' meeting must be filed with the Registrar. A liquidator is appointed by the members of the board and the creditors. The creditors and the company may appoint 5 members each to a committee of inspection. The liquidator then follows the procedure of winding up which is essentially the same for all kinds of liquidation.

2. Change Process

Change frequently disrupts normality whilst the organization may be facing strong external pressures, it is unrealistic to expect managers and employees not to querry or resist the need to change. The change process becomes difficult when individuals perceive that they are

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losing out rather than benefiting or are not being rewarded for cooperating when managers engage in planned change, they typically follow a process.

Change involves actions based on a carefully thought-out process that anticipates future difficulties, threats and opportunities. The various steps in the change process are:

i. **Recognition of Need for Change**

In the first step, the senior management must develop an early awareness of the need for change. Information leading to such awareness can come from the various stakeholders of the firm. For example, Canon entered the U.S. copier and office equipment markets by asking secretaries what attributes they prefer in photocopiers. Another source of information is scientific associations, which may know more about developments in product and manufacturing technologies. Moreover, examining the actions of competitors gives an additional lens to managers through which they can monitor the environment.

ii. **Building Awareness of Need to Change**

Once senior managers have gained a general idea of the kind of change required, they must build awareness of this need among employees in the firm. Awareness can be built among employees during routine contacts with them. These conversations will stimulate people's thoughts about possible change without raising anxieties too quickly. Thus, sharing information and establishing trust are critical in building support for change.

iii. **Foster Debate**

Stimulating debate about alternative solutions and a diversity of perspectives are essential. Diversity of ideas raises the chances that both the best and worst aspects of each alternative are brought to light. The debtors and various perspectives contribute towards building a commitment to new goals.

iv. **Create Consensus**

An evidence will accumulate in favor of particular approach by analyzing the results of debates. This evidence will help in creating a consensus about the direction change should take. In this process, opposition is likely and retaining entrenched opponents to a change initiative can result in trouble. In this stage, continuous training and management development can reap big dividends in implementing change. By teaching new skills to employees, the management can eliminate fear, the major source of resistance to transformation.

v. **Assign Responsibility**

Once the appropriate response to change has been determined, responsibility for carrying it out must be assigned. In this context, a new effort towards change can be placed within an existing department. Also, the firm can set a new autonomous unit. To ensure that an initiative receives proper attention, it may need to be established as a separate unit headed by someone who has only its welfare in mind.

vi. **Allocate Resources**

A variety of resources may be needed to carry out a new initiative. Management must ensure that sufficient resources are available for the initiative. Otherwise, the initiative will atrophy for the lack of sustenance. Allocating these resources is the final step of the change process.

Resistance to Change

Managers promoting change often possess insufficient knowledge to determine as to how a firm should respond to change. A senior manager interested in bringing about change must rely on employees to implement the new response once it has been developed. Therefore, they need to support managers and employees in designing a change initiative and implementing it. In certain organizations, employees withhold such support. Certain reasons for withholding support are:

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i. **Lack of Awareness**

Change requires a broad view of both the competitive and general environment. Manager (at middle and lower level) and employees are often too focused on current activities to develop this kind of perspective. They become narrowly focused to be aware of potential changes over the horizon. They fail to appreciate the need for change, especially if change means learning new methods, processes or techniques.

ii. **Lack of Interest**

Even when managers and employees recognize the need for change, they often perceive it with lack of interest. This kind of reaction is common even with new developments. People also tend to ignore developments that represent, transcend or relatively small opportunities for expansion.

iii. **Incompatibility with Cherished Values**

Mostly firms develop their own sense of shared values and corporate cultures. Managers and employees oppose new strategies, products or approaches that appear to conflict with established practices. Therefore, strongly held values and corporate cultures can become significant obstacles to change.

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Paper II

Part D: Case Study

1. Impact of Budget 2003

i. The increase in the specific excise duty by Rs.50 to Rs.400 per tonne will adversely affect the cement industry, which has of late been finding it difficult to improve realizations. The average realizations of 45 cement companies were about Rs. 2160.71 in FY 2001-02. The cement realizations are stagnant further increase in input prices in the current year impacting the industry's margins. In this backdrop, additional Rs.50 per tonne of excise duty will entail a burden of around Rs.585 crore for the industry.

ii. a. The reduction in CST from 4% to 2% will benefit the industry. Infact, this move has the potential to almost negate the adverse impact of the increase in specific excise duty.

However, it is to be noted that not all cement sales are made inter-state, and thereby attract CST. Hence, to the extent companies produce in one state and sell in another, the adverse impact of additional excise duty is nullified by reduction in CST. Nevertheless, companies cannot increase the inter-state sales just to encash this opportunity in view of various factors, including additional transportation cost.

b. The national players will be benefited more than the regional players, as the former are in a better position to take advantage of the reduction in CST. The regional players, particularly in the Southern region will be benefited on account of replacement of sales tax with Value added tax. This is on account of high rates of sales tax levied by a few states, including Tamilnadu. The reduction in railway freight will benefit companies, which transport more through railways than roadways, including ACC and Grasim. Though the initial reaction of the market has been negative, the overall positive gains to the industry will be demonstrated in the medium–term. Investors with medium–term focus can contemplate exposures in Larsen & Toubro, ACC and southern players like Madras Cements.

iii. The reduction in basic customs duty on white cement will adversely affect the two major white cement producers – Grasim Industries and J K Corp. Nevertheless, the actual impact is likely to be negligible as the users require white cement in small quantities, which will not justify the ordeal of imports.

iv. The fresh projects worth Rs.6000 crore for roadways, airport and seaways will bring immense benefit to the industry in terms of sustained rise in demand. Further, of the 48 new road projects with a total length of over 10000 kilometers to be constructed at a cost of Rs 40000 crore, 25% thereof will be cement concrete roads. This will be a major boost to the domestic cement industry, which has been adversely affected by poor realizations in view of the over supply situation. In the ten months ended Jan'02, the industry's capacity utilization increased to 80% from 77% in the corresponding previous year. In light of this, further increase in capacity utilization will not only enable spreading of fixed costs amongst larger output, but will also enable the industry to improve the realizations, thereby leading to sustained rise in margins.

v. The reduction in the railway freight on cement and clinker by 3.6% and 3.7% to Rs. 55.81 and Rs.53.74 per 100 kg for 700 kilometers is a welcome breather for the industry. The cement industry loaded 34% of the dispatches in the nine months ended Dec'02 through railways, down from 36% in the corresponding previous year period. Considering the rail-road ratio, the effective reduction in the total freight outward charges of the cement industry will be about 1.3%. However, the benefit will vary from company to company, depending on the rail-road ratio of different companies.

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The cement industry has got welcome benefits from Railway and Union Budget, particularly in view of the reduction in railway freight, CST and greater thrust on infrastructure, including cement concrete roads. These gains will outweigh the increase in excise duty on cement at least in the medium-to-long-term. Hence, overall, the sector stands to gain from the recent budget initiatives.

2. Let us first calculate the free cash flow of ACC

(Rs. in crore)

	2002	2001	2000
PAT	130.43	47.48	(58.85)
Interest	146.71	170.18	161.77
I × (1 – Tax) @ 35% Tax	95.36	110.62	105.15
NOPLAT = PAT + I (1 – T)	225.79	158.10	46.30
Depreciation	151.14	141.28	124.51
Gross Cash flow = (NOPLAT + Dep)	376.93	299.38	170.81
Gross investment*	(109.62)	389.80	281.09
Free cash flow	267.31	(90.42)	(110.28)

*Calculation of gross investment

Calculation of gross investment

(Rs. in crore)

Particulars	2002	2001	2000
Increase in Finished Assets	502.73	135.65	506.60
Capital work-in-progress	(333.10)	267.75	(240.84)
Investments	(6.14)	9.27	25.49
Net current assets	(276.65)	(3.72)	(53.71)
Miscellaneous Expenses	3.54	(17.15)	43.55
Gross investments during the year	**(109.62)**	**389.80**	**281.09**

3. Assumptions:

i. 25% of current liabilities is treated as accounts payable.

ii. Average purchases per day includes Raw materials plus power and fuel.

iii. A year consists of 365 days.

iv. Minimum cash balance maintained by the firm is average of past 5 years.

a. Duration of raw material = $\frac{\text{Average level of raw materials}}{\text{Average cost of goods sold per day}}$

$$= \frac{(312.8+300.12)/2}{(2042.63)/365} = \frac{306.46}{5.60} = 54.73 \text{ days.}$$

b. Duration of work-in-progress = $\frac{\text{Average level of work-in-progress}}{\text{Average cost of goods sold per day}}$

$$= \frac{\dfrac{[(850.11+841.30)/2\times 0.40]+[(324.14+228.82+1210.28) +(309.12+218.72+195.04)/2]\times 0.40}{2}}{2042.63/365}$$

$$= \frac{338.28+497.22}{5.60} = 149.20 \text{ days.}$$

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c. Duration of Finished goods $= \frac{\text{Average level of finished goods}}{\text{Average cos t of goods sold per day}}$

Average level of finished goods

$= 38.28 + 497.22 + \left[\frac{(650.46 + 158.2) + (582.23 + 146.54)}{2} \times 0.20\right]$

$= \frac{338.28 + 297.22 + 153.74}{5.60} = 140.94$ days.

d. Duration of accounts payable $= \frac{\text{Average level of payable}}{\text{Average purchaser per day}}$

$= \frac{\text{Rs.161.85 crore}}{(\text{Rs.850.11 crore} + \text{Rs.324.14 crore})/365} = \frac{161.85}{3.22} = 103.06$ days.

e. Duration of receivable $= \frac{\text{Average level of receivables}}{\text{Average sales per day}} = \frac{\text{Rs.232.06 crore}}{\text{Rs.8.88 crore}}$

= 50.86 days.

Average level of receivables $= \frac{\text{Rs.247.63} + \text{Rs.216.50}}{2}$

= Rs.232.06 crore

Average sales per day $= \frac{\text{Rs.3239.91}}{365}$

= Rs.8.88 crore

Receivable period = 232.06/8.88 = 26.13.

Hence operating cycle = 54.73 + 149.20 + 140.94 + 50.8 – 103.06
= 292.67 days.

For weighted operating cycle the duration of inventory and accounts payable should have corresponding weights.

Weight of raw material inventory $= \frac{\text{Value of raw material consumed}}{\text{Value of sales}}$

$= \frac{850.11}{3239.91} = 0.262$

Weight of W-I-P inventory $= \frac{850.11 + \frac{1}{2}(324.14 + 228.82 + 210.28 + 151.34)}{3239.91}$

$= \frac{850.11 + 457.19}{3239.91} = \frac{1307.3}{3239.91} = 0.403$

Weight of FG inventory $= \frac{850.11 + (914.38 + 429.28 + 650 + 158.2)}{3239.91} = 0.9265$

Weight of receivables = 1

Weight of payable $= \frac{850.11 + 324.14}{3239.91} = 0.362$

Therefore,

Weighted operating cycle = 54.73 × 0.262 + 149.2 × 0.403 + 140.94 × 0.9265 + 50.86 × 1 – 103.06 × 0.362 = 228.90 days.

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Average sales per day $= \frac{\text{Rs.}3239.91}{365\,\text{days}}$ = Rs.8.876 crore

Hence, working capital required for the company

= 228.90 × 8.876 + Minimum cash balance

= Rs.2031.72 crore + Minimum cash balance

Average cash balances of the company over 5 years

$$= \frac{\text{Rs.}27.49 + \text{Rs.}27.95 + \text{Rs.}32.78 + \text{Rs.}51.15 + 65.58}{5} = \text{Rs.}40.99 \text{ crore}$$

Therefore, working capital required for the company for present level of operation

= Rs.2031.72 crore + Rs.40.99 crore

= Rs.2072.71 crore.

Industry operating cycle = Investors duration + Debtors duration

$$\frac{365}{9.27} + \frac{365}{16.16} = 39.37 + 22.59 = 61.96 \text{ days.}$$

Therefore, we conclude that the company ACC is having very high level of gross operating cycle in comparison to 61.96 days of the industry.

4. Book value of assets as on 31/03/02 = Capital employed + Current liabilities

= (Rs.1,019.81 + Rs.1,105.4 + Rs.4,84.73) + (Rs.791.47 + Rs.107.26)

= Rs.3,508.67 crore.

Total claim on the firm's assets = Total Debt + Current liabilities

= Rs.1,590.13 + Rs.791.47 + Rs.107.26

= Rs.2,488.86 crore.

The value of equity share of the company can be understood as the value of the call option on the firm's assets where exercise price is substituted by all claims outstanding against the company.

Using Black and Scholes equation.

$$C = S_0\,N(d_1) - \frac{E}{e^{rt}}\,N(d_2)$$

$$d_1 = \frac{\ln\left(\frac{S_0}{E}\right) + (r + 0.5 \times \sigma^2)\,t}{\sigma \times \sqrt{t}}$$

$$d_2 = d_1 - \sigma\sqrt{t}$$

$$S_0 = 1.1 \times 3508.67 = 3859.54$$

$$E = 2488.86$$

$$d_1 = \frac{\ln\left(\frac{3859.54}{2488.86}\right) + \left[0.08 + \left(0.5 \times 0.35^2\right)\right] \times 1}{0.35 \times \sqrt{1}}$$

$$= \frac{0.4387 + 0.14125}{0.35} = 1.657.$$

$$d_2 = 1.657 - 0.35\sqrt{1} = 1.307$$

$$N(d_1) = N(1.657) = 0.9512$$

$$N(d_2) = N(1.307) = 0.9043$$

$$N(d_1) = N(1.657) = N(1.6) + 0.7[N(1.66) - N(1.65)]$$

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$= 0.9505 + 0.7[(0.9515) - (0.9505)] = 0.9512$

$N(d_2) = N(1.307) = N(1.3) + 0.7[N(1.31) - N(1.30)]$

$= 0.9032 + 0.7[(0.9049) - (0.9032)] = 0.9044.$

$$C = S_0 N(d_1) - \frac{E}{e^{rt}} N(d_2)$$

$$= 3{,}859.54 \times 0.9512 - \frac{2{,}488.86}{e^{0.08\times1}} \times 0.9044 = 3671.19 - \frac{2{,}488.86}{1.08328} \times 0.9044$$

$=$ Rs.1,593.31 crore.

Note: Alternatively long-term debt and capital deployed can also be used in the above model.

