FINAL EXAMINATION

GROUP III

(SYLLABUS 2008)

SUGGESTED ANSWERS TO QUESTIONS

DECEMBER 2013

Paper- 13: MANAGEMENT ACCOUNTING – STRATEGIC MANAGEMENT

Time Allowed: 3 Hours **Full Marks : 100**

SECTION-I (60 Marks)

(Strategic Management)

Answer Question No. 1 and any other two from the rest in this section.
(Please answer all parts of a question at one place.)

1. (a) In each of the cases/statements given below, one of four/five alternatives is correct. Indicate the correct answer: 1 x 10

(i) "Marketing mix" is a general phrase used to describe the different kinds of choices organization's have to make in the whole process of bringing a product or service to market. The 4Ps is one way—probably the best-known way—of defining the marketing mix, and was first expressed in 1960 by
(A) Boom and Bitner
(B) Lauterborn
(C) Borden
(D) McCarthy

(ii) The role of leadership can be best evaluated by looking at
(A) Mission
(B) Strategy
(C) Communication
(D) Succession planning
(E) All of the above

(iii) For an Entrepreneur
(A) Vision is before the mission
(B) Mission is before the vision
(C) Both are developed simultaneously
(D) Profitability is most crucial
(E) Vision or mission is an unimportant issue

(iv) The BCG growth matrix is based on the two dimensions
(A) Market size and market share
(B) Market size and profit margins
(C) Market size and competitive intensity
(D) Market size and market competition
(E) Market growth and market share

(v) Sharing investment is one of the basic motive of
 (A) Strategic alliances
 (B) Joint ventures
 (C) Conglomerate acquisition
 (D) Vertical merger

(vi) 'Marketing Research' studies are undertaken
 (A) To measure brand loyalty of a class of consumers
 (B) To predict market potential of a product on a future date
 (C) To understand product-price relationship
 (D) All of the above

(vii) The pricing strategy in which the seller has an obligation to deliver goods to a named place for transfer to a carrier known as
 (A) Zone delivered pricing
 (B) FOB pricing
 (C) Point of production pricing
 (D) Freight absorption pricing
 (E) Uniform delivered pricing

(viii) ABC Corporation has a cost of capital of 10% but that the company has undertaken too many projects, many of which are incomplete. This causes the company' s actual return on investment to drop well below the 10% level. As a result, management decided to place a cap on the number of new projects by raising the cost of capital for these new projects to 15%. This is an example of
 (A) Capital asset strategy
 (B) Insurance strategy
 (C) Capital rationing
 (D) Target costing
 (E) Process costing

(ix) Which one of the following is not a measure related to BSC?
 (A) Financial
 (B) Customer Satisfaction
 (C) Innovation
 (D) Gap Analysis

(x) The minimum cash balance is ₹ 20,000 is required at Miller-Orr Co., and transferring money to or from the bank costs ₹ 50 per transaction. Inspection of daily cash flows over the past year suggests that the Standard Deviation is ₹ 3,000 per day, and hence the variance (Standard Deviation squared) is ₹ 90 lakhs. The interest rate is 0.03% per day on marketable securities. So the spread between the upper and lower limits under 'Stochastic Model' is
 (A) ₹ 31,200
 (B) ₹ 31,100
 (C) ₹ 31,300
 (D) ₹ 31,000

(b) State whether the following statements, based on the quoted terms, are 'TRUE' or 'FALSE' with justifications for your answer. If any statement is false, you are required to give the correct terms, duly quoted. No credit will be given for any answer without justification. 1x5
 (i) 'Merger' is the purchase of controlling interest of another company.
 (ii) 'CVP model' is a simple 'Break-Even model'.
 (iii) 'Time Value' refers to the difference between the market value of an option and its intrinsic value.
 (iv) ABC Ltd. is engaged in sale of footballs. Its cost per order is ₹ 400 and its carrying cost

unit is ₹ 10 per unit per annum. The company has a demand for 20,000 units per year. EOQ for the company is 1,300 units.

