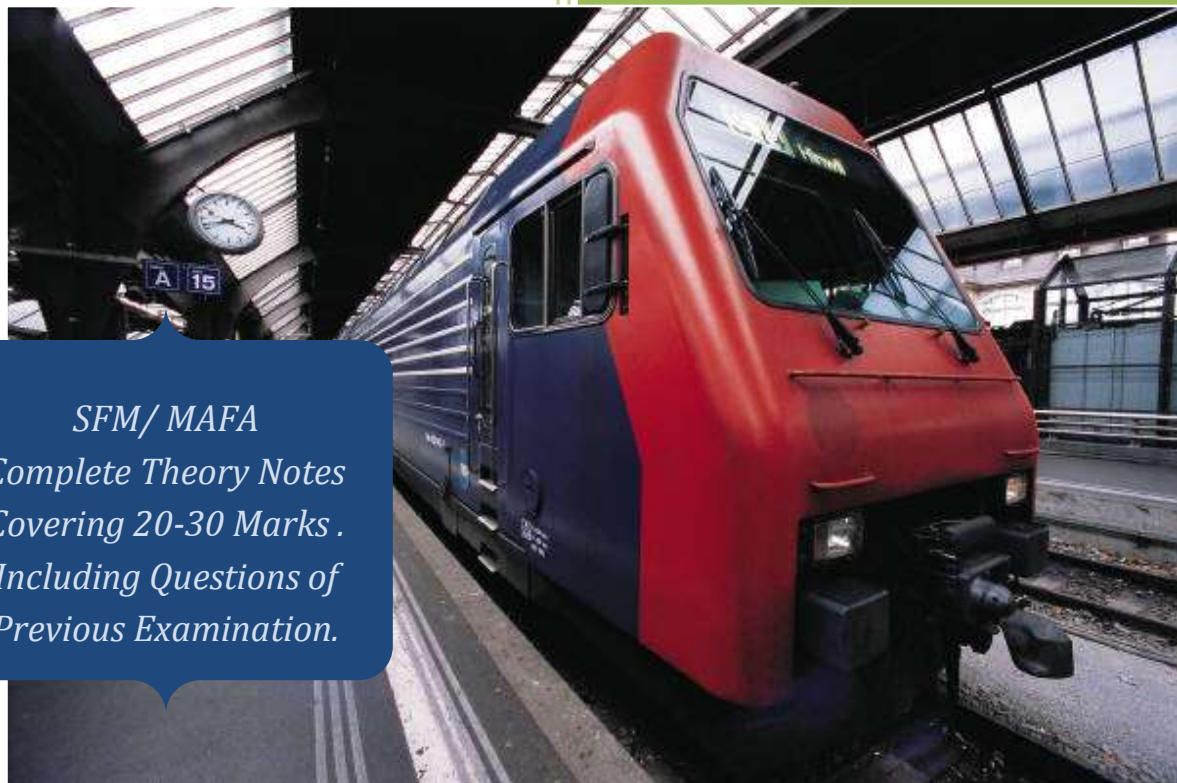


# 2012

## Strategic Financial Management



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3/25/2012

# PROJECT PLANNING AND CAPITAL BUDGETING

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## Question 2

Write short notes on any four of the following:

(a) *Margin Money.*

(b) *Internal Rate of Return.*

(10 marks) (May 1996)

## Answer

(a) **Margin Money:** Bankers keep a cushion to safeguard against changes in value of securities against which loans are given to customer. This cushion represents the Margin Money.

The quantum of Margin money depends upon the credit worthiness of the borrower and the nature of security.

In project financing, Margin Money has to come from Promoters' contribution.

In the case of borrowing for working capital Margin Money has to be provided as per norms that are prescribed from time to time by RBI. In the case of new projects Margin Money required for working capital is included in the Project Cost.

(b) **Internal Rate of Return:** It is that rate at which discounted cash inflows are equal to the discounted cash outflows. In other words, it is the rate which discounts the cash flows to zero. It can be stated in the form of a ratio as follows:

$$\frac{\text{Cash inflows}}{\text{Cash outflow}} = 1$$

This rate is to be found by trial and error method. This rate is used in the evaluation of investment proposals. In this method, the discount rate is not known but the cash outflows and cash inflows are known.

In evaluating investment proposals, Internal rate of return is compared with a required rate of return, known as cut-off rate. If it is more than cut-off rate, the project is treated as acceptable; otherwise project is rejected.

Q. Write short note on Appraisal of projects under inflationary conditions.

(5 marks) (May 1998)

## Answer

**Appraisal of projects under inflationary conditions:** The timing of project appraisal is significant from the point of view of appraisers. A project under normal conditions is viewed from different angles, viz, technical feasibility, commercial and financial viability and economic and social considerations and managerial aspects. However, normal conditions seldom exist and a project is subjected to inflationary pressures from time to time because the project has to be implemented over a long time frame. During such a period, it will be difficult to predict when the trade cycle sets in and the up-turn the economy is generated. Besides this, the size and magnitude of the project also varies from organization to organisation. In such a situation, inflation is bound to affect the project appraisal and implementation process.