5. Long-term strategies often called master or business strategies provide basic direction for strategic actions. A long-term strategy can be defined as a comprehensive general approach that guides a firm's major actions.

i. One of the facets of long-term strategies where we come across growth based strategies the first aspect is concentration. Concentrated growth is the strategy of the firm that directs its resources to the profitable growth of a single product, in a single market, with a single dominant technology. The main advantage of concentrated growth strategy is that it leads to enhanced performance. ACC is concentrating on those areas where cost-saving measures are significant like production of captive power plants not only to reduced cost but simultaneously to increase performance of its product.

ii. Diversification is an approach that entails affecting growth through the development of new areas that are clearly distinct from current business. As part of strategies ACC apart from the core area of manufactures and markets cements. ACC is giving significant importance to concentric diversification, by diversifying its services in the areas of refractory products and provides consultancy and engineering services.

iii. In between growth and defensive strategies there is a stability strategy ACC has decided to put on hold its plans to set-up five new Ready Mix Concrete (RMC) plants. Instead, it has decided to consolidate the existing 13 RMCs units and to go in for a capacity expansion of these operational units. The company, along with the Tatas has decided to exist from ailing business at Floatglass India. ACC holds around 13% stake in that company.

iv. As far as defensive long-term strategy ACC, which had one of the worst cost structures, has made substantial progress in reducing cost. ACC is deviating from its objective of curtailing its cost structure to be cost effective, and there is a pressure from shareholder or customers to improve performance by lowering the cost from customers print of view and increasing the profits from shareholders point of view. These efforts along with better price realization in cement industry have helped the company to post a turnaround in the FY 2000-01.

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Part E: Caselets

Caselet 1

1. Even though a powerful technique, the DCF method is not devoid of shortcomings. DCF is merely a mechanical valuation tool, where, even a small change in inputs can result in a massive change in the value of a company or estimation of a project. Therefore, virtues of a careful estimation of the cash flows assume a significant role in the exercise. In practical sphere of operation, forecasting cash flows beyond a certain number of years is a difficult task indeed. While using the DCF model, the finance managers find it difficult a guess up-to a sizable duration into the future.

Second limitation that comes while using DCF method is the time horizon problem of the investment decision. DCF model clearly has a long-term bias and isn't ideally suited for the short-term investments. Thirdly, over indulgence with the DCF means inviting risks of overlooking certain events. For example, a manager using the DCF approach assumes that the project would continue to operate within the given set of constraints and opportunities. However in practice, a change in legislation, technology or managerial expertise can throw up interesting possibilities for the growth of the project or company. It may be true that by adopting the DCF technique an analyst can avoid the temptation to be a part of a speculative bubble, but equally is a chance that he might miss an opportunity elsewhere.

Fourthly DCF analysis is very sensitive to the discount factor even a minor change in prevailing interest rate can make a big difference.

Last but not the least DCF model is an internal exercise and does not allow for further investigation.

If a company fails to meet financial performance expectations, if one of its big customers shifts to a competitor, or if interest rates take an unexpected turn, the DCF model becomes ineffective. Even the firms with negative earnings cannot be valued using DCF method. Ratio based valuation models like the PE ratio, Price to sales or PEG ratio are found better than the DCF models because under the first sets of techniques, companies or projects are comparable to each other rather than judged on intrinsic value.

2. Under DCF approach following are used

i. Operating earnings and expected growth in earnings

ii. Expected duration of growth

iii. Cost of equity, cost of debt, tax rate applicable to the company, prevailing expectation of investors.

We will discuss the accounting manipulation possible in the above factors.

Operating earnings usually taken on accrual basis rather than on cash basis. It leaves lot of room for manipulation of receipt. However, the same can be scrutinized if taken over a long duration. Similarly, the growth rate based on past data may not reflect the gains possible due to the new strategy adopted at present. Here, again there is a scope of variance in estimated growth rate.

The duration of growth is very crucial and affects the valuation significantly. No one can give the exact estimate of the growth period. This can be addressed to using scenario analysis.

Cost of debt normally is taken at book value however, the correct cost should be reflecting the prevailing market rate. Cost of equity is normally calculated using CAPM. However, β used varies with time. There is no consensus on the time period used for regression in order to find out β.

Similarly, there can be difference effective tax rate and tax rate applicable to the company. This leads to difference in cost of capital calculated. The accounting trickles does affect the cost of capital.

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Caselet 2

1. Corporate Governance is no longer alien to Indian Inc. The developments in the Indian and global markets have established that Indian companies can no longer ignore better governance practices. There is a global consensus about the objective of 'good' corporate governance: Maximizing long-term shareholder value. A code for corporate governance in India must include the following:

- A single board can maximize the long-term shareholder value if it performs well. The board should meet a minimum of six times a year, preferably at an interval of two months and each of these meetings must have agenda items that require at least half a day of discussion.
- Any listed company with a turnover of Rs.100 cr and above should have professionally competent and acclaimed non-executive directors, who should constitute at least 30% of the board if the chairman is a non-executive director, or 50% if the chairman and managing director is the same person.
- No single person should hold directorships in more than 10 companies that excludes directorships in subsidiaries and associate companies.
- For non-executive directors to play an important role they need to become active participants and must have clearly defined responsibilities.
- To secure better efforts from non-executive directors, companies should pay a commission over and above the sitting fees for the use of the professional inputs.
- While re-appointing members of the board, companies should give the attendance record of the concerned directors. If a director has not been present for 50% or more meetings, this should be explicitly stated in the resolution that is put to vote. One should not re-appoint a non-executive director who has not attended even one-half of the meetings.
- The key information that must be placed before the board include annual operating plans and budgets, capital and overhead budgets, internal audit reports, defaults in payment of interest or principal amounts, details of any joint venture, and transactions that involve substantial payment for goodwill or brand equity.
- Listed companies with either a turnover of over Rs.100 cr or a paid-up capital of Rs.20 cr whichever is less should set-up Audit Committees. The committee should consist of at least three members, drawn from a company's non-executive directors, having adequate knowledge of finance, accounts and basic elements of company law.
- Under "Additional Shareholder's Information", listed public companies should give data on high and low monthly averages of share prices, statement on value added, and greater detail on business segments or divisions.
- Consolidation of Group Accounts should be optional and subject to the FIs allowing companies to leverage on the basis of the group's assets, and the Income Tax Department using the group concept in assessing corporate income tax.
- Major Indian Stock Exchanges should gradually insist upon a compliance certificate signed by the CEO and the CFO, which states that the management is responsible for the preparation, integrity and fair presentation of the financial statements and other information in the annual report.
- For all companies with paid-up capital of Rs.20 cr or more, the quality and quantity of disclosure that accompanies a GDR issue should be the norm for any domestic issue.
- Government must allow for greater funding to the corporate sector against the security of shares and other paper.

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- It would be desirable for FIs to re-write their covenants to eliminate having nominee directors except in the event of serious and systematic debt default.
- If any company goes to more than one credit rating agency, then it must divulge in the prospectus and issue document the rating of all the agencies that did such an exercise.
- Companies that default on fixed deposits should not be permitted to accept further deposits and make inter-corporate loans or investments or declare dividends until the default is made good.
- FIs should take a policy decision to withdraw from boards of companies where they have little or no debt exposure and where their individual shareholding is 5% or less, or total FI holding is under 10%.

2. Many factors contribute to good governance; some (such as the relationship between the CEO and the chair) are difficult to quantify. Nevertheless, several useful indicators of a well-governed company are available to shareholders. Ten widely recognized principles are summarized here.

i. **Accountability**

a. **Transparent ownership:** Identify major shareholders, director and management shareholdings, and cross-holdings.

b. **Board size:** Establish an appropriate number of board seats; studies suggest that optimal number is 5 to 9.

c. **Board accountability:** Define board's role and responsibilities in published guideline, and make them basis for board compensation.

d. **Ownership neutrality:** Eschew anti-takeover defenses that shield management from accountability. Notify shareholders at least 28 days before shareholder meetings and allow them to participate online.

ii. **Independence**

a. **Dispersed ownership:** Deny any single shareholders or group privileged access to or excessive influence over decision-making.

b. **Independent audits and oversight:** Perform annual audit using independent and reputable auditor. Insist that independent committees oversee auditing, internal controls, and top-management compensation and development.

c. **Independent directors:** Allow no more than half of directors to be executives of company; at least half of non-executive directors should have no other ties to company.

iii. **Disclosure and Transparency**

a. **Broad, timely, and accurate disclosure:** Fully disclose information on financial and operating performance, competitive position, and relevant details (such as board member backgrounds) in timely manner. Offer multiple channels of access to information and full access to shareholders.

b. **Accounting standards:** Use internationally recognized accounting standards' for both annual and quarterly reporting.

iv. **Shareholder Equality**

One share, one vote: Assign all shares equal voting rights and equal rights to distributed profit.

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Caselet 3

1. Rationalizing procurement by the way of centralization will produce the full potential of savings if the streamlined process is not used throughout the firm. There are four elements to any effort to introduce a new process:

   - **Management buy-in-**High-profile board level approval and involvement is crucial to acceptance of any fundamental change in business processes.
   - **Change management–**Only a thorough training and communication effort can ensure that all staff can ensure that all staff understand the principles behind the new process. Existing communications channels – such as a group Intranet – can be harnessed to clarify new processes.
   - **Metrics –** Management must be able to monitor how money is being spent and by whom in order to track non-compliance. Performance can be measured by the center-led procurement department – this is relatively simple if a firm uses an ERP system company wide, less so if all subsidiaries use different applications. An international software firm, which had grown though acquisition, was able to save US $1 mm through implementation of an online requisition program and payables reporting and matrics(previously, no process/methodology to control purchasing or expenditure management reporting structure existed).
   - **Sanctions –** Staff in the organization must know that there is a price to pay for non compliance. One effective measure is to make it clear that "if it is not bought through the purchase channels its not bought for the company" so staff will payout of their own pocket for minor purchases not made though authorized channels. (They can keep what they have paid for!)

2. To be effective in cutting costs, a center-led procurement organization must aim to push all of the company's spend through approved channels, using strategically-sourced framework agreements wherever possible. The following four channels would work for most companies in order to tackle structural and payment problems:

   Framework agreements/contracts — A fixed contract or longer-term agreement with a preferred supplier including agreed payment terms, awarded following a full strategic sourcing review, i.e., a thorough appraisal of all potential suppliers and their ability to meet your firm's needs. (also see below)

   Low-value channel — All low-value payments (i.e., those 60-70% of transactions that account for 3% or 4% of spending) should be conducted via a single low-maintenance mechanism, such as procurement or purchasing cards. Procurement-cards effectively remove all small suppliers (up to 60% to 70% of the all suppliers) from the firm's purchasing systems, in favor of the single card supplier. Ideally, the P-cards should be held locally, but under the control of a senior manager / budget holder.

   Authorized suppliers — This is an intermediary category for existing suppliers, following rationalization, but prior to a full strategic sourcing review. Volume discounts will have been sought from these vetted suppliers during rationalization, but a framework agreement will not be in place.

   Catch-all — If none of the above applies, a special purchase order can be made by the procurement unit; the only time at which it is directly responsible for a purchase. An authorized supplier will then be appointed if the purchase is likely to be repeated.

   Clearly the aim is for all large purchases to percolate through from categories four and three to one. Rationalizing suppliers, narrowing the field of existing suppliers by offering volume discounts, is distinct from a full strategic review. Researching the whole market can take up to six months and it may be a matter of years before the move from "best of existing suppliers" to "best in class" is completed, with framework agreements replacing all authorized suppliers. In cases where the purchaser does not have enough leverage to bargain effectively with suppliers, a consortium approach may be required. It is important that the sourcing review follows steps similar to those listed below as imposing an inferior supplier will undermine the process in the eyes of the end user:

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- **Understand the purchase —** Talking to all stakeholders and users of the product / service will help understand the purchase and aid market research. Standardization will take place during this step.
- **Market research —** Who are the leading suppliers? What are the key issues specific to this market?
- **Talk to the market —** Informing the market of your intentions can result in useful advice from potential suppliers.
- **Pricing tender —** Ask shortlisted suppliers (no more than four or five) to submit prices.
- **Negotiation —** Explain the pricing, payment terms and service levels that you require.
- **Pre-sign audit —** Once a favorite has been established, check that this supplier really can meet your needs (e.g., consolidated invoices, deliveries on half-pallets). If this is left until after the contract has been signed, the supplier has less incentive to put matters right.

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Model Question Paper V

Time: 3 Hours **Total Points: 200**

Paper I

Part A: Basic Concepts (30 Points)

Answer all the questions. Each question carries one point.

1. Which of the following is not an assumption of Modigliani-Miller approach to capital structure?

a. Information is freely available to investors.

b. Transactions are cost free.

c. Investors have homogeneous expectations about future earnings of a company.

d. Growth of a firm is entirely financed through retained earnings.

e. Securities issued and traded in the market are infinitely divisible.

2. According to Pecking Order Theory of financing, which of the following orders of financing is most preferable for a firm?

a. Debenture, preference capital, fresh equity, retained earnings.

b. Fresh equity, preference capital, debenture, retained earnings.

c. Retained earnings, fresh equity, debenture, preference capital.

d. Fresh equity, retained earnings, preference capital, debenture.

e. Retained earnings, debenture, preference capital, fresh equity.

3. If the market price per share of Magnificent Ltd. is Rs.44, EPS is Rs.3.75 and retention ratio is 60%, then the multiplier according to Graham-Dodd Model of dividend policy is

a. 14.2

b. 14.9

c. 15.8

d. 16.0

e. 16.4.

4. Which of the following is not a financial determinant of value according to Marakon Model?

a. Cost of goods sold.

b. Return on equity.

c. Cost of equity.

d. Growth rate of dividends.

e. None of the above.

5. Which of the following is a 'value driver' that affects the value of a firm according to Alcar Model?

a. Dividend payout.

b. Value growth duration.

c. Net profit margin.

d. Growth rate of dividends.

e. Book value of the firm.

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6. Consider the following information relating to Glenco Ltd :

EBIT	= Rs.20 crore
Depreciation	= Rs.3 crore
Interest on debt	= Rs.3 crore
Annual loan installment	= Rs.2 crore
Tax rate	= 35%

The fixed charges coverage ratio of the company is

a. 2.50

b. 3.33

c. 3.78

d. 10.00

e. None of the above.

7. Which of the following statements regarding the adjusted book value approach to valuation of companies is/are true?

a. The expected future cash flows of the firm are discounted at the weighted average cost of capital.

b. Current assets like deposits made are valued at book value.

c. The ratio of share price to book value per share is applied to the book value of the assets to determine their market value.

d. Long term debt is valued using the standard bond valuation model.

e. Both (b) and (d) above.

8. A costing technique based on sales price of a product necessary to capture a predetermined market share is known as

a. Activity based costing

b. Absorption costing

c. Quality costing

d. Target costing

e. Life cycle costing.

9. Which of the following is not a model for predicting sickness of a firm?

a. Beaver Model.

b. BCG Matrix.

c. Altman's Z Score Model.

d. Argenti Score Board.

e. Wilcox Model.

10. Which of the following adjustments is not recommended by Current Cost Accounting method to determine the current cost operating profit?

a. Depreciation adjustment.

b. Cost of sales adjustment.

c. Equity value adjustment.

d. Monetary Working Capital adjustment.

e. None of the above.