(v) A 'Cost-Plus' policy can lead to inflexibility in a firm's pricing decisions.

(c) Define the following terms (in not more than two sentences): 1x5

(i) PALTO

(ii) Barriers to entry

(iii) Non-price competition

(iv) Societal Marketing

(v) Going-rate pricing method

Answer:

1. (a)

(i) (D) McCarthy

(ii) (E) All of the above

(iii) (A) Vision is before the mission

(iv) (E) Market growth and market share

(v) (B) Joint ventures

(vi) (D) All of the above

(vii) (B) or (C) FOB or Point of Production pricing

(viii) (C) Capital rationing

(ix) (D) Gap Analysis

(x) (A) Spread = $3(3/4 \times 50 \times 9{,}000{,}000/0.0003)^{1/3}$ = ₹ 31,200

(b)

(i) False - Merger is the combination of two or more companies in which one of the companies survives and the other one cease to exist. A merger occurs when two companies combine to form a single.

(ii) True - Break-Even analysis is based on the CVP analysis of a firm.

(iii) True - Difference in value positive / negative arises over a period of time.

(iv) False - EOQ = Sq. Root (2 x Quantity x Cost per order / Carrying Cost per Order) = 1,265 units.

(v) True - A 'Cost-Plus' policy can lead to inflexibility in a firm's pricing decisions.

(c)

(i) 'PALTO' is a small model has been using by British Rail since 1973, which manipulates the financial and physical data from the main Rail Plan by using simple "What if? Variations in selected key variables, such as the impact of the price changes on traffic volumes.

(ii) 'Barriers to entry' is the expression indicates the factors like economies of scale, product differentiation and capital requirements, which make it difficult for a new entrant to enter and to gain a foothold in an industry.

(iii) 'Non-price competition' is a marketing strategy in which one firm tries to distinguish its product/service from competing product/service on the basis of attributes like design, workmanship, quality of service, extensive distribution, customer focus, or any other sustainable competitive advantages than price.

(iv) 'The Societal Marketing' concept is an enlightened marketing concept that holds that a company should make good marketing decisions by considering customers' wants/need/fashion/taste etc. the company's requirements, and also the society's long-term interest.

(v) 'Going-rate pricing' method refers to a pricing policy whereby the prices are fixed in consideration of the prices of the competitors and the firm's cost. This is like 'follow the leader' i.e., price leadership. Under this method, price is fixed near about the prices of the leaders. This pricing policy does not have any scientific basis like considerations of cost and marketing factors.

2. (a) What are the 'Corporate Strategy Components'?
(b) State in brief the key 'Issues' of it.
(c) How these corporate strategy components help top management to integrate vision, mission and guiding principles for gap analysis?
(d) Tata Steel's mega takeover of European steel major Corus Company is $12.2 billion, the biggest ever for an Indian company. This is first big business transaction which marked the arrival of Indian Inc on the global stage. Which one amongst four components of growth gap can be filled by Tata Steel in this accusation?

2½ + 7½ + 5 + 5

Answer:

2. (a) Five Corporate Strategy Components and Issues:
(i) Scope, mission and intent;
(ii) Objectives;
(iii) Development Strategy;
(iv) Resource allocation; and
(v) Sources of synergy along with their associated issues.

(b) (i) What business of the firm be in? What firm's strategic purpose or intent.
What customer needs, market segments, and technologies should be focused?
(ii) What performance dimensions, target level, time frame in which target should be attained?
(iii) How can the firm achieve a desired level of growth over time?
Can the desired growth be attained by expanding the firm's current business?
Will the company can diversify into new business or product markets to achieve its future growth objectives?
(iv) How should the firms' limited financial resources be allocated across its business to produce the highest returns?
(v) What competencies, knowledge, and customer based intangibles (i.e., brand recognition, reputation, image, etc.) might be developed and shared across the firm's business?
What operational resources, facilities or functions (i.e., Plants, R&D, Sales-force, etc.) might the firm's business share to increase their efficiency?