In a developing country like ours, inflation has become a part of life and has been steadily increasing over a period of years. Therefore, it is always prudent to make adequate provision for a probable escalation in the project costs as a cushion to inflationary jerks.

It is well known that during a period of inflation, the project cost is bound to escalate on all heads viz. labours, raw material, cost of fixed assets, building materials, remunerations of technician and managerial personnel etc. Besides, such conditions erode the purchasing power of the consumers and are likely to affect the pattern of demand. Thus, not only the costs of production but also the projected statements of profitability, cash flows etc., will get seriously affected. Financial institutions may revise their lending rates of interest during such inflationary times. IN these circumstances, project appraisal has to be done generally keeping in view the following guidelines which are adopted normally by governmental agencies, banks and financial institutions.

- (a) It is always advisable to make provisions for cost escalation for all heads keeping in mind the rate of inflation, likely delay in completion of project etc.
- (b) The various sources of finance should be scrutinized carefully with response to possible revision in the rates of interest by lenders which will affect the cost of borrowing, the collateral securities offered, margins required etc.
- (c) Adjustments are to be made in the profitability and cash flow projections to take care of the inflationary pressure affecting future projections.
- (d) It is also advisable to critically examine the financial viability of the project at the revised rates and reasons the economic justification of the project. The appropriate measure for this is the economic rate of return for the project which will equate the present cost of capital expenditure to net cash flows over the project life. The rate of return should be acceptable which also accommodates the rate of inflation.
- (e) In an inflationary situation, projects having early pay back periods should be preferred because projects with a longer pay back periods may tend to be risky.

Because inflation can have major effect on business, it is critically important and must be recognized. "The most effective way to deal with inflation is to build into each cash flow element, using the best available information about how each element will be affected, since one cannot estimate future rates of inflation, errors are bound to be made. Therefore, inflation adds to uncertainty, riskness and complexity to capital budgeting. Fortunately, computers and spread sheet models are available to help inflation analysis. Thus, in practice, the mechanics of inflation adjustments are not difficult.

### Question 16

*What are the issues that need to be considered by an Indian investor and incorporated within the Net Present Value (NPV) model for the evaluation of foreign investment proposals?*

*(8 marks) (November, 2000)*

### Answer

The issues that need to be considered by an Indian investor and incorporated within the Net Present Value (NPV) model for the evaluation of foreign investment proposals are the following:

- (1) *Taxes on income associated with foreign projects:* The host country levies taxes (rates differ from country to country) on the income earned in that country by the Multi National Company (MNC). Major variations that occur regarding taxation of MNC's are as follows:
  - (i) Many countries rely heavily on indirect taxes such as excise duty, value added tax and turnover taxes etc.
  - (ii) Definition of taxable income differs from country to country and also some allowances e.g. rates allowed for depreciation.

- (iii) Some countries allow tax exemption or reduced taxation on income from certain “desirable” investment projects in the form of tax holiday’s, exemption from import and export duties and extra depreciation on plant and machinery etc.
  - (iv) Tax treaties entered into with different countries e.g. double taxation avoidance agreements.
  - (v) Offer of tax havens in the form of low or zero corporate tax rates.
- (2) *Political risks*: The extreme risks of doing business in overseas countries can be seizure of property/nationalisation of industry without paying full compensation. There are other ways of interferences in the operations of foreign subsidiary e.g. levy of additional taxes on profits or exchange control regulations may block the flow of funds, restrictions on employment of foreign managerial/technical personnel, restrictions on imports of raw materials/supplies, regulations requiring majority ownership vetting within the host country.
- NPV model can be used to evaluate the risk of expropriation by considering probabilities of the occurrence of various events and these estimates may be used to calculate expected cash flows. The resultant expected net present value may be subjected to extensive sensitivity analysis.
- (3) *Economic risks*: The two principal economic risks which influences the success of a project are exchange rate changes and inflation.
- The impact of exchange rate changes and inflation upon incremental revenue and upon each element of incremental cost need to be computed.

### Question 19

*Many companies calculate the internal rate of return of the incremental after-tax cash-flows from financial leases.*

*What problems do you think this may give rise to? To what rate should the internal rate of return be compared? Discuss.* (8 marks) (May 2001)

### Answer

Main problems faced in using Internal Rate of Return can be enumerated as under:

- (1) The IRR method cannot be used to choose between alternative lease bases with different lives or payment patterns.
- (2) If the firms do not pay tax or pay at constant rate, then IRR should be calculated from the lease cash-flows and compared to after-tax rate of interest. However, if the firm is in a temporary non-tax paying status, its cost of capital changes over time, and there is no simple standard of comparison.
- (3) Another problem is that risk is not constant. For the lessee, the payments are fairly riskless and interest rate should reflect this. The salvage value for the asset, however, is probably much riskier. As such two discount rates are needed. IRR gives only one rate, and thus, each cash-flow is not implicitly discounted to reflect its risk.
- (4) Multiple roots rarely occur in capital budgeting since the expected cash – flow usually change signs once. With leasing, this is not the case often. A lessee will have an immediate cash inflow, a series of outflows for a number of years, and then an inflow during the terminal year. With two changes of sign, there may be, in practice frequently two solutions for the IRR.