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11. If the inflation rate is expected to rise from 5% to 8%, nominal return before rise in inflation is 12%, and tax rate is 30%, then nominal return after rise in level of inflation will be

a. 15.0%

b. 15.2%

c. 15.8%

d. 16.0%

e. 16.3%.

12. Converting an existing division into a wholly owned subsidiary is called

a. Split-off

b. Split-up

c. Divestiture

d. Equity carveout

e. Spin-off.

13. When there is a capacity constraint in the transferor division, the transfer pricing can be ideally done by

a. Market price

b. Marginal cost

c. Shadow price

d. Full cost pricing based on actual cost

e. Marginal cost + Lumpsum annual payment.

14. Low cost product strategy is used by Nirma in detergents, Ruf & Tuf in denims and Akai in television. This strategy of pricing low, falls under which of the following costing techniques?

a. Life cycle costing.

b. Target costing.

c. Quality costing.

d. Activity based costing.

e. Value chain analysis.

15. Which of the following is true in the context of stocksplit?

a. The par value of the equity share increases.

b. Reserves are capitalized.

c. Shareholders proportional ownership changes.

d. Book value of equity capital increases.

e. Market price of the equity share decreases after a stock split.

16. If ITC (Tobacco division) starts its own chain of retail stores from which it sells its cigarettes, it is an example of

a. Horizontal Integration

b. Backward Integration

c. Forward Integration

d. Conglomerate diversification

e. Concentric diversification.

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17. BCG matrix is a portfolio approach that compares various businesses in a firm's portfolio on the basis of relative market share and market growth rate. In this context, which of the following represents new products with a potential for success that need a lot of cash for development?

a. Cash cows.

b. Dogs.

c. Stars.

d. Question marks.

e. None of the above.

18. Which of the following describes a company's product, market and technological areas of thrust, and reflects the values and priorities of the strategic decision makers?

a. Company's Profile

b. Company's Mission

c. Company's Objective

d. Company's Strategy

e. Company's Vision.

19. In which mode of strategic decision-making, strategy formulation is confined to owner promoters?

a. Entrepreneurial mode.

b. Adaptive mode.

c. Planning mode.

d. Receptive mode.

e. Intuitive mode.

20. When a strength gives the firm a comparative advantage in the marketplace, it is called a(n)

a. Niche competence

b. Organizational capability

c. Distinctive advantage

d. Distinctive competence

e. Intangible asset.

21. Which of the following is/are the key feature(s) for distinguishing annual objectives from long-term objectives?

a. Time frame.

b. Focus.

c. Specificity.

d. Measurement.

e. All of the above.

22. Banking organizations in India have seen a lot of radical change. One of the changes being the implementation of voluntary retirement scheme for their employees. This type of strategic change is called

a. Re-engineering

b. Restructuring

c. Innovation

d. Capacity building

e. Diversification.

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23. An agreement in which a firm grants rights to another firm in another country or market to produce and/or sell a product is called the

a. Acquisition

b. Licensing arrangement

c. Joint venture

d. Mutual service consortia

e. Franchising.

24. Strategic control focuses on monitoring and evaluating the strategic management process to ensure that it functions in the right direction. Which of the following is designed to monitor a broad range of events inside and outside the company that are likely to threaten the course of a firm's strategy?

a. Implementation control.

b. Premise control.

c. Operational control.

d. Strategic surveillance.

e. Special alert control.

25. An industry in which no firm has a large market share and each firm serves only a small piece of the total market in competition with others is known as

a. Multidomestic

b. Fragmented

c. Global

d. Transnational

e. International industries.

26. Competitive scope has a great influence on competitive advantage, because it shapes the configuration and economics of the value chain. Which of the following is not an appropriate dimension of competitive scope?

a. Geographic scope.

b. Business scope.

c. Industry scope.

d. Segment scope.

e. Vertical scope.

27. A firm's external environment includes a remote sector and an immediate task sector. Which of the following factors are included in the remote sector?

a. Political, technological, economic and social

b. Political, union activity, economic and technological

c. State government, production, social and economic

d. Mission, company profile and competition

e. All of the above.

28. In which of the following stages of an industry will technological know-how diminish as an entry barrier?

a. Embryonic stage.

b. Growth stage.

c. Shake out stage.

d. Mature stage.

e. None of the above.

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29. Advertisements for products and services such as life insurance policies, mouthwash and deodorants play upon fear. By showing the unfortunate consequences that a consumer faces if he doesn't use the service or product, advertisers force the consumers to purchase the product or service. Such ads use

a. Legitimate power

b. Coercive power

c. Expert power

d. Referent power

e. Reward power.

30. In which of the following structures functional and product forms are combined simultaneously at the same level of the organization?

a. Divisional structure.

b. Functional structure.

c. Simple structure.

d. Matrix structure.

e. Geographic structure.

Part B: Problems (50 Points)

Solve all the problems. Points are indicated against each problem.

1. Power Products Ltd. (PPL) had issued 15-year tax-free debentures on July 1, 1999 carrying a coupon rate of 10.5 percent payable semiannually. The issue provisions provide for a call option on these debentures after a term of 5 years at a price, which is 6 percent above the nominal value of the debentures. The interest paid by the company on these debentures for the period July 1, 2003 to December 31, 2003 amounted to Rs.1,05,000. Because of a fall in the interest rates, the company is planning to replace these debentures with effect from July 1, 2004, by new debentures carrying a coupon rate of 8.5 percent payable semi-annually and having a maturity period of 10 years. The company expects that the net amount realized from the issue of the new debentures will be equal to the total nominal value of the existing debentures and the issue costs will amount to 1 percent of the net amount realized. It is assumed that the coupon rate and the terms of coupon payment of the new issue reflect the prevailing effective annual rate of interest on the debt securities of the companies similar to PPL.

You are required to find out the following:

a. The direct costs associated with the replacement decision.

b. The financial viability of the replacement decision being considered by the firm.

(3 + 5 = 8 points)

2. The following information relates to the operations of Modi Industries Ltd.:

Net worth	Rs.50 lakh
Current liabilities and provisions	Rs.60 lakh
Gross profit	Rs.72 lakh
Gross profit margin	20%
Total asset turnover ratio	2.5
Inventory turnover ratio	6
Average collection period	36 days
Total debt to equity ratio	1.88
Current ratio	1.5

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You are required to complete the balance sheet of the company given below:

Balance sheet

Net worth Term loan Current liabilities and provisions		Net fixed assets Inventories Receivables Cash and bank	
Total		Total	

It is assumed that the revenues of the firm wholly consisted of sales and that the sales are entirely on credit basis. Assume 1 year = 360 days.

(9 marks)

3. The equity capitalization rate of Jupiter Industries Ltd. is 12 percent. The company has 50,000 shares outstanding which have a market price of Rs.200 each. The company expects a net income of Rs.7,00,000 at the end of one year and plans to declare a dividend of Rs.6 per share at that time. The company also plans to invest Rs.10,00,000 in a project after one year. It is assumed that the assumptions underlying the Modigliani-Miller model on dividend policy are applicable.

You are **r**equired to show that the Modigliani-Miller model on dividend policy holds good irrespective of whether dividends are paid or not.

(8 marks)

4. Pinnacle Industries Ltd. is planning to invest in a new project, which requires an outlay of Rs. 10 crores. The company is considering different mixes of equity and debt for financing this project. The present capital structure of the company is given below:

Equity share capital	Rs.12 crores (par value of each equity share = Rs.10)
Term loan	Rs.8 crores (at 12.5% interest)

In the recently completed financial year the profit before tax was Rs. 5 crore and the company declared dividends amounting to Rs.1.92 crore; the dividend payout ratio was 60 percent. It is assumed that the current liabilities of the company do not include any interest bearing debt. Additional debt can be issued at 13 percent. It is also assumed that the effective tax rate for the company will remain unchanged.

You are required to answer the following questions:

a. It is expected that the new project will lead to an increase in EBIT by 40 percent. Determine the financing structure for the new project, which will yield the same EPS as at present. Any new equity shares will be issued at Rs.14 per share.

b. Taking the new project into consideration, determine the level of EBIT at which the firm will be indifferent between the long term debt to equity ratio of 5:4 and 6:5. Any new equity shares will be issued at Rs.20 per share.

(6 + 7 =13 points)

5. The following details are available with regard to Excel Enterprises Ltd. (EEL):

	(Rs. in lakh)
Sales	600
Corporate tax	27
Paid up equity share capital	80
Reserves and surplus	40
Effective tax rate	36%

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The companies Ace Industries Ltd.(AIL), Modern Industries Ltd.(MIL), Rover Enterprises Ltd.(REL) are considered to be similar to EEL in terms of nature and scale of operation.

The following details are available with regard to these companies:

	AIL	MIL	REL
	(Rs. in lakh)	(Rs. in lakh)	(Rs. in lakh)
Sales	540	580	640
Tax	19.6	22.4	32.4
Paid up equity share capital	60	80	90
Reserves and surplus	40	30	60
Market value of the firm	648	725	896
Effective tax rate	35%	35%	36%

The value of EEL has to be determined using the comparable firms approach. It is felt that in the valuation of EEL the weightage of sales, earnings and book value should be in the ratio of 1:2:1.

You are required to determine the value of EEL by the comparable firms approach.

(7 points)

6. The finance manager of Murphy & Sons Ltd. intends to use a suitable model to manage the cash requirements of the company. An expert has suggested the Miller & Orr model. The company wants to maintain a minimum cash balance of Rs.3 lakh at all times. The company policy is to invest surplus cash in marketable securities. Presently the yield available on such securities is 6.3 percent. The transaction costs involved in buying and selling such securities is assumed to be a fixed amount of Rs.300 per transaction. The standard deviation of the daily changes in cash balances is Rs.3,000. (Assume 1 year = 360 days.)

You are required to answer the following questions:

a. Determine the maximum amount of cash balance that can be accumulated at any time and the amount of cash that should be invested in marketable securities as the maximum cash balance is attained.

b. What will be the change in the maximum cash balance and the required investment in marketable securities as the maximum cash balance is attained, if the daily inflows of cash increase by a constant amount of Rs.2000 and the daily out flows of cash increase by a constant amount of Rs.1500, due to increased business activity? It is assumed that the other factors influencing the cash balances will remain unchanged.

c. What will be the change in the required investment in marketable securities as the maximum cash balance is attained, if the minimum required cash balance is increased by Rs.1 lakh? It is assumed that the other factors influencing the cash balances will remain unchanged.

(3 + 1 + 1 = 5 points)

Section C : Applied Theory (20 Points)

Answer all the questions. Points are indicated against each question.

1. Shell company has adopted a new Management Information System (MIS) in its Chennai branch. Though the MIS promised rich benefits, Shell's employees were quite apprehensive about the new system and resisted this recent move of the company. Can you suggest some measures or techniques for overcoming resistance to change at Shell?

(10 points)

2. Reorganization of a firm in financial distress is often a more sensible solution than liquidation as the firm will be more likely to repay its debts, when it is alive and operating than when it is liquidated. Explain the steps involved in the reorganization of a financially distressed firm.

(10 points)

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Paper II

Part D: Case Study (50 Points)

Read the case carefully and answer the following questions:

1. a. Analyze and comment on the capital structure of Gujrat Ambuja Cement Limited.

b. Does capital structure matter? Why do you think that it has been difficult to provide finance managers with a ready-made formula in ascertaining the optimal capital structure?

(6 + 6 = 12 points)

2. a. Analyse the dividend policy of Gujrat Ambuja Cement and comment on it.

b. The prices of the shares, in general, tend to be upwardly inclined when organizations announce publicly any increases in their dividend pay-out. In this context discuss the signaling effect of dividends.

(6 + 4 = 10 points)

3. Calculate the Z-score of the company for the years 1998-99 to 2002-03 and state your inferences. Does Altman's Z-score have any practical significance in the Indian context. Justify your answer.

(8 + 4 = 12 points)

4. a. For the financial year 2004-2005, the earnings per share and the dividends per share are anticipated to be Rs.15 and Rs.7.50 respectively. The growth expected by investors is 10 percent and the expected rate of return of the investors is 12 percent. What will be the estimated price of the share of the firm if it switches over to a cent percent dividend payout, and decides to issue the required shares for financing its growth? Explain your answer with necessary calculations, assuming that the perpetual dividend-growth model, and the assumptions underlying MM hypothesis on dividend policy are applicable.

b. If the management of the firm were to make a fixed price offer to buy-back a certain percentage of the outstanding shares at a significant premium, what would be the impact of buybacks on the current market price of the stock?

(6 + 4 = 10 points)

5. Comment on the long-term strategy for Gujrat Ambuja Cement from the given information on industry and company.

(6 points)

One of the oldest of brick and mortar industries, the Indian cement sector is now hogging the limelight as leading players are gearing to face the new economy. The cement produced by the industry is regarded as a world-class product made by indigenous technology at competitive prices. However, the cement sector has undergone a veritable metamorphosis after the decontrol. Further, it witnessed a blistering pace of growth in the succeeding years and now the industry is estimated to have a turnover of Rs. 25,000 crore.

Virtually thrown open to market forces, the sector stands witnesses to large-scale consolidation moves via. acquisitions, mergers or hostile takeovers. With MNCs eyeing for a pie in the growing Indian cement market, the competitive milieu is ready for a change.

Industry Structure: India is world's second largest cement producing country, next only to China (America closely catching up).

As of Mar '03, there are 124 large cement plants belonging to 54 companies, with an installed capacity of 135.03 million tonne. Of these, 54 plants have a capacity of one million tonne or more. In addition there are over 300 mini plants with a total installed capacity of about 11.10 million tonne. A plant is categorized as mini plant if its capacity is less than 1.98 lakh tonne.

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The top five industry groups Birla group, Larsen & Toubro, Gujarat Ambuja, India Cements and Jaiprakash Industries (through its subsidiary Jaypee Rewa Cement) controls over 60% of the total cement capacity.

The Birla Group controls 22%, while Gujarat Ambuja (including ACC's 10%) controls 17% whereas L & T controls for about 12.6% and India Cements group control about 5.34% of the installed capacity of cement in India.

Region-wise cement production

Region	% of production
Western	40
Southern	31
Rest of India	29

Cost Dynamics: Limestone, coal, freight, electricity and furnace oil are the major cost factors. As per standard input-output norms, to produce one tonne of cement, 1.5 tonne of limestone, 0.25 ton of coal, 120 kwh of power and 0.05 tonne of gypsum are required.

As for as lime stone is concerned, the major cost is the royalty paid to the central government and cess levies on royalties charged by the state governments.

Coal constitutes around 35-40% of the production cost of cement. India's coal has low calorific value and high ash content. As the cost per calorie of imported coal compares favourably with domestic coal, the industry also resorts to import.