(c) The top management set the guiding principles for long term strategic planning of the corporations. Corporate management must first decide what business areas to pursue and set priorities for allocating resources to each SBU. The decision makers for each SBU must select the strategies for implementing the corporate strategies and producing the results that corporate management expects, including both financial and non-financial objectives.
Corporate strategies and resources should help an SBU to compete more effectively than if the unit operates on a completely independent basis. Corporate resources and synergies help the SBU establish its competitive advantage. The strategic focus and priorities of corporate strategy guide SBU strategies. When viewed in this context, the SB Us becomes the action centres of the corporation.

(d) One important objective of M&A is to fill the growth-gap, i.e. the gap between company's sales potential and its current actual performance. The four important components of growth-gap are:
(i) Product line gap;
(ii) Distribution gap;

(iii) Usage gap; and
(iv) Competitive gap.
Tata Steel have got all four components in this case. They are able to expand their products offerings, now have reach to Europe market, can have better efficiency in terms of usage of their resources and competitively stronger than before.

3. (a) A leading steel manufacturing company in Western Maharashtra has one soaking pit at Blooming Mill to roll 4/5 metric tons of ingots. At present they are rolling 750 metric tons of ingots per month. The productivity was low and the fuel consumption was high in the soaking pit during the initial stages of production. Series of actions were taken to increase productivity and reduce the fuel consumption by introducing facilities to charge ingots in hot conditions (i.e. 750-800 degrees Celsius). With these facilities in place the fuel cost is reduced and the production has increased by 50%. For reducing fuel costs, the technique of standard costing was followed and per week reporting of actual consumption as against the standard was introduced. This shows impressive results. In view of the growing demand for rolled products, the company has also decided to install additional equipments in the form of soaking pit with eight cells and all auxiliary equipments, which will cost the company ₹ 33 million. However, the cost reduction per month would be to the tune of ₹ 1.10 million and the payback period will be 3 years 9 months.
State the five stages strategic management framework with reference to the above case.

(b) What challenges in long term commitment the companies faces while entering into rural emerging markets in designing a marketing channel strategy that meets the needs of rural customers?

(c) What do you understand by the term 'Product Line'? Give an example.

(d) Why sometimes new products fail? Give five basic reasons.

(e) What techniques you will follow to fill the 'New Product Planning Gap'.

(1x5)+(1x5)+(2+1)+5+(1x2)

Answer:

3. (a) The steel manufacturing company in Western Maharashtra was facing the problem of low productivity and high consumption of fuel in the initial stages of production. This situation badly affected the cost effectiveness of the company. It wanted to improve productivity and reduce fuel cost by considering series of actions. The company then selected the facility to charge ingots in hot condition and by implement the facility the company is now able to reduce its fuel costs and simultaneously increase the production capacity by 50%.

Strategic management framework stages:
Stage - 1: Where are we in present condition?
Stage - 2: Where we want to go?
Stage - 3: Analysis of various alternatives.
Stage - 4: Draw a priority rank of the various alternatives and select the best one.
Stage - 5: Starting the implementation process along proper monitoring measures.

(b) Challenges in designing a marketing channel strategy that meet to needs of the customers in the rural emerging market:
(i) Decisions in distribution in network design (i.e. channels of distribution coverage);
(ii) Creating an effective distribution network on the ground (i.e. network logistics).
(iii) Affordability;
(iv) Lack of brand and reputation trust;
(v) Lack of education and awareness in topics like hygiene, health, modern agriculture practices, proper uses of products and services, etc.

(vi) After-sales service to customers and its quality.

(c) Product line is group of products that are related either because they satisfy similar needs of different marketing segments or because they satisfy different but related needs of a given marketing segment. E.g.: Satisfy the need same type to all – Entertainment products are used together - Toothpaste and Toothbrush, Blade and Razor, Pencil and Sharpener, etc.

(d) The following are some of the reasons for the failure of the new products:
(i) In-adequate market analysis and market appraisal;
(ii) In-sufficient and in-effective market support;
(iii) Bad timing of launching of new product in the market;
(iv) Incapable for adjusting the rapidly changing marketing environment;
(v) Failure to measure the SWOT analysis (i.e., strengths, weaknesses in relation to the perceived opportunities and threats affects the strategy formulation and its effective implementation;
(vi) Higher cost of the product compares to the substitute products of the competitor;
(vii) To many new products entering in the market at the same time.