Cement is power-intensive, electricity charges accounting for nearly 16% of the operating costs. As state governments usually supply power, the tariff varies from state to state and location to location. Rising power costs and frequent power cuts have forced major players in the sector to set up captive power plants.

With freight costs at 15% of the cost, plants are ideally located closer to the lime stone quarries. However, this results in substantial differential in prices within the country.

As the cement industry is highly capital-intensive, leading players have leveraged on their balance sheets and have huge loan exposure. The total debt exposure of Indian cement industry is about Rs. 15,000 crore. Hence, a small increase in their interest cost will severely affect their bottom lines. Likewise, excise duty on cement at present is Rs. 350 per tonne for large plants fetching a revenue of over Rs. 3200 crore to the central exchequer.

Critical Success Factors: Better cost control, lowering debt-equity ratio caused by funding of acquisitions and greenfield projects primarily through borrowings and better capacity utilization are critical success factors.

Freight and transport costs being significant in cement industry, efficient logistics management is equally critical. and fuel costs exceeding 21% of the sales, units with captive power plants have a distinct advantage. This is particularly because of unreliable supply from SEBs, that comes at a huge cost, as against reliable and relatively low cost captive power plants.

With growing interests shown by MNCs in the Indian market, the competitive milieu is shifting towards companies with deep pockets who can absorb temporary losses.

Demand Drivers: India's per capita consumption is about 90 kg compared to the world average of 250 kg. This implies great growth potential for the domestic industry.

With 60% of the demand coming from the housing sector, the fortunes of cement industry are closely linked to it. Demand will also improve due to new infrastructure projects like ports, roads and highways.

The roadways and highways project in general, and the golden quadrilateral project in particular, has generated significant demand for cement in the last couple of years and continues to propell demand for FY 2003-04 also.

With nearly Rs. 8,00,000 crore worth of investments likely in electricity generation in the coming decade, the overall prospects of the growth in demand appears bright.

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Current Scenario: The cement industry, upbeat on Prime Minister's much-ambitious highway development project and the booming housing segment, witnessed the biggest ever merger in L&T-Grasim deal, even as the foreign majors adopted a cautious path with a 'wait and watch' policy in 2003. Notwithstanding the drought that hit the country in the early part of 2003, the Rs. 30,000 crore cement industry is expecting a modest 8 percent growth even though the GDP is expected to grow 6-7 percent.

Close on the heels of 'complex' Rs. 2,200 crore L&T-Grasim deal, slated to become a benchmark for future merger and acquisitions (M&As), the other competitor, ACC, was all smiles with the Orissa Government deciding to handover Idcol Cement to it. Gujarat Ambuja is trying a different strategy to give a tough fight to the bigwigs by trimming its liabilities as part of efforts to make its products competitive in the market. The industry, however, still continues to bear the brunt of high input costs along with high tariffs for power, apart from high excise, sales taxes and limestone royalty. Interestingly, the passing year was no different for government-owned small players as they continued with losses and some of them were on the verge of going into private hands.

Foreign players like Lafarge, Blue Circle, Holders Bank and Ital Cementi had not initiated any noteworthy aggressive step to consolidate their existing market share. The L&T-Grasim combine along with ACC-Ambuja duo will now hold nearly 40 percent of the overall domestic market share. The existence of two huge units would reduce the frequent price fluctuations in the domestic market. Polarisation of big domestic players will bring in checks and balances for the foreign players in future. The 17.5 million capacity L&T-Grasim deal was struck at $78 a tonne capacity, well within global $68-80 range for merger and acquisitions. By adding L&T capacity, Grasim would be able to raise its total capacity to 31 million tonnes commanding over 22 percent of 120 million tonne capacity for large plants. The lower than expected growth of the industry during the first half was attributed to the 'twin factors' of bad monsoon and transporters strike which affected supplies in many parts of the country. These two factors affected both supplies and consumption badly in the first half, though production and despatches started picking up after September and would continue to maintain the trend till beginning of the next fiscal. The production witnessed a 4.7 percent growth in April-November 2002 at 75.15 million tonnes against 72 million tonnes a year ago. Despatches also grew by 4.37 percent to 75 million tonnes during the first eight months of the current fiscal as compared to 71.86 million tonnes. Uttar Pardesh recorded the highest output growth in 2003, followed by West Bengal, Maharashtra and Karnataka. Bihar, Gujarat and Chhattisgarh were the top three States in terms of negative production growth. Production growth was the highest in the central region at 8 percent, followed by south at 7 percent, west at 4 percent and north at 3 percent while the eastern region recorded a negative 4 percent growth. Cement consumption witnessed positive growth in 2003, except Himachal Pradesh, Gujarat, Bihar, Orissa and Tamil Nadu where it was negative. It, however, registered an impressive growth in Uttaranchal, Rajasthan, Karnataka and Kerala. The central region comprising Uttar Pradesh and Madhya Pradesh recorded the highest 8 percent consumption growth during the year. The southern region recorded 6 percent growth in consumption, followed by north at 5 percent and east at 2 percent while west clocked a one percent negative growth, mainly due to 13 percent negative consumption growth in Gujarat. In variety wise production, OPC still leads at 45 percent of the total output closely followed by PPC variety at 44 percent.

Exports: On the export front, nothing encouraging happened despite existence of huge export potential to neighbouring nations. Cement exports increased by 10 percent while the clinker export witnessed 57 percent increase during the year.

Future Outlook: The industry is forging ahead with spectacular spurt in demand, which is likely to remain in double digits in FY 2003-04, though some in the industry peg it at 8%. Even this growth rate is spectacular, and the industry has witnessed significant gains in terms of operating costs due to higher capacity utilization. The industry's efforts in terms of consolidation, branding, blending, and more important, strict cost control would retain its core strength.

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Cement Industries Ratios

Year	Latest	2002	2001	2000	1999	1998
No. of Companies	49	16	19	25	28	31
Debt-Equity Ratio	2.23	2.14	2.01	1.75	1.66	1.54
Long-Term Debt-Equity Ratio	1.79	1.7	1.56	1.36	1.37	1.28
Current Ratio	0.8	0.77	0.81	0.93	1.16	1.27
Turnover Ratios						
Fixed Assets	0.84	0.83	0.86	0.88	0.9	0.94
Inventory	9.27	9.29	8.87	8.77	7.99	6.79
Debtors	16.16	16.99	15.1	12.93	11.63	11.58
Interest Cover Ratio	1.13	1.39	0.97	0.36	0.65	0.7
PBIDT/Sales (%)	15.13	15.51	14.6	9.7	11.67	10.99
PBIT/Sales (%)	8.96	9.5	8.72	3.44	5.98	5.89
PBDT/Sales (%)	7.17	8.69	5.63	0.13	2.43	2.53
Cash Profit Margin (%)	6.4	7.85	5.4	0	2.33	2.43
Aggregated Profit after Tax margin (%)	0.23	1.83	-0.48	-6.26	-3.36	-2.67

Gujarat Ambuja Cement Limited: The Company was Incorporated on 20th October, 1981 as Ambuja Cements Pvt. Ltd. It was jointly promoted by Gujarat Industrial Investment Corporation Ltd. (GIIC) and N.S. Sekhsaria and his associates, Vinod K. Neotia and Suresh Mulani, for setting up a cement project in the joint sector. The Company was converted into a public limited company on 19th March, 1983 and its name was changed to Gujarat Ambuja Cements, Ltd., on 19th May, 1983.

It quickly became clear to GACL that if it were to run a profitable company, it should to keep power costs to the minimum. So it focused its efforts on improving efficiency at its kilns to get more output for less power. Next GACL set up a captive power plant at a substantially lower cost than the national grid. It sourced a cheaper and higher quality coal from South Africa. And a better furnace oil from the Middle East. The result is that today it is in a position to sell our excess power to the local state government

The Company adopted the latest dry process precalcination technology incorporating five stage preheater for the main pyro processing system of the cement plant. For grinding the raw material, the Company undertook to install the latest air swept roller mills of polysius design which were extremely energy efficient. A computerised process control system with field instruments supplied by Larsen & Tourbo was also installed to give consistently high quality cement with maximum productivity. In addition, electronic packing machines were obtained from Haver & Boecker, West Germany, and reverse air baghouse equipment from Zurn Industries, USA. The company entered into an agreement with Krupp Polysius AG, (KP) West Germany, for supply of plant, equipment and service for the project, KP agreed to supply raw material and coal grinding vertical roller mills, homogenising and kiln feed, burning, cooling and coal firing equipment and pneumatic transport pumps. KP have a collaboration agreement with Buckau Wolf India, Ltd. who are supplying the balance items of the main plant as per KP design. The scope of the agreement with KP provides for complete engineering of the plant, technical documentation and information and supervision of erection and commissioning of the project. In 1992 the company undertook bulk cement transportation, by sea, to the major markets of Mumbai, Surat and other deficit zones on the West Coast. Transportation was to be carried out by three specially designed ships. The units bulk terminal at Kodinar and one at New Mumbai was completed and work

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on the third terminal near Surat began. In 1994 the company's muller location 1.5 million tonne cement project with clinkeriation facility at site in H.P and grinding facility both at Suli & Ropar in Punjab was commissioned. Land was acquired at Sahranpur to serve as another site for grinding cement. The Company also undertook to set up a new unit, 'Gajambuja Cement' with an installed capacity of 9.4 lakh tonnes, at the existing premises. The kiln was fired on 1st March 1993 and the unit produced its first batch of clinker on 4th March, 1993. The company undertook to set up the third 1 million tonne cement plant at Ambujanagar. In 1995, the company proposed to install one more cement mill at Himachal plant. Two more ships 'Ambuja Keerti' and 'Ambuja Shakti' were added to the Fleet. Gujarat Ambuja Cement Ltd. has offered to set up a multi-crore cement plant in Jammu and Kashmir. Gujarat Ambuja Cement Ltd. (GACL) set up two new units with a capacity of 1.5 m.t. each through its subsidiaries. The company signed a memorandum of understanding (MoU), with the promoters of Modi Cement to take control of the sick company and submitted a revival proposal to the Board for Industrial and Financial Reconstruction (BIFR). In 1998 Gujarat Ambuja Cements proposed to set up a $20 million clinker Grinding unit in Sri Lanka and greenfield cement plant with a six million tonne capacity in phases in Andhra Pradesh. It also planned to set up a 0.50 MT bulk terminal and a packaging facility at Tuticorin for Rs.16 crore to increase its presence in the south, especially Tamil Nadu. The company entered into a unique agreement with cement giants Larsen & Tubro (L&T) to reduce transportation costs in despatching bulk cement in Gujarat. The company has entered the fray for setting up a slag cement unit near the integrated steel complex of Jindal Vijayanagar Steel Ltd. in Karnataka. The company has entered into a contract with a Suinhalese firm, Mahaveli Marine Cement, to supply around 2.5 lakh tonnes of cement annually. Eastern Ambuja Cement, a 92-percent subsidiary of Gujarat Ambuja Cement, is in talks with Orissa-based Shiva Cement for a possible joint venture. The Company has kickstarted its operations in Sri Lanka with the setting up of a cement terminal in the port of Galle, in the south of the island country. Recently, BIFR has sanctioned the rehabilitation scheme for merger of Ambuja Cement Rajasthan with Gujarat Ambuja Cements Ltd.

In the last decade the company has grown tenfold. With the commencement of commercial production at its 2mn tonne plant in Chandrapur, Maharashtra, Ambuja will become India's 3rd largest cement company, with a capacity of 12.5mn tonnes and revenue in excess of 2,500 crores.

Its plants are some of the most efficient in the world. With environment protection measures that are on par with the finest in the developed world.

The pollution levels at all GACL cement plants are even lower than the rigorous Swiss standards of 100 mg/NM^3. The air is so clean that a rose garden flourishes right next to the main plant. Ambuja has received the highest quality award – the National Quality Award. The only cement company to do so. It's also the first to receive the ISO 9002 quality certification.

Almost 90% of cement in India travels by rail or road and in bags. It was the first company to realize that the only way to speed up transportation was a completely different approach. The result: a bulk transporting system via the sea. Making it the first company to introduce the concept of bulk cement movement by sea in India.

The company's most distinctive attribute, however, is its approach to the business. Ambuja follows a unique homegrown philosophy of giving people the authority to set their own targets, and the freedom to achieve their goals. This simple vision has created an environment where there are no limits to excellence, no limits to efficiency. And has proved to be a powerful engine of growth for the company.

As a result, Ambuja is the most profitable cement company in India, and the lowest cost producer of cement in the world.

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Financial Highlights

Profit & Loss Account

(Rs. Millions)

	2003	2002	2001	2000	1999
Income:					
Sales	17,345.20	13,837.86	12,680.48	11,170.77	10,604.97
Expenses:					
Material Consumed	3,035.80	2,417.69	1,936.20	1,564.63	1,551.48
Manufacturing Expenses	4,915.20	3,668.59	3,317.15	3,100.06	2,680.03
Personnel Expenses	688.60	498.67	445.91	397.71	352.33
Selling Expenses	3,122.50	1,983.97	1,760.35	1,739.65	1,861.27
Administrative Expenses	795.10	730.29	632.80	589.21	584.35
Expenses Capitalized	0.00	0.00	-3.90	0.00	-12.49
Cost of Sales	12,557.20	9,299.21	8,088.51	7,391.26	7,016.97
Operating Profit	4,788.00	4,538.65	4,591.97	3,779.51	3,588.00
Other Recurring Income	519.10	377.34	169.84	455.54	361.02
Adjusted PBDIT	5,307.10	4,915.99	4,761.81	4,235.05	3,949.02
Interest	1,266.20	1,176.68	1,417.21	1,254.51	1,308.22
Depreciation	1,716.40	1,378.15	1,292.97	1,238.91	1,229.58
Other Write offs	10.00	7.58	3.87	3.49	4.43
Adjusted PBT	2,314.50	2,353.58	2,047.76	1,738.14	1,406.79
Tax Charges	317.40	451.20	145.20	282.50	1.20
Adjusted PAT	1,997.10	1,902.38	1,902.56	1,455.64	1,405.59
Non Recurring Items	165.70	-49.86	-58.70	2,820.53	18.66
Other Non Cash adjustments	58.10	-63.18	85.78	2.37	12.33
Reported Net Profit	2,217.30	1,861.46	1,863.47	4,281.64	1,504.70
Earnings Before Appropriation	2,981.00	2,546.22	2,439.71	4,450.12	1,666.88
Equity Dividend	1,087.10	931.14	735.65	588.51	515.03
Preference Dividend	0.00	0.00	30.44	100.00	100.00
Retained Earnings	1,754.60	1,615.09	1,591.89	3,660.57	986.77

Balance Sheet

(Rs. Millions)

	2003	2002	2001	2000	1999
SOURCES OF FUNDS					
Owner's Fund:					
Equity Share Capital	1,553.00	1,551.68	1,471.10	1,471.02	735.50
Share Application Money	0.90	181.58	0.99	47.50	0.00
Preference Share Capital	0.00	0.00	0.00	1,000.00	1,000.00
Reserves & Surplus	14,612.50	14,493.24	13,778.24	12,596.60	9,791.52
Loan Funds:					
Secured Loans	8,450.00	11,911.52	10,622.07	5,795.37	5,820.64
Unsecured Loans	9,062.80	5,920.01	5,951.59	6,028.60	2,119.72
Total	33,679.20	34,058.03	31,823.99	26,939.09	19,467.38
USES OF FUNDS					
Fixed Assets					
Gross Block	29,579.30	28,554.29	21,772.94	19,380.26	19,043.89
Less : Revaluation Reserve	0.00	0.00	0.00	0.00	0.00
Less : Accumulated Depreciation	10,120.40	8,478.08	7,085.20	6,024.07	4,821.14
Net Block	19,458.90	20,076.21	14,687.74	13,356.20	14,222.75
Capital Work-in-progress	660.60	446.42	4,939.81	1,838.19	373.81
Investments	11,017.10	11,320.53	11,188.10	9,459.61	2,655.28
Net Current Assets:					
Current Assets, Loans & Advances	8,238.80	6,624.92	4,006.06	4,103.80	3,795.08
Less : Current Liabilities & Provisions	5,741.60	4,452.80	3,037.24	1,859.10	1,624.38
Net Current Assets	2,497.20	2,172.12	968.82	2,244.71	2,170.70
Miscellaneous expenses not written	45.40	42.76	39.53	40.38	44.83
Total	33,679.20	34,058.04	31,824.00	26,939.09	19,467.37
Book Value of Unquoted Investments	9,268.20	9,448.54	9,273.20	7,793.16	1,721.40
Market Value of Quoted Investments	605.80	972.10	912.47	1,016.80	877.83
Contingent liabilities	1,904.10	2,704.67	4,267.62	2,900.70	1,004.02
Number of Equity shares outstanding	155,317,771.00	155,189,921.00	147,131,802.00	147,128,002.00	73,576,539.00

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Share Prices –Gujarat Ambuja Cement Limited

(Rs.)

Financial Year	High	Low
2002-03	218.00	146.00
2001-02	254.00	136.30
2000-01	236.00	136.00
1999-00	683.40	200.00
1998-99	332.00	163.80

Part E: Caselets (50 Points)

Caselet 1

Read the caselet carefully and answer the following questions:

1. The caselet states that mergers and acquisitions always look good in an Excel spreadsheet. Synergies appear, costs vanish, growth zooms, and the sensitivity analysis results in a glowing picture of the company a few years down the line. Why do these synergies fail to materialize in most cases after the acquisition? Discuss.

(8 points)

2. The caselet mentions that merger is a strategic move. What are the strategic issues involved in a merger? Discuss.

(10 points)

Most acquisitions don’t work. A recent *Harvard Business Review* article puts the failure rate at 70-80 percent. That figure is supported by not one, but several studies over the past few years. In case after case, mergers and acquisitions result in a drop in shareholder value. It doesn't matter whether the companies are large or small, in consumer goods or in technology — the results are the same. So, why did 1995-2000 see M&A deals totalling over $12 trillion in the US alone?

Most acquisitions are driven by slowing growth opportunities in a company's main business. Normally, this is also the time when the business is throwing up a lot of free cash. So, we have the potent combination of slow growth and a lot of spare cash sloshing around in corporate pockets. And no matter what theory says, there is not a chance of the managers returning this cash to the shareholders (can you visualise a red-blooded manager saying he can't manage the cash better than that little old lady who owns 2,000 shares?) At the same time, we have financial analysts poking and prodding — where will future growth come from, what will turnover be in three years, how will you combat the slowdown in your industry, and so on. Inadequate replies to these pesky questions can lead to a fall in stock price, and thereby to the value of stock options.

No wonder that the compulsion to acquire is strong. Not only does it promise to kick-start growth, but also makes the company look aggressive, like a predator in a jungle. Add to this the fact that mergers and acquisitions always look good in an Excel spreadsheet. Synergies appear, costs vanish, growth zooms, and the sensitivity analysis results in a glowing picture of the company a few years down the line.

Here’s a real life example. A major FMCG player, which dominated its market, was present essentially in the premium segment. Facing severe competition from low-priced brands, it decided to enter the economy segment. After due deliberation, it acquired a regional, low-priced brand. This was to be its beachhead in a large-volume, low-margin business. All the data was rigorously analysed — financials, cost structure, and so on and everything looked good.

Also, the new brand would fill a gap in the existing portfolio. Overall, the acquisition seemed certain to deliver value.

Unfortunately, a regional company operates very differently from a mainstream, national one. Begin with overheads. A low-cost factory shed HQ turned into a centrally air-conditioned office in central Mumbai. Next, instead of a flat distribution structure, the new brand was put through the existing, multi-layer, high cost distribution system. Train travel by managers turned into air travel. Then, the consumer profile was changed. The original

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business was very clear about its customers — price-conscious consumers in a specific region. This consumer base was maintained through low media spends — now, there was `brand-building' through TV. When all this was added up, the costs allocated to it were, obviously, far higher than it could take. As allocated costs went up, the already low margins turned negative. This threw up red flags all over the (existing) accounting system, and the price was increased. The result was what can be expected when a price-led brand increases price unilaterally — a quick descent into oblivion.

Like vertical integration and diversification, a large merger or an acquisition is a strategic move since it can make or break a company. Mark Sirower of BCG, an internationally acclaimed expert in the field of mergers and acquisitions found that two-thirds of the 168 deals he analyzed between 1979 and 1990, destroyed value for shareholders. When he looked at the shares of 100 large companies that made major acquisitions between 1994 and 1997, Sirower found that the acquirer's stock, on an average trailed the S&P 500 by 8.6%, one year after the deal was announced. Sixty of these stocks underperformed in relation to the market, while 32 posted negative returns. Many of the companies acquired were sold off later, often at a loss. Sirower was also the brain behind a more recent study conducted by *BusinessWeek*. The study shows that 17 out of the 21 'winners' who announced their deals in the spring of 1998 were a disaster for investors who owned their shares. If CEOs had stayed put and simply matched the stock market performance of their industry peers, shareholders would have been far better off. For example, in the year after the Green Tree bid, Conseco shares lost 47% of their value. Shares of insurers in the Standard & Poor's 500-stock index rose 8% in the same time. So Conseco lagged behind its peers by 55 percentage points—and that was before its stock spiraled down to 10 cents amid a debt restructuring, now under way. Daimler shareholders did not fare much better: Their total returns underperformed S&P's index of auto stocks by 30%. Travelers shareholders were among the few who were in the money after a year. But they received returns that were only a marginal 2% better than other insurers. Similar patterns appeared across the 302 major mergers from July 1, 1995, to August 31, 2001, covered by the B*usinessWeek* study. The worst deal involved Web MD and Medical Manager in a $3.2 bn stock deal completed in February 2000. Struck during the peak of the Internet bubble, the huge 48% premium paid quickly evaporated. A year later, the merged entity badly trailed behind its health care peers.

Caselet 2

Read the caselet carefully and answer the following questions:

1. In what way is corporate culture important for those inside the company and those outside the company? Discuss.

(8 points)

2. The caselet mentions that the internal culture of the organisation does eventually influence how the customer sees it — and therefore the `equity' of the corporate brand. Do you agree? Discuss.

(8 points)

Even the sceptics in the corporate world are beginning to admit the possible existence of something called the corporate culture, although to the hard-headed accountants and engineers the words seem currently in favour, mainly amongst the thinking types and academics. What is distinctive about a company, almost amounting to a flavour of its ways of working (Sumantra Ghoshal calls the `smell of the place'), could constitute a business advantage, which will gain in significance in the future.

This flavor, like good wine, matures and evolves over time. And the older any organisation (not even necessarily a business) gets, the less easy it is for any one person or group to change its content dramatically. True, the Ford Motor Company today is not what it was under Henry Ford in the early years, but all inside and outside would agree that there is yet a discernible Ford way of doing business, method of managing the process of building cars and of selling them, which can be seen anywhere in the world. What is more, this extends to ways of relating to employees, customers, suppliers and dealers. Although the connection might seem far-fetched to some people on the face of it, the internal culture of the organisation does eventually influence how the customer sees it — and therefore the `equity' of the corporate brand.

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The more explicitly one articulates the elements of a culture or 'the way', the easier it is to ensure a degree of standardisation in execution of major policies. It is also easier to inculcate it in new entrants and draw the line of negotiability. To know what is debatable and negotiable and what is not saves a lot of time and energy. One can avoid needless stress otherwise demanded by having to explicate the essence to others in a crisis situation. A written code of conduct, of course, is one form of such expression but it cannot anticipate all possible eventualities nor be as flexible as guidelines. It has been found even written codes need to be supported by visible behaviour or `walking the talk', especially by the senior managers. This is only all the more important when considering Indian companies going global and wanting to establish companies elsewhere in Asia or further beyond. As a well-integrated and ingrained culture becomes more and more internalised, it would create the space for managerial initiative. It would make for more effective working and behaviour in what would be already a stressful situation, working against unfamiliar competition in an unfamiliar market. Establishing the minimal bases for sound action is also very essential also for another external reason - maintaining the character of the company everywhere. Sony, Toyota, and McDonald's are often cited as splendid examples of this. Wherever you go in the world, you can expect the same quality and level of service — or so the expectation goes.

Caselet 3

Read the caselet carefully and answer the following questions:

1. Do you think that continuous focus on building competitive advantages detracts from and blocks creativity? Discuss.

(8 points)

2. The caselet argues that value innovation and not competitive advantage should be the focus of business. Do you agree? Discuss.

(8 points)

While most companies aim to stand out in the market, it seems customers can find fewer differences between them. What went wrong with the strategy? How is it that while companies invest in getting their strategies right, they increasingly look like mirror images of one another, facing mounting cost and price pressures?

Think for a minute about five-star hotels in north Mumbai. At one time their location set them apart. Today most of the newcomers are located within walking distance of each other. One could make the case that their offering — food, decor, toiletries, and even the way the toilet paper is folded into little triangles — is similar.

The same goes for business-class services of leading airlines, where food, seating, uniforms, films, even the boring offerings of orange juice, champagne and water before take-off are almost universal.

Yet, companies are increasingly claiming that their cost structures are rising and their margins shrinking. This holds true for most industries, be they consumer products, financial services, industrial products, information technology, telecommunication or business-to-business.

Businesses discuss their strategy moves and urge their managers forward under the banner of building advantages over the competition. The background to this obsession started in the '70s with the meteoric rise of the Japanese economy. In industry after industry — from cars and steel to consumer electronics to textiles, leading Western companies found their markets under attack. For almost the first time in their histories, customers were deserting Western companies. In this background, emerged the principle of 'competitive advantage'. This is the idea which suggests that competition is at the core of the success and failure of companies.

But should organizations be motivated in this way? The continuous focus on building competitive advantages detracts and blocks creativity. When asked to build competitive advantages, managers typically put themselves against competitors, assess what they do and strive to do it better.

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Consider the story of the videocassette recorder or mobile phone industries. Companies fought ferociously to offer sophisticated product features. Most products ended up being almost identical and over-designed from the customer's perspective. Most buyers find the features confusing and even, at times, irritating. They even express fear about using the product because of all the controls and flashing lights. Companies outdistance one another constantly but are off-target in giving buyers what they want — low prices.

Companies should insist their managers to pursue 'value innovation'. Value innovation is just what the name implies — value and innovation with equal emphasis.

It is the drive to achieve a leap in value with a low-cost business model that makes companies question everything the industry and competition are doing. How can companies break out of the grip of competitive thinking? Perhaps the best way to start is to ask what it takes to win the mass of buyers even without marketing! When companies frame their strategic thinking this way, the futility of benchmarking the competition becomes clear.

In order to quantify the relative impact of value innovation on profits and growth as regards competitive improvement, the two co-founders of 'value innovation network', W. Chan Kim and Renee Mauborgne, undertook a massive study of business launches of more than 100 companies. They found that while 86 percent of the business launches were line extensions — 'me-toos' or incremental value improvement that sought larger share in the existing market space — they explained that only 62 percent of total revenues and a mere 39 percent of total profits (the value innovations that created new market space) explained 38 percent of total revenues and 61 percent of total profits. Therefore, it seems imperative that value innovations are just the route to take!

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Model Question Paper V

Suggested Answers

Paper I

Part A: Basic Concepts

1. ***(d)*** (a), (b), (c) and (e) are the assumptions of Modigliani Miller Approach of capital structure. Regarding growth no assumption have been made in the M-M approach. Hence (d) is not correct.

2. ***(e)*** According to this theory the first and most popular is retained earnings as it has no associated floatation cost.

3. ***(d)*** Market price as per Graham – Dodd Model is given by

$$P_o = m\left(D + \frac{E}{3}\right)$$

Given : Po = 44, E = 3.75, D = 3.75 (1 – 0.6) = 1.5

$$\Rightarrow m = \frac{44}{\left(1.5 + \frac{3.75}{3}\right)} = 16$$

4. ***(a)*** As per Marakon model,

$$\frac{P_o}{B} = \frac{r - g}{k - g}$$

where,

Po – Present market value

B – Book value

r – Return on equity

g – Growth rate in earnings and dividends

k – Cost of equity.

Clearly, cost of goods sold is not a financial determinant of firm's value.

5. ***(b)*** Of the given factors, value growth duration only is a value driver as per Alcar Model all other are financial factor determining firm's value as per Marakon Model.

6. ***(c)*** Fixed charges coverage ratio = $\frac{EBIT + D}{I + \frac{LR}{(1-T)}} = \frac{20 + 3}{3 + \frac{2}{(1-0.35)}} = 3.78$

7. ***(e)*** (b) and (d) statements are correct regarding the adjusted book value approach. (a) is not correct as discounted cash flows are not used under adjusted book value approach. Similarly, (c) is not correct.

8. ***(d)*** This is the approach used by SONY to launch Walkman. Subsequently, it has become popular for launch of new product and for competitive advantage.

9. ***(b)*** BCG matrix classifies the products into four broad categories. All others are the models for predicting sickness of a firm.

10. ***(c)*** CCA recommends that three different adjustment are to be made in the income statements to determine the current cost operating profit. These are:

Depreciation adjustment.

Cost of sales adjustment.

Monetary Working Capital Adjustment.

Hence the correct answer is (c).

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11. *(e)* We have, $r_1 = r + \frac{a_1 - a}{(1-t)}$

Where,

r_1 = Nominal rate after considering inflation factor.

r = Nominal rate prior to the increase in rate of inflation.

a_1 = Expected inflation rate after increase

a = Expected inflation rate before increase

f = Tax rate

$\Rightarrow r_1 = 12 + \frac{8-5}{1-0.3} = 12 + \frac{3}{0.7} = 16.29 \approx 16.3\%.$

12. *(d)* Converting on existing division or unit into a wholly owned subsidiary is called equity carveout.