(e) The new product planning gap can be filled in two ways:
(i) Acquisition (three types like corporate, patent and license acquisition); and
(ii) New product development (includes original product, product improvements, product modifications, new brands that a firm develops through its own R&D efforts)

4. (a) The 'Product Life Cycle (PLC)' hypothesis is a powerful integrated tool for any industry. State the various stages defined in three popular models, namely:
Porter's Generic Strategy;
Ansoffs Matrix;
and BCG Matrix.
(b) How does 'Market Research' help a management accountant to gain strategic cost advantage for a firm?
(c) Write a short note on 'Activity Based Cost-Management (ABM)'. (3x3)+6+5

Answer:

4. (a)

Models	Introduction	Growth	Maturity	Decline
Porter' Generic	Differentiation	Differentiation	Cost Leadership	Cost Focus
Ansoff's matrix	Market Development	Product Development	Market Penetration	Market and/or Product Diversification
BCG Matrix	Question Mark (low market share and high growth market)	Star (high market share and high growth market)	Cash Cow (high market share and low growth market)	Dog (low market share and low growth market)

(b) Market Research helps the management accountant to gain strategic cost advantage for a firm in three ways:
i) By helping understand current customer tastes and preferences in order to ensure that they continue to buy company's products or services.
ii) Help to understand the tastes and preferences of competition customers in order to try and sell company's products and services to them.
iii) Helping launch the new products and services effectively by understanding the potential of the market.

iv) Help to find profitable ventures' location to draw more customers. The office or store location is often a very important factor, particularly for ventures selling directly to the public.
v) Help to gather customer experience with additional information as to how quality can be perceived and measured.
vi) Helps in collecting technological advancement which the competitor firm follow to reduce cost effectively.

(c) Activity Based Cost management (ABM) uses the information in various analyses designed to yield continuous improvement. ABM manages activity rather than resources. It determines what drives the activities of the organization and how these activities can be improved to increase the profitability. ABM utilizes the cost information gathered to activity based cost. ABM is a discipline that focuses on the management of activities as the route to improve the value received by the customers and the profit achieved by providing this value. The various analyses under ABM are:

(i) **Cost Driver analysis** - It identifies the factors that cause activities to be performed, in order to manage activity costing.
(ii) **Activity analysis** - It involves identification of an organization and the activity centres or activity cost pools. This analysis also identifies the Value Added and Non-Value Added activities.
(iii) **Performance analysis** - It aims to identify the best ways to appropriate measure the performance of factors that are important to organizations in order to stimulate continuous improvement, consistent with each unit's goals and objectives.

SECTION-II (40 Marks)
(Risk Management)

Answer Question No. 5 and any other two from the rest in this section.
(Please answer all parts of the question at one place.)

5. (a) In each of the cases/statements given below, one of four/five alternatives is correct. Indicate the correct answer: 1x5

(i) When risk is perceived and not transferred/recognized/reduced is actually known as
(A) Risk retention
(B) Risk reduction
(C) Risk transfer
(D) Risk sharing

(ii) Unsystematic risk relates to
(A) Market risk
(B) Beta(β)
(C) Inherent risk
(D) Inflation risk

(iii) 'Building block' approach related to asset-liability model refers to successive levels in an organization. The levels are
(A) Standalone risks within a single risk factor are accumulated (Ex. Credit risk)
(B) Accumulation of risks arising out of different risk factors within a single business area (Ex. Combining the assets, liabilities and operating risks in companies operations)
(C) At this level risks across all the business lines in a corporate are aggregated together
(D) All of the above

(E) Both (A) and (C)

(iv) Solvency related risk measures do not include
- **(A) Probability of ruin**
- **(B) Short-fall risk**
- **(C) Value at risk**
- **(D) Return on equity**
- **(E) Tail value at risk**

(v) Often analysts focus on characteristics of loss distributions, such as
- **(A) Expected loss**
- **(B) Standard Deviation of loss**
- **(C) Maximum probable loss**
- **(D) Both (B) and (C)**
- **(E) All of the above**

(b) State whether the following statements, based on the quoted terms, are 'TRUE' or 'FALSE' with justifications for your answer. If any statement is false, you are required to give the correct terms, duly quoted. No credit will be given for any answer without justification: 1x5

(i) 'Purchasing Power Risk' is the uncertainty of the purchasing power of the monies to be received, in the future.

(ii) Hedging involves the transfer of pure risk.

(iii) 'Act liability only' is a life insurance cover available through life insurance policy.

(iv) Future contracts have built-in safeguard against default risk, in the form of stock brokers or a clearing house guarantee.

(v) The Turnbull guidance as an evolution framework for the purposes of the Sarbanes-Oxley Act is mandatory requirements related to the risk management and internal control.

Answer:

5. (a) (i) (A) Risk retention
- (ii) (C) Inherent risk
- (iii) (D) All the above
- (iv) (D) Return on equity
- (v) (E) All of the above

(b) (i) True
- (ii) False - It is speculative risk
- (iii) False - It is vehicle insurance cover
- (iv) True
- (v) True

6. (a) With the passage of IRDA bill, India has been set for the entry of new players in the insurance field. However, even before their formal entry, a few international insurance majors have been instrumental in setting up risk management companies. How risk management is different from insurance?

(b) Differentiate forward contracts from future contracts.

(c) What is meant by the term 'Profit Loading'? 5+5+5

Answer :

6. (a) Risk management is much broader in concept than insurance. It can be defined as the systematic identification and analysis of the various loss exposures faced by a firm or individual and the best method of treating the identified loss exposures consistent with the firm's or individual's objectives. On the other hand Insurance is defined as a co-operative device to spread the loss caused by a particular risk over a number of entities or individuals who are exposed to it and who agree to insure themselves against that risk. It is a part of Risk management and is only one of the methods of treating risk exposures.

Generally, a risk manager of a company is concerned only with management of pure risks, not speculative risks. Risk management is not a one-time activity. In a fast changing dynamic environment, the risk manager must remain alert to factors that affect his company. Hence, he has to take the responsibility for periodic evaluation of risks as well as techniques for taking various loss situations.

Risk management can be divided into pre-loss stage and post-loss stage. The primary objective at the pre-loss stage is to prepare the firm for potential losses in the most economical way possible. A second objective is to reduction of anxiety. The risk management must also prepare the firm to meet any obligation imposed by outsiders.

The most important post-loss objective is to ensure survival of the firm in the event of loss. Secondly, the firm has to resume operations as soon as possible. Ensuring stability of earnings is also important. Finally, the firm cannot forget its responsibility to the community in which it operates.

On the other hand insurance tries to reduce the cost of loss to society by reducing risk. It accumulates funds to meet individual losses. The fund is the way of transferring individual loss to a group. The loss that was uncertain from individual's side, but for a group the loss becomes certain. It is a mechanism of spreading risk falling on one over many facing the same risk.

(b) Forward contracts and future contracts are classified as 'commitment contracts', which impose a performance obligation on both the long as well as the short term. However, while forward contracts are customised or over-the counter (OTC) products, future contracts are standardized or exchange-traded products. In the case of the former, all aspects such as the lot size or the number of units of the underlying assets to be delivered per contract; the grade of the underlying assets, for commodities which are characterized by multiple grades; the location for delivery; and the delivery date are decided by bilateral discussions between the two parties to the contract. Consequently, the contract may structured in any way that the two parties deem fit. In future contracts, however, there is an exchange, which will specify the-lot size; one or more deliverable grades and delivery locations; as well as the delivery period. As this suggests, while the exchange in practice does give an element of choice to the two counterparties, they cannot design a contract beyond the boundaries specified by it.