13. *(c)* The marginal cost rate breaks down under a capacity constraints of transferor division. The accounting price arrival using mathematical programming method is appropriate for transfer pricing. This type of price is also called shadow price.

14. *(e)* Low cost strategy is one of the two strategies followed under value chain analysis. The other strategy being differentiation strategy.

15. *(e)* In stock split par value decreases and as a result market price per share decreases immediately after a stock split.

16. *(c)* ITC (Tobacco division) starting its own chain of retail stores from which it sells its cigarettes is an example of a forward integration strategy, as the company which is primarily into manufacturing, is moving forward towards its immediate customers in the value chain. In horizontal integration the firm's long-term strategy is based on growth through the acquisition of one or more similar firms operating at the same stage of production-marketing chain. Backward integration takes place when a firm assumes a function previously provided by a supplier. Conglomerate diversification is diversification into a new business area that has no obvious connection with any of the company's existing areas. It is also called unrelated diversification. Concentric diversification occurs when an organization diversifies into a related, but distinct business. In other words, it involves the acquisition of business that are related to the acquiring firm in terms of technology, markets or products.

17. *(d)* Question marks are new products with a potential for success, but need a lot of cash for development. (a) cash cows are the businesses that have a high relative market share in a slowly growing market. (b) Dogs are businesses that have a low relative market share in a slowly growing or stagnant market. (c) A business in the star category has a high relative market share in a rapidly growing market.

18. *(b)* The mission statement is enduring statement of instruction of an organization; it refers to the philosophy of business in order to build the image of the company by activities currently pursued by the organization and its future status. While, Vision statement describes the aspiration for the future, but without specifying the means to achieve those desired ends.

19. *(a)* In the entrepreneurial mode of strategic decision-making, strategy formulation is confined to owner promoters. The owner promoters then delegate their vision / mission to the organizational hierarchy for implementation.

20. *(d)* When a strength gives the firm a comparative advantage in the market place, it is called distinctive competence. It is also defined as an organizational strength that is unique and not easily matched by competitors.

21. *(e)* An annual objective must be clearly linked to one or more long-term objectives of the business's grand strategy. However, to accomplish this (a) Time frame (b) focus (c) specificity (d) measurement are the four dimensions required to distinguish annual objectives from long-term objectives.

22. *(b)* Restructuring program involves changes in the relationship between division and function. Banking organization is downsizing the number of employees though VRS to reduce operating cost. (a) Re-engineering is the fundamental rethinking and radical redesign of business process to achieve dramatic improvements in critical, contemporary

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measures of performance such as cost, quality, service and speed (c) Innovation is a process by which organizations use their skills and resources to create new technologies or products (d) capacity building is the increase in the volume from the existing one. (e) Diversification is a growth strategy that entails effecting growth the development of new areas that are clearly distinct from current business.

23. ***(b)*** In a licensing arrangement, a firm grants rights to another firm in another country or market to produce and/or sell a product. An acquisition is defined as the purchase of a controlling interest in a firm, via a tender offer for the target shares. A joint venture leads to the creation of a separate business enterprise, representing the interests and capital of the partners involved. Franchising is a business arrangement in which a person gets the right to manufacture, market or distribute the products or services of a company and use the company's name to do business. In mutual service consortia the organizations in a particular industry come together to promote the business they are involved in.

24. ***(d)*** Strategic surveillance is designed to monitor a broad range of events inside and outside the company that are likely to threaten the course of a firm's strategy. (a) implementation control determines whether or not the overall strategy should be changed in light of the unfolding events and results associated with incremental steps and actions that implement the overall strategy. (b) Premise control helps to check systematically and continuously whether or not the premises set during the planning and implementation process are still valid. (c) Operational controls are concerned with "steering" the company's future direction and they are concerned with providing action controls. (e) Special alert control reflects the need to thoroughly reconsider the firm's basic strategy based on a sudden unexpected event.

25. ***(b)*** In a fragmented industry, no firm has a large market share and each firm serves only a small piece of the total market in competition with others. Hence it is difficult for any single company to have a dominant position in the market A multi-domestic industry is one in which the competition within the competition within the industry is essentially segmented from country to country. A global industry is one in which competition within the industry crosses national borders. International industries can be characterized along a continuum from multi-domestic to global. Transnational are organizations, which operates in different continents.

26. ***(b)*** The competitive scope includes four dimensions that affect the value chain. They are segment scope, geographic scope, vertical scope and industry scope. So the alternatives (a), (c), (d) and (e) are not the answer. Business scope is a general term, which is not used in defining the competitive scope while framing the value chain of a company. So the answer is alternative (b).

27. ***(a)*** The remote environment is composed of a set of forces that originate beyond and usually irrespective of any single firm's operating situation - that is, political, economic, social, technological. It presents opportunities, threats and constraints for the firm, while the organization rarely exerts any meaningful reciprocal influence. All other options are not correct.

28. ***(b)*** By the time an industry enters its growth stage, the importance of technological know-how as an entry barrier diminishes. Other entry barriers also tend to be low because few companies manage to achieve significant economies of scale or have differentiated their product sufficiently to guarantee brand loyalty. An industry that is just beginning to develop is referred to as an embryonic industry. Growth at this stage is slow due to factors such as buyers unfamiliarity with the industry's product etc. In the shake out stage the rate of growth slows down in course of time. In mature stage the market is completely saturated and demand is limited to replacement demand.

29. ***(b)*** Advertisements for products and services such as life insurance policies, mouthwash, and deodorants play upon fear. By showing the unfortunate consequences that a consumer faces if he doesn't use the service or product, advertisers force the consumers to purchase the product or service. Such ads use Coercive power. This is the power to influence behavior through punishment or by withholding rewards. (a) Legitimate power stems from

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a member's perception that the group has the legitimate right to influence him. (c) Expert power results from the expertise gained in due course of time either by an individual or a group. (d) Referent power is the power that results from being admired, personally identified with, or liked by others. (e) Reward power is based on the perception one has about another's ability to reward him.

30. *(d)* Matrix structures are functional and product forms combined simultaneously at the same level of the organization. (a) Divisional structure is a type of departmentalization in which positions are grouped according to similarity of products, services or markets. The Divisional structure does not promote specialization of labor (b) Functional structure is a type of departmentalization in which positions are grouped according to their main functional area or specialized area. (c) In simple structure all the strategic and operating decisions are under the control of the owner-manager. (e) Geographic structure is a form of divisional structure involving divisions designed to serve different geographic areas.

Part B : Problems

1. a. Direct cost of the replacement decision = Floatation costs + Call premium

Call premium (total) = Total nominal value × 0.06

$$\text{Total nominal value} = \frac{1,05,000}{\left(\frac{0.105}{2}\right)} = \text{Rs.}20,00,000$$

∴ Call premium (total) = 20,00,000 × 0.06 = Rs.1,20,000

Floatation cost of new debentures = Net amount realized from the new debentures × 0.01

= 20,00,000 × 0.01

= Rs.20,000

∴ Direct cost of the replacement decision = 1,20,000 + 20,000 Rs.1,40,000

b. NPV of the replacement decision :

Considering in terms of half year :

Interest savings after the new issue =

Total interest on new debentures – Total interest on old debentures

$$\text{Total interest on new debentures} = (20,00,000 + 20,000)\ \frac{0.085}{2} = \text{Rs.}85,850$$

Total interest on old debentures = Rs.1,05,000

Interest savings every half year = 1,05,000 – 85,850 = Rs.19,150

Number of half yearly periods up to maturity = 10 × 2 = 20

$$\text{Discount rate} = \frac{\text{Coupon rate on new debentures}}{2} = 4.25\%$$

(Because the coupon rate and terms of coupon payment on the new debentures reflect the prevailing effective rate of interest on the similar debt instruments)

$\therefore$NPV = 19150 PVIFA $_{(4.25\%,20)}$ – 1,40,000

$$\text{PVIFA}_{(4.25\%,\ 20)} = \frac{(1.0425)^{20} - 1}{(1.0425)^{20}(0.0425)} = 13.294$$

$\therefore$NPV = (19,150 × 13.294) – 1,40,000 = Rs.1,14,580 (Approx.)

Since the NPV is positive the decision is viable.

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2. Sales $= \dfrac{\text{Gross Profit}}{\text{Gross Profit margin}} = \dfrac{72}{0.20} = \text{Rs.360 lakh}$

Total assets $= \dfrac{\text{Sales}}{\text{Total Asset Turnover}} = \dfrac{360}{2.5} = \text{Rs.144 lakh}$

Inventories $= \dfrac{\text{Cost of goods sold}}{\text{Inventory turnover}} = \dfrac{360(1-0.20)}{6} = \text{Rs 48 lakh}$

Receivables = Average collection period × Average daily sales

$= 36 \times \dfrac{360}{360} = \text{Rs.36 lakh}$

Current assets = Current ratio × Current liabilities = 1.5 × 60 = Rs.90 lakhs

Cash and bank = Current assets – Inventories – receivables

= 90 – 48 – 36 = Rs.6 lakh

Net fixed assets = Total assets – Current assets

= 144 – 90 = Rs.54 lakh

Total debt = Total debt equity ratio × Net worth

= 1.88 × 50 = Rs.94 lakh

Term loan = Total debt – Current liabilities = 94 – 60 = Rs.34 lakh

Balance Sheet

(Rs. in lakh)

Net worth	50	Net fixed assets	54
Term loan	34	Inventories	48
Current liabilities & Provisions	60	Receivables	36
		Cash & Bank	6
	144		144

3. Value of the firm when dividends are paid :

Let :

Price per share after one year $= P_1$

Price per share now $= P_0$

Dividend per share after 1 year $= D_1$

$P_0 = \dfrac{D_1 + P_1}{1+k}$ where 'k' is the equity capitalization rate.

Or $200 = \dfrac{6+P_1}{1.12}$

Or $P_1 = 1.12 \times 200 - 6 = \text{Rs.218}$

Since dividends will be paid the company will have to issue new shares in order to raise the amount of funds used in paying dividends. Let n_1 and P_1 be the numbers of share to be issued after one year and P_1 be the price per share after 1 year respectively.

∴ Amount to be raised:

n_1P_1 = Investment – (Earnings – Dividends paid)

= 10,00,000 – (7,00,000 – 50,000 × 6) = Rs.6,00,000

Number of new shares to be issued $(n_1) = \dfrac{6,00,000}{218}$

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Value of the firm $= \frac{(n+n_1)P_1 - I + E}{1+k_e}$

$$= \frac{\left[50,000 + \frac{6,00,000}{218}\right]218 - (10,00,000 - 7,00,000)}{1.12}$$

= Rs.1,00,00,000.

Where, n = Number of shares outstanding now.

Value of the firm when dividends are not paid:

Price per share at the end of year 1:

$P_0 = \frac{D_1 + P_1}{1+k_e}$

$200 = \frac{0 + P_1}{1.12}$

$P_1 = 200 \times 1.12 =$ Rs.224

Amount to be raised from the issue of new shares.

$n_1P = 10,00,000 - 7,00,000 =$ Rs.3,00,000

Number of new shares to be issued $(n_1) = \frac{3,00,000}{P_1} = \frac{3,00,000}{224}$

Value of the firm $= \frac{(n+n_1)P_1 - I + E}{(1+k_e)}$

$$= \frac{\left(50,000 + \frac{3,00,000}{224}\right)224 - (10,00,000 - 7,00,000)}{1.12}$$

= Rs.1,00,00,000

(where 'n' is the number of shares outstanding now)

From above we see that value of the firm remains the same both in the cases when dividends are paid and dividends are not paid. Therefore it is proved that MM model on dividend policy holds good.

4. a. Present situation :

EBIT = PBT + Interest = 5 + (8 × 0.125) = Rs.6 crore

Tax rate (effective) $= \frac{PBT - PAT}{PBT}$

$$= \frac{5 - \left(\frac{1.92}{0.60}\right)}{5} = 0.36 \text{ i.e. } 36\%.$$

Number of equity shares $= \frac{12,00,00,000}{10} = 1,20,00,000$ i.e. 1.2 crore

Projected situation:

EBIT = 6 × 1.4 = Rs. 8.4 crore

Let new equity capital be 'x'.

∴ New debt = 10 – x

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$$\frac{(EBIT_1 - I_1)(1-t)}{n_1} = \frac{(EBIT_2 - I_2)(1-t)}{n_2}$$

or $$\frac{[6,00,00,000 - (8,00,00,000 \times 0.125)](1-0.36)}{1,20,00,000}$$

$$= \frac{[8,40,00,000 - \{(8,00,00,000 \times 0.125) + (10,00,00,000 - x)\ 0.13\}](1-0.36)}{1,20,00,000 + \frac{x}{14}}$$

or $$\frac{8}{3} = \frac{(7,40,00,000 - 1,30,00,000 + 0.13x)\ 0.64}{1,20,00,000 + \frac{x}{14}}$$

or $$120,00,000 + \frac{x}{14} = (6,10,00,000 + 0.13x)\ 0.64 \times \frac{3}{8}$$

or $$120,00,000 + \frac{x}{14} = 146,40,000 + 0.0312x$$

or $0.0402\ x = 26,40,000$

$x = Rs.6,56,71,642$

∴ New debt = 10,00,00,000 – x = Rs.3,43,28,358

∴ Long term debt to equity ratio for the new project = $\frac{3,43,28,358}{6,56,71,642} = 0.523$

b. **DER of 5 : 4**

Let the level of equity (new) be x.

∴ New debt = 10 – x

$$\therefore \frac{8 + (10 - x)}{12 + x} = \frac{5}{4}$$

or $4(18 - x) = 5(12 + x)$

or $72 - 4x = 60 + 5x$

or $12 = 9x$

or $x = \frac{12}{9}$ (Rs. crore) (new equity)

∴ New Debt = $10 - \frac{12}{9} = \frac{26}{3}$ (Rs.crore)

DER of 6 : 5

$$\frac{8 + (10 - x)}{12 + x} = \frac{6}{5}$$

or $5(18 - x) = 6(12 + x)$

or $90 - 5x = 72 + 6x$

or $18 = 11x$

or $x = \frac{18}{11}$

∴ New debt = $10 - \frac{18}{11} = \frac{92}{11}$ (Rs. crore)

The EPS will be same under both the plans. Workings are shown in crores.

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$$\therefore \quad \frac{\left[\text{EBIT}-\left\{(8\times 0.125)+(\frac{26}{3}\times 0.13)\right\}\right](1-0.36)}{1.2+\frac{1}{20}\left(\frac{12}{9}\right)}$$

$$= \frac{\left[\text{EBIT}-\left\{8\times 0.125)+\left(\frac{92}{11}\times 0.13\right)\right\}\right](1-0.36)}{1.2+\frac{1}{20}\left(\frac{18}{11}\right)}$$

or $\quad \dfrac{\text{EBIT}-2.127}{1.2+\frac{1}{15}} = \dfrac{\text{EBIT}-2.087}{1.2+\frac{9}{110}}$

or $\quad \text{EBIT}\left(1.2+\frac{9}{110}\right)-2.127\left(1.2+\frac{9}{110}\right) = \text{EBIT}\left(1.2+\frac{1}{15}\right)-2.087\left(1.2+\frac{1}{15}\right)$

or $\quad 1.282\text{EBIT} - 2.727 = 1.267\text{EBIT} - 2.644$

or $\quad 0.015\text{EBIT} = 0.083$

or $\quad \text{EBIT} = \text{Rs.}5.533$ crores.

5. The valuation multiples of the comparable firms are calculated below:

	AIL	MIL	REL
A. Profit after tax (Rs. in lakh)	$\frac{19.6}{0.35}\times(1-035) = 36.4$	$\frac{22.4}{0.35}(1-.35) = 41.6$	$\frac{32.4}{0.36}\times(1\text{-}.36) = 57.6$
B. Book value (Rs. in lakh)	60 + 40 = 100	80 + 30 = 110	90 + 60 = 150
C. Price to sales ratio	648 / 540 = 1.20	725 / 580 = 1.25	896 / 640 = 1.40
D. Price to earnings ratio	648 / 36.4 = 17.80	725 / 41.6 = 17.43	896 / 57.6 = 15.56
E. Price to book value ratio	648 / 100 = 6.48	725 / 110 = 6.59	896/150 = 5.97

Industry average of the valuation multiples

Price to sale ratio $= \dfrac{1.20+1.25+1.40}{3} = 1.283$

Price to earnings ratio $= \dfrac{17.80+17.43+15.56}{3} = 16.93$

Price to book value ratio $= \dfrac{6.48+6.59+5.97}{3} = 6.347$

Applying the valuation multiples for valuing EEL:

	Multiple	Parameter (Rs. in lakh)	Value (Rs. in lakh)
Price / Sales	1.283	Sale = 600	1.283 × 600 = 769.8
Price / Earnings	16.93	Earnings = $\frac{27}{0.36}\times(1\text{-}0.36)$ = 48	16.93 × 48 = 812.64
Price / Book value	6.347	Book value = 80 + 40 = 120	6.347 × 120 = 761.64

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Weighted average of the values

$$= \frac{1}{1+2+1} \times 769.8 + \frac{2}{1+2+1} \times 812.64 + \frac{1}{1+2+1} \times 761.64$$

$$= \frac{1}{4}(769.8 + 1625.28 + 761.64) = \text{Rs.}789.18 \text{ lakh}$$

$\therefore$ The market value of EEL is Rs.789.18 lakh

6. a. Return point (RP) $= \sqrt[3]{\frac{3b\sigma^2}{4I}} + LL$

Given : b = Rs.300

σ = Rs.3,000

$I = \frac{0.063}{360} = 0.000175$

LL = Rs.3,00,000

$\therefore$ RP $= [\frac{3 \times 300 \times 3000^2}{4 \times 0.000175}]^{\frac{1}{3}} + 3,00,000 = \text{Rs.}3,22,618$

Maximum amount of cash balance (UL) = 3RP – 2LL

= (3 × 3,22,618) – (2 × 3,00,000)

= Rs.3,67,854

The amount of cash that should be invested in marketable securities as the maximum cash balance is attained = UL – RP = 3,67,854 – 3,22,618 = Rs.45,236.

If the daily cash inflows increase by a constant amount of Rs.2,000 and the daily cash outflows increase by a constant amount of Rs.1,500, then the 'changes' in daily cash balances will increase by a constant amount of Rs.500 (i.e. Rs.2,000 – Rs.1,500). Since all the values (of changes) will increase by a constant value of Rs.500 their mean will also increase Rs.500. Because of this the deviations from mean will remain unchanged. Hence the standard deviation of the change in daily cash balances will also remain unchanged. Other factors influencing the cash balances will also remain unchanged. So there will be no change in the maximum cash balance and the required investment in marketable securities as the maximum balance is reached.

If the minimum required cash balance is increased by Rs.1 lakh then, LL = 3 +1 = Rs.4 lakh.

Required investment in marketable securities as the maximum cash balance is attained = UL – RP

= (3RP – 2 LL) – RP

= 2 RP – 2LL

= 2 (RP – LL)

Since other factor remain unchanged the return point RP also increases by the same amount as LL i.e. Rs. 1 lakh.

Hence the difference between RP and LL remains the same as before. So the required investment in marketable securities remains unchanged.

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Part C: Applied Theory

1. Managers promoting change often possess insufficient knowledge to determine as to how a firm should respond to change. A senior manager interested in bringing about change must rely on employees to implement the new response once it has been developed. Therefore, they need to support managers and employees in designing a change initiative and implementing it. In certain organizations, employees withhold such support. Certain reasons for withholding support are:

Lack of Awareness

Change requires a broad view of both the competitive and general environment. Manager (at middle and lower level) and employees are often too focused on current activities to develop this kind of perspective. They become narrowly focused to the aware of potential change over the horizon. They fail to appreciate the need for change, especially if change means learning new methods, processes or techniques.

Lack of Interest

Even when managers and employees recognize the need for change, they often perceive it with lack of interest. This kind of reaction is common even with new developments. People also tend to ignore developments that represent, transcend or relatively small opportunities for expansion.

Incompatibility With Cherished Values

Mostly firms develop their own sense of shared values and corporate cultures. Managers and employees oppose **new** strategies, products or approaches that appear to conflict with established practices. Therefore, strongly held values and corporate cultures can become significant obstacles to change

Fear Of Cannibalization

Development new products that are distinct from those of the firm's current lineup means admitting the possibility that alternatives or substitute products exist. Facing the threat of substitute products is hard for any company. Therefore, cannibalization is one of the main reasons that prevent companies from investing in new technologies/products before competitors compel them to do so.

Fear Of Personal Loss

The fear of restructuring that would eliminate entire divisions or business, along with people involved in it, making corporate change painful. Moreover, change may reduce the career opportunities for employees and may even cost them their jobs.

Different Perception

A manager may make a decision and recommend change base on his/her own assessment of a situation. Other may resist the change because they may perceive the situation differently. As a result of different perception it become difficult for organizations to implement change.

The opposition to change must be overcome, if it is to be implemented successfully. Casualties are possible and sometimes inevitable. Moreover, some people will leave because they are uncomfortable with the changes. But there are several techniques to overcome resistance. They are:

Participation And Involvement

Participation is the most effective technique for overcoming resistance to change. Employees who participate in planning and implementing a change are better able to understand the reasons for change

Education and Communication

Education and Communication helps people understand the logic and the need for change. If open communication is established and maintained during the change process, uncertainty can be minimized

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Facilitation and Support

Facilities and support involve training and counseling. An example could be making only necessary changes, announcing those changes in advance and allowing time for people to adjust to new way of doing things. This can helps in reducing resistance to change.

2. Reorganization

The steps involved in reorganization of a firm are

Techno- economic viability study

Formulation and execution of the reorganization plan

Monitoring the activities of the firm

Techno-economic Viability Study

A reorganization plan is worked out on the basis of a techno-economic viability study of the firm. This study sets out to identify the strengths and weaknesses of the firm, the causes of failure, the viability of future operations and the course of action to be taken to bring about a turnaround. The techno-economic viability study is undertaken by the operating agencies assigned to the firm. These operating agencies are generally financial institutions and banks such as IDBI , IFCI, ICICI, IRBI, SBI, PNB, etc.

The techno-economic viability study covers all the functional areas of a firm: management, finance, production and marketing.

Management: The effectiveness and ability of the management is one of the most important factors that determines the success or failure of a firm. A detailed study is done in terms of the objectives of the firm, both short-term and long-term, the corporate strategy, the corporate culture, the management-labor relations, the organizational hierarchy, the decision-making process, etc. The study tries to determine the effectiveness of management and its integrity. The areas of mismanagement are also determined.

Finance: Finance it the main functional areas of business. It is a measurable indicator of the firm's health and performance. A though analysis of the firm's Balance Sheet and Profit/Loss statement is made.

These statements when properly analyzed give the financial stability and liquidity of the firm; profitability and uses of funds. The analysis also identifies the capital structure and the sources of unds. The analysis gives insight into working capital management and management of earnings.

Production and Technology: Production and Technology function assumes immense importance in the viability study. The various areas that are looked into are, the firm's equipment and machinery, the maintenance of the equipment, the technology used in production, the production capacity and utilization, the products being offered by the firm, the quality control system, production planning and inventory control.

Marketing: A number of firms have failed because of lack of good marketing management. The various areas of marketing that are studied are, the product mix of the firm, the past sales of the product in terms of quantity and value, the market share of the firm, the demand for the product range, the study of the customer profile, the price of the products, the distribution channels being used, the kind of promotion-mix being used and the most important of all is the marketing team. This study is done in comparison with the competitors.

Formulation and Execution of the Plan

The viability study serves as the basis for formulation of a rehabilitation plan. A thorough study of the various functional areas of the firm reveals the strengths, weaknesses, opportunities and threats of the firm. It gives a comprehensive idea about the status of the firm, the viability of the firm both technically and economically and the additional funds required for rehabilitation.

The formulation plan involves the changes and action to be taken regarding the various functions of the firm. It may decide to make changes in the management, if it is not found competent. Some of the labour may be retrenched/recruited depending on the situation. The amount of financial assistance to be given is determined and arrangements are made to secure the loan. Various steps are taken to improve the production function in terms of new machinery and new technology. The viable level of operations are determined and steps are

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taken to achieve this production level. The product-mix, the pricing, the quality of the products, distribution channels and the promotion-mix are to be changed to suit the needs of the customers, to achieve the desired sales levels. Once the plan is formulated, the plan is carefully executed. All the necessary changes prescribed by the plan are made. The funds are disbursed in a phased manner as and when required. The necessary concessions and reliefs are provided. A close watch is kept on the activities of the firm and a continuous evaluation is done.

Monitoring

Monitoring is a very important part of a rehabilitation plan. It is done to evaluate the execution of the plan. Regular meetings are held between the firm, the bankers, the financial institutions and other concerned parties to verify and evaluate the process of execution. Monitoring is one to ensure the proper utilization of funds and adherence to the terms of rehabilitation plan. It also ensures the proper working of the firm. Feedback is obtained and remedial measures are taken as and when the situation demands. The impact of rehabilitation becomes evident in a short period. Once the success of the firm becomes evident, the role of agencies and banks is confined to constantly hold meetings to assess and revies the process. This continues till the firm is successful. In case the firm is found incapable of making a turnaround despite the plan, then the steps to liquidate the firm are undertaken.

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Paper II

Part D : Case Study

1. a. The following computations are made for analyzing the capital structure of Gujarat Ambuja Cement Limited

	2002-2003	2001-2002	2000-2001	1999-2000	1998-1999
Total Debt	17512.80	17831.53	16573.66	11823.97	7940.36
Shareholders fund	16166.40	16226.50	15250.33	15115.12	11527.02
EBIT	3580.70	3530.26	3464.96	2992.66	2715.02
Interest	1266.20	1176.68	1417.21	1254.51	1308.22
D/E ratio	1.08	1.10	1.09	0.78	0.69
Interest coverage	2.83	3.00	2.44	2.39	2.08

Comments:

- The total debt of GACL has more than doubled during the period 1998-1999 to 2002-2003. Subsequently this will increase the liability to pay interest. Whereas, the equity has increased to the extent of slightly over 1.4 times. Thus the firm is relying more on the outsiders funds.
- The D/E ratio has increased from 0.69 in 1998-99 to 1.10 in 2001-02 and thereafter decreased to 1.08 in 2002-03. The increased amount of debt indicates increased leverage and more financial risk. However, this has to be seen in the light of the expansion program undertaken by the company during the last five years.
- The interest coverage ratio has been consistently greater than 2 indicating that GACL's EBIT can easily sustain the interest payment obligations. It seems that the ability of the firm to meet the interest obligations is good.
- Over the period GACL slowly increased the debt proportion, but was able to meet the financial burden (clearly seen from steady interest coverage ratio).

b. Capital structure does matter irrespective of the controversies enveloping this issue, especially if the tax shields arising due to interest costs, financial distress costs and agency costs are taken into account. Though not ordinarily consisting of debt in its entirety, and despite the involved complexities, a firm ought to keep up its search for a capital structure that tends towards optimality. A few factors that managers should consider before making the decision of selecting the optimal leverage are the present value of the interest tax shield, costs associated with agency conflicts, business risk or the variability of the net operating income, and the costs of bankruptcy/distress. According to theorists in finance, there are also other factors that may influence the capital structure decision of a firm such as hidden information, threats of hostile takeover bids, product market strategies etc. However, for convenience, we shall consider for the sake of analysis that pressure is being exerted by the stakeholders of the firm on the management to select a capital structure that maximizes the value of the firm only with respect to the factors of business risk, interest costs, costs of agency and financial distress.

Is it possible for the management to determine an optimal capital structure using only these four factors? The answer is that there is no cut-and-dried solution, but guidelines can be formulated to enable the management in seeking the desired capital structure. The interest tax shield and the business risk represented by the variability of the net operating income can be safely measured and reasonably estimated by the management. But when it comes to predicting the costs of financial distress, the task can be difficult as it involves the intricate issue of translating an increase in the probability of bankruptcy into market values.

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Though there is no exact recipe, a few things can be kept in mind. To begin with, the capital structure of successful firms in the same industry can be analyzed. Then the best subjective estimates of the present values of the various factors affecting the capital structure can be used in choosing the D/E ratio that you consider optimal. The only way to know whether the chosen capital structure is optimum or not is from the results. For instance, in the next issue the management decides to raise only debt. Now if the price of the stock increases that would imply that the firm was not at optimal leverage and the stockholders prefer more debt. If this process is continued a stage shall come when the stock price shall begin to fall, and at that point more debt shall be counterproductive. Firms often experiment in this fashion as this leads the firm to a fairly close approximation to optimality. It is common to raise debt, use the proceeds for re-purchase that increase the D/E ratio and then observe the reaction of the market. This is repeated as long as the market value of the firm increases.

It is also equally important to note that interest rates, business risk and tax rates change in a dynamic environment. Following suit, there is a likelihood of an optimal capital structure changing repeatedly over different periods. Although the theories underlying capital structure of a firm are conceptually well defined, measuring the economic value of its constituents and identifying it in a world of flux is an art. The theoretical considerations serve only as a guide in seeking the desired optimal capital structure but a clear and sure formula for the same remains beyond prescription.

2. a.