(c) The purpose of every business activity is to earn profits and insurance business is no exception to this. Just like all other for - profit entitles, insurance companies also need to earn sufficient amount of profit in order to cover up business expenses and cost of capital to keep the stake-holders especially investors happy. Profit loading is simply an amount added (by the insurance company or insurer) to an insurance premium to cover business expenses and contingencies including cost of capital. Just like other normal businesses insurance companies must cover its 'trading cost' which are claims and must earn ABOVE its business costs (which is both claims and other business expenses) in order to prosper. That additional amount earned which is above the cost of claims and other business expenses are called 'profit loading'. And the gross total is termed as simply premium or target premium.
The following is the mathematical equation for more understanding about how these figures are connected:
Premium = Claims + Business Expenses + Profit Loading Where;

Premium is the amount that will be demanded from the insure;
Claims is the total amount of losses insured; and
Expenses are different business expenses including the cost of capital of the insurer.

7. (a) What is meant by 'Incurred-But-Not-Reported Reserve (IBNR)'? Enumerate one suitable example.

(b) In India asset-liability mismatch in balance sheet of commercial banks posed serious challenges as the banks were following the traditional methods of recording assets and liabilities at the book values. As a CMA how would you advise banks for taking appropriate steps in minimizing the mismatch in the asset-liability composition?

(c) What do you understand by 'Pure Risk'? What are the major types of 'Pure Risk' which affect the business? State in brief the different methods of managing 'Pure Risk'.

4+5+(1+2+3)

Answer:

7. (a) Many losses occur near the end of the accounting period but are not reported until the next period. The IBNR reserve is a reserve that must be established for claims that have already occurred but have not yet been reported. Loss reserves must be established for these losses that will be reported during the next accounting period. For example, on December 31, a certain number of motor cycle accidents have already occurred but have not been reported to the insurer.

(b) The liberalization process in the economy coupled with multifaceted global developments exposed banks for various kinds of risks viz. interest rate risk, liquidity risk, exchange risk, operational risk, changes in competitive risk, etc. which have direct impact on their operations, profitability and efficiency to compete with. The RBI focused and advised banks for taking concrete steps in minimizing the mismatch (i.e., gap of maturing assets and maturing liabilities) in the asset-liability composition. There had been many positive impacts of various strategies followed by banks in last one decade.

(i) There are serious attempts by banks to minimize the asset-liability mismatch since the implementation of RBI guidelines. Banks should have made adequate follow up and monitoring arrangements at different level;
(ii) The gap is the difference between the maturing assets to the maturing liabilities. This gap are of two types, positive gap and negative gap. Individual banks should have fixed maximum tolerance limits under each time bucket for the mismatch for close monitoring;
(iii) They should have scope to improve profitability by monitoring and reducing short term liquidity;
(iv) To fill the short term liquidity gap, banks resort to market borrowings at higher rate of interest which reduces interest margin and profitability of banks;
(v) Banks should have greater scope to manage interest rate risk through various techniques.

(c) The risk that can be insured is generally referred to as pure risk. The risk management function has traditionally focused on the management of pure risk.
The major types of Pure Risk that affect the business include following:
(i) Property Risk;
(ii) Legal Liability Risk;
(iii) Other Risks (includes risk of death, illness, disabilities to employees, risk of loss of services etc.

The methods of managing Pure Risk can be broadly classified as:
(i) Loss Control;

Two general approaches:
(a) reducing the level of risky activity and
(b) Increasing precautions against loss for activities that are undertaken.

(ii) Risk Financing or Loss Financing;
This method is used to obtain funds to pay for or offset losses that occur. Three approaches, like (a) retention, (b) insurance, and (c) other contractual risk transfers. These approaches are not mutually exclusive, that is, they often are used in combination.

(iii) Internal Risk Reduction; (i.e., business can reduce pure risk internally).There are two major forms of internal pure risk reduction; (a) diversification, and (b) investment in information.

Loss Control and Internal Risk Reduction are commonly involved in decisions to invest resources to reduce expected losses. They are conceptually equivalent to other investment decisions, such as firm's decision to buy a new plant or an individual's decisions. Risk Financing/Loss Financing decision refers to decisions about how to pay for losses if they do occur.