Particulars	2002-2003	2001-2002	2000-2001	1999-2000	1998-1999
Equity Dividends (Rs. in millions)	1087.10	931.14	735.65	588.51	515.03
No. of shares (N) (in millions)	155.32	155.19	147.11	147.10	73.58
DPS (Rs.)	7.00	6.00	5.00	4.00	7.00
EPS (Rs.)	14.27	11.99	12.67	29.11	20.45
Dividend payout ratio (%)	49.05	50.00	39.46	13.74	34.23

Comments:

- Except for a decline in dividend payout ratio in 1999-2000, GACL has maintained a very high payout ratio. During the last two years the payout ratio has been as high as 50% indicating a good return to shareholders.
- The dividend per share also declined in 1999-2000 from Rs.7.00 to Rs.4.00 but after that it has consistently increased again to Rs.7.00 per share indicating that GACL is following a constantly increasing dividend policy.

b. Once a dividend payout ratio is decided and accordingly the company makes dividend payments to the stockholders of the firm, companies will be wary and reluctant to bring about any decline in the dividend payouts of the future. This also implies that a dividend increase by itself will be considered by the management only when it feels reasonably certain that such dividend increases can be conveniently maintained in the future. Any increase in dividends serves as a signal to the investors with regard to the confidence of the management about the future earnings potential of the firm. It is by virtue of this signal that a tendency of the stock prices to rise is observed.

3. The average value market price of the share of GACL:

Particulars	2002-2003	2001-2002	2000-2001	1999-2000	1998-1999
AV market price (Rs.)	182.00	195.15	186.00	441.70	247.90
Market value of equity (Rs. in millions)	28268.24	30285.33	27366.18	64974.07	18240.48

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The various ratios required for Z – score are calculated as follows:

Particulars	2002-03	2001-02	2000-01	1999-00	1998-99
Total Assets (Net Block +Current Assets)	39420.80	38510.84	34861.24	28798.19	21091.75
$X_1 = \frac{NWC}{TA}$	0.0633	0.0564	0.0278	0.0779	0.1029
$X_2 = \frac{\text{Reserves \& Surplus}}{TA}$	0.3707	0.3763	0.3952	0.4374	0.4642
$X_3 = \frac{EBIT}{TA}$	0.0908	0.0917	0.0994	0.1039	0.1287
$X_4 = \frac{\text{MV of equity}}{\text{BV of debt}}$	1.61	1.70	1.65	5.07	2.04
$X_5 = \frac{S}{TA}$	0.440	0.359	0.364	0.388	0.503

Z- Score = 1.2 x 1 + 1.4 x 2 + 3.3 x 3 + 0.6 x 4 +1.0 x 5

Z-2002-2003 = 2.30

Z-2001-2002 = 2.28

Z-2000-2001 = 1.67

Z-1999-2000 = 4.48

Z-1998-1999 = 2.93

- GACL can be regarded as a healthy company only during the year 1999-2000. But during other years, it has been identified under the head Area of ignorance because the Z-score has been less then 2.99.
- Z-score increased initially from 2.93 to 4.48 because of increase in market value of equity in 1999-2000 which may be attributed to the good expected benefits. However, the Z-score declined drastically in 2000-01. From 2001-02 the Z-score has recoreded an increase for the last two years which can be attributed to increase in NWC/TA and S/TA.

Altman's Z- score practical significance in Indian context:

- This model was developed way back in 1977, that too taking long-range prediction. From Indian companies point of view and taking current scenerio into consideration if any short term fluctuations are there the company will be classified as risky on the basis of this score. Long term forecasting and prediction is not possible atleast in the Indian context.
- Another point to be noted is that Altman's Z-score takes only seven variables and five ratios into consideration. But as of today their are other variables which will have direct impact on the firm. These variables changes from situation to situation, industry to industry and company to company. The type of environment in which the company is operating also matters a lot.

4. a. Using the perpetual growth model of calculating stock prices, we have

Intrinsic value = Dividends/(Expected rate of return – Rate of growth)

P0 = Div/(r – g) = Rs.7.50/(0.12 – 0.10) = Rs.7.50/0.02 = Rs.375

As given, the firm will have to issue new shares to finance its growth if it switches to a cent percent payout policy. The growth rate of dividends tends to decline when the amount of retained earnings decreases every year. On the basis of the current dividend payout policy, the price of the stock for the subsequent year can be obtained by multiplying the growth rate of 10 percent with the intrinsic value of Rs.375, which gives Rs.412.50. At t = 1, if the number of original shares outstanding are taken to be n1, the market value of the company shall be Rs 412.50n1.

As per the revised policy, new shares numbering n2 will be issued to compensate for the amount distributed out of retained earnings. This compensation will be equivalent to the Rs 7.50 per original share (the difference of Rs 15 and Rs 7.50), an aggregate loss of Rs 7.50n_1. The quantity of the new shares being n_2 and with P_1 as

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the price of the share at t = 1 under the revised policy $n_2P_1 = 7.50n_1$. At the same time, as the total value of the firm does not get changed, $412.50n_1 = P_1(n_1 + n_2)$. These two equations $n_2P_1 = 7.50n_1$ and $412.50\ n_1 = P_1(n_1 + n_2)$, are to be solved to give the value of P_1. By substituting $P_1 = 7.5n_1/n_2$ in the other equation, we get,

$412.50n1 = 7.50n1/n2\ (n1 + n2)$,

$412.50n2 = 7.5(n1 + n2) = 7.5n1 + 7.5n2$,

$55n2 = n1 + n2,\ n1 = 54n2$

When this relation between n1 and n2 is again substituted in n2P1 = 7.5n1, we get

$n2P1 = 7.5 \times 54n2,\ \therefore\ P1 = Rs\ 405$

It follows that if P0 is the price at t = 0 and the expected rate of growth is g, then P1 = P0 (1 + g) and also P0 = Rs 15/(0.12 – g). Solving for g and P0, we get g to be 8 percent and P0 to be Rs 375, which is the same as its original price thus leaving it unchanged.

b. Buy-back of shares or share re-purchases are in general perceived to be a signal from the management of the firm to either avoid the accumulation of excess liquidity or increase the debt-equity ratio in the capital structure. If the repurchase of stock is effected at a premium, then it implies that the management is sending a signal to the effect of the stock being of good value even at the premium offered over and above the prevailing market price. In the presence of such signaling effects, the price of the stock is most likely to register an increase. On the other hand the price of the share can remain unchanged or even decrease if the management is buying back their own shares or if the repurchase of shares is perceived to result in increasing the risk of the firm. The consequent effect on the share price may also be likewise if the action of buy-back was understood by the investors and the stakeholders to be the result of not being able to find potentially favorable projects with a positive net present value. A share repurchase is perceived to be a zero-NPV investment, if markets are efficient. If the trade-off is between investing in real assets or a buyback of shares, the shareholders will obviously prefer to have a share re-purchase than an investment in a negative-NPV project. The desirability of a share re-purchase is likely to be influenced by the investment opportunities in the possession of the firm. On the flip side, if the managers due to asymmetric information have an inside understanding that the prevailing price of the stock is too low, then repurchasing shares will adversely affect the shareholders who sell and be favorable to those who continue to hold the shares.

5. Long-term strategies often called master or business strategies provide basic direction for strategic actions. A long-term strategy can be defined as a comprehensive general approach that guides a firm's major actions. One of the facets of long-term strategies is concentration. Concentrated growth is the strategy of the firm that directs its resources to the profitable growth of a single product, in a single market, with a single dominant technology. The main advantage of concentrated growth strategy is that it leads to enhanced performance. GACL is concentrating on those areas where cost-saving measures are significant like production of captive power plants and shipping as a mode of transport, not only to reduce cost but simultaneously to increase performance of its product. It has also consolidated its position in the industry through various mergers and acquisitions. It is also setting up plants in Sri Lanka which will further enhance its market share. In long run it should concentrate on the critical success factors like quality and cost.

Apart from this, in order to remain competitive in the long run, it should focus on the following aspects:

- Profitability
- Public responsibility
- Productivity
- Competitive position
- Employee development
- Technological leadership

GACL is already taking steps in this direction as is shown by its employee empowerment policy, minimum pollution level at its cement plants, low cost production and competitive pricing.

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Part E: Caselets

Caselet 1

1. This is because the process focuses too much on the results, that is, the numbers like costs and sales, and not enough on the causes — the softer issues like the business model and organizational culture. This is important because the softer issues are what drive the results — change these, and the results are bound to change. And these are always changed — can you imagine an acquisition in which the buyers leave the bought company alone? Almost certainly, there will be a "culture integration" exercise, application of existing metrics to the acquired business, and generally, a force fitting of the new business into the existing business model.

Apart from this the following factors also result into failures of acquisitions:

- Lack of leadership focus
- Inadequate communication to minimize uncertainty among the minds of shareholders as well employees of the acquired company
- Loss of Key talent of the acquired company
- Cultural clashes
- Lack of integration between the two entities
- Inability to share control or compromise on difficult issues
- Poor business fit

2. A merger involves unique challenges such as the valuation of the company being acquired, synergies and integration of the pre-merger entities. Valuation is a subjective matter, involving several assumptions. In order that valuation is done objectively, the acquiring firm should take steps to see that the 'due diligence' exercise is carried out objectively and meticulously. All the relevant financial data should be analyzed and growth rates should be determined taking into consideration modest projections about the expected growth post merger. The financial data should be combined with non-financial parameters like human capital, market share, quality of management etc to give an insight into the future of the merged entity. Synergies will materialize when a holistic approach and a broader vision is adopted by top management and all the delicate and 'soft issues' are handled skillfully. This involves dealing with uncertainty in the minds of shareholders and employees. The best approach is to counter any uncertainty with facts. The top management should see that the best employees of the acquired company don't leave the company. After all it is they who gave the acquired company its value. Integration of the pre-merger entities is a demanding task and has to be managed skillfully. In this regard, the top management has to be very cautious. This involves integrating the cultures, values, systems and operations of the two entities. This is easier said than done. Though it takes time but if done in the right earnest and right spirit it is not an impossible task. If all these strategic issues are handled skillfully and sincerely there is no reason why a merger should fail.

Caselet 2

1. To define culture is both easy and difficult at the same time. It is a set of widely accepted guidelines that influence company employees' behavior, a set of underlying values, a way of life all rolled into one. It is something indefinably real, which can be felt, like the wind on your face — but not held in the palm of your hand or put under a microscope. Put in a mundane way, it tacitly dictates the `done things' and the `not done things' inside a company. It is partly dependent on history, origins, and the type of business and the leadership but not on any one of them singly.

A little depth of observation will show that the internal benefits of culture are far from being just intangible or conceptual. It can result in greater effectiveness in implementation and value-driven behavior, including decision-making throughout the organization. Indeed, contrary to what one might think, it can also contribute to speed and efficiency of decision-making. Consider the following: If the values, beliefs and ways were explicit, widely shared and unambiguous, any educated person could make almost any decision given the same information; and the result is unlikely to be far different from what it would be if the senior-most person handled the situation. This is one of the truly unsung benefits of a

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culture of standards and guidelines rather than bureaucratic procedures. As a result, the area manager working a thousand miles away from headquarters and facing an unfamiliar situation cropping up need not feel paranoid about inviting a tonne of bricks on his head when he returns to base. He can tackle the problem (say, with a customer or a Government officer), confident that what he decided would be acceptable, and indeed much the same as what his Managing Director might have done in his place.

The global consumer is a major reason for the concern for culture. The global outlook and the marketplace that engenders it demands as a minimum that a Body Shop outlet or a Marks & Spencer store everywhere in the world will look and feel familiar to the customer coming there, hoping to get the shopping ambience and experience she has been accustomed to 'at home'. This applies to the airport brands from whisky to cheese and chocolates that vast numbers of travellers — backpackers just as much as business travellers — rush into for the last-minute gift buying before departure. The customer takes it for granted that the truly global brands will be there and will feel and taste the same no matter where in the world they are made.

2. There is definitely a link between internal culture of an organization and its effect on potential customer. The link is more readily apparent in hotels, banks and airlines because of the very nature of the service. Think back to the best interaction that you had with airline counter staff, a bank teller or the front office or room service staff of a hotel. And you will conclude that you can never disconnect in your mind the brand experience from your impression of the individual. Therefore, what the customer is paying for is largely for the experience at the `touch point' or the 'moment of truth' when the employee, trained in the ways of doing business according to the culture and traditions of the company, enters into a direct relationship with the customer. Today, the consumers have a wide variety of brands available to choose from. They are ready to pay a little more price but they want an excellent service to be provided. We can see that banks like ICICI or HDFC have become so strong brands within such a short period of time only because of the service they provide. LIC has been rated as the number one brand in insurance sector because of the same reason. The same goes true with all brands irrespective of the industry. All else is mere talk, compared to what one gets as direct experience. The experience that a customer gets in turn depend upon what the culture of the organization is and to what extent it has been ingrained into the employees delivering the product or service. Hence culture plays an important role in creating the brand equity.

Caselet 3

1. The continuous focus on building competitive advantages detracts and blocks creativity. When asked to build competitive advantages, managers typically put themselves against competitors, assess what they do and strive to do it better. They put themselves against competitors and forget about the consumer. The result is that they fight ferociously to win a larger market share but come out with a product or service, which is almost identical and often over-designed from the customer's perspective. For instance, if we take the case of cellular phones so many brands of instruments are there in the market and each claims to be distinctive. However, they are studded with so many features that are often not used by the customer and often confuse him. In order to be creative, what is required is to move out of the trap of logical thinking. In building competitive advantage and focusing on the consumer the managers do more of logical thinking and less of 'creative' thinking. Over the last few decades, all marketing has been focused on building competitive advantage. The managers have been so enthralled with this concept that they never thought anything beyond this. This obsession has resulted in only crowding the market with 'me-too' products and services. It is high time that managers break this paradigm and start focusing on the customers instead.

2. Yes, value innovation and not competitive advantage should be the focus of business. Value innovation is just what the name implies — value and innovation with equal emphasis. The buyer and not the competitor should be placed at the center of strategic thinking. And managers should aim for leapfrogging advancements, not mere incremental advantages over market rivals. It is the drive to achieve a leap in value with a low-cost business model that makes companies question everything the industry and competition are doing. Perhaps the best way to start is to ask what it takes to win the mass of buyers even without marketing! When companies frame their strategic thinking this way, the futility of

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benchmarking the competition becomes clear. To create a compelling strategy for an organization — one that achieves the financial reward of value innovation, achieving both exceptional value for buyers and low costs for companies — begin by asking four questions:

- What factors should be eliminated that an industry has taken for granted?
- What factors should be reduced below the industry standard?
- What factors should be raised above the standard?
- What should be introduced that the industry has never offered?

To get the above right, the company needs to create an environment that permits creative thinking among the managers and various functions within the organization. It is worth investing in a group of talented people — pulled out of different functions and set them up for "innovating thinking". Their focus should be the consumer; their aim should be to do things differently and not just better than competition.

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