8. Write answers any 3 (three) from the following: 5x3
(a) 'Knock-for-Knock' Agreement.
(b) Arbitrage Pricing Theory (APT).
(c) Risk Mapping or Profiling.
(d) Risk Assessment Techniques.

Answer:

8. (a) The 'knock-for-knock agreement' is an agreement entered into among the insurance writing motor insurance. The agreement provides that in the event of damage caused by collision or attempt to avoid between two vehicles, the insurer of each vehicle will bear his own loss within the limits of his policy; irrespective of legal liability and will not enforce his subrogation rights, if any, against the other insurer. This agreement covers all vehicles which are not playing for hire or reward.

While an insurer will be able to pursue a recovery from the party responsible for an accident or from its policy-holder, there will be a costly administrative procedure. The knock-for-knock agreement simplifies recovery claims among insurers and, over time, attributes costs fairly among insurers.

However, these agreements between insurers have been criticised as unfair on the party not responsible for an accident. If, for the sake of administrative ease, an insurer pays out to repair damage done to its policy-holder's own car instead of pursuing the party responsible for the accident for all relevant costs, an effective claim is recorded against that policy-holder's insurance record. In this way, knock-for-knock agreements can result in policy-holders finding unexpectedly, when they come to renew their insurance, that there are higher premiums regardless of responsibility for an accident they were involved in.

(b) Since it is unlikely that markets are inefficient for extended periods of time, financial economists began looking for alternative risk-return models, beyond the factor model such as the CAPM. In the mid-1970s, Stephen Rose developed an alternative model called the Arbitrage Pricing Theory (APT) which is reasonably intuitive, requires only limited assumptions and allows for multiple risk factors.
The APT does not require the following assumptions (which under grid the CAPM): the utility functions of investors are quadratic; security returns are normally distributed; the market portfolio that contains all risky assets is mean-variance efficient.

The APT only assumes that the capital markets are perfectly competitive and that investors always prefer more wealth to less wealth with certainty.

APT in finance, is a general theory of asset pricing that has become influential in the pricing of shares. APT holds that the expected return of a financial asset can be modeled as a linear function of various macro-economic factors or theoretical market indices, where sensitivity to changes in each factor is represented by a factor specific beta coefficient. The model derived rate of return will then be used to price the asset correctly.

(c) Risk mapping or profiling is one of the alternative methods of risk identification and assessment in the enterprise risk management. Since integrated risk management is based on identifying all the risks facing the firm, it is not unusual for a firm to identify in excess of 100 risks when using this approach. Cataloguing and making sense of so many risks requires a structured process. Risk mapping or profiling involves arraying these risks in a matrix, with one dimension being the frequency of events and the other being the severity. Each risk is then marked to indicate whether it is covered by insurance or not. By considering the likely-hood and severity of each of the risks in this matrix, as well as the extent to which insurance protection is already available, it becomes possible for the firm to identify the risk that are most likely to seriously affect the firm's ability to achieve its goals.

(d) Risk Assessment is a fundamentally important part of the risk management process. In order to achieve a comprehensive risk management approach, an organization needs to undertake suitable and sufficient risk assessment techniques. It is also required in relation to routine operations.

Risk Assessment Techniques:

(i) Structured Questionnaires and Checklists: to collect information to assets with the recognition of the significant risks.

(ii) Workshops and Brainstorming: collection and sharing of ideas and discussion of the events that could impact the objectives, stakeholder expectations or key dependencies.

(iii) Physical Inspections of premises and activities and Audits of compliance with established systems and procedures.

(iv) Flow-charts and Dependency Analysis for identifying critical components that is key to success.

(v) Hazard and Operability Studies (HAZOP) and Failure Models Effects Analysis (FMEA): These are the quantitative technical failure analysis techniques.

(vi) SWOT and PESTLE Analysis: Strengths, Weaknesses, Opportunities and Threats analysis and Political, Economic, Social, Technological, Legal and Environmental analysis offered structured approaches to risk recognition.