### Question 23

*Distinguish between Net Present-value and Internal Rate of Return.* (2 marks) (May 2002)

### Answer

**NPV and IRR:** NPV and IRR methods differ in the sense that the results regarding the choice of an asset under certain circumstances are mutually contradictory under two methods. In case of mutually exclusive investment projects, in certain situations, they may give contradictory results such that if the NPV method finds one proposal acceptable, IRR favours another. The different rankings given by the NPV and IRR methods could be due to size disparity problem, time disparity problem and unequal expected lives.

The net present value is expressed in financial values whereas internal rate of return (IRR) is expressed in percentage terms.

In net present value cash flows are assumed to be re-invested at cost of capital rate. In IRR re-investment is assumed to be made at IRR rates.

### Question 25

*Write short note on Certainty Equivalent Approach.*

*(4 marks) (May 2002)*

#### Answer

**Certainty Equivalent Approach:** This approach recognizes risk in capital budgeting analysis by adjusting estimated cash flows and employs risk free rate to discount the adjusted cash-flows. Under this method, the expected cash flows of the project are converted to equivalent riskless amounts. The greater the risk of an expected cash flow, the smaller the certainty equivalent value for receipts and longer the C.E. value for payment. This approach is superior to the risk adjusted discounted approach as it can measure risk more accurately.

This is yet another approach for dealing with risk in capital budgeting to reduce the forecasts of cash flows to some conservative levels. In certainty Equivalent approach we incorporate risk to adjust the cash flows of a proposal so as to reflect the risk element. The certainty Equivalent approach adjusts future cash flows rather than discount rates. This approach explicitly recognizes risk, but the procedure for reducing the forecasts of cash flows is implicit and likely to be inconsistent from one investment to another.

### Question 26

*(a) What is the sensitivity analysis in Capital Budgeting?*

**Sensitivity Analysis in Capital Budgeting:** Sensitivity analysis is used in Capital budgeting for more precisely measuring the risk. It helps in assessing information as to how sensitive are the estimated. Parameters of the project, such as, cash flows, discount rate, and the project life to the estimation errors. Future being always uncertain and estimations are always subject to error, sensitivity analysis takes care of estimation errors by using a number of possible outcomes in evaluating a project. The methodology adopted in sensitivity analysis is to evaluate a project by using a number of estimated cash flows so as to provide to the decision maker an insight into the variability of outcome. Thus, it is a technique of risk analysis which studies the responsiveness of a criterion of merit like NPV or IRR to variation in underlying factors like selling price, quantity sold, returns from an investment etc.

Sensitivity analysis answers questions like,

- (i) What happens to the present value (or some other criterion of merit) if flows are, say Rs. 50,000 than the expected Rs. 80,000?
- (ii) What will happen to NPV if the economic life of the project is only 3 years rather than expected 5 years?

Therefore, wherever there is an uncertainty, of whatever type, the sensitivity analysis plays a crucial role. However, it should not be viewed as the method to remove the risk or uncertainty, it is only a tool to analyse and measure the risk and uncertainty. In terms of capital budgeting the possible cash flows are based on three assumptions:

- (a) Cash flows may be worst (pessimistic)

- (b) Cash flows may be most likely.
- (c) Cash flows may be most optimistic.

Sensitivity analysis involves three steps

- (1) Identification of all those variables having an influence on the project's NPV or IRR.
- (2) Definition of the underlying quantitative relationship among the variables.
- (3) Analysis of the impact of the changes in each of the variables on the NPV of the project.

The decision maker, in sensitivity analysis always asks himself the question – what if?

### Question 31

*Write short note on Social Cost Benefit analysis.*

*(4 marks) (November, 2003)*

#### Answer

**Social Cost Benefit Analysis:** It is increasingly realised that commercial evaluation of projects is not enough to justify commitment of funds to a project especially when the project belongs to public utility and irrespective of its financial viability it needs to be implemented in the interest of the society as a whole. Huge amount of funds are committed every year to various public projects of all types—industrial, commercial and those providing basic infrastructure facilities. Analysis of such projects has to be done with reference to the social costs and benefits since they cannot be expected to yield an adequate commercial rate of return on the funds employed at least during the short period. A social rate of return is more important. The actual costs or revenues do not necessarily reflect the monetary measurement of costs or benefits to the society. This is because the market price of goods and services are often grossly distorted due to various artificial restrictions and controls from authorities, hence a different yardstick has to be adopted for evaluating a particular project of social importance and its costs and benefits are valued at 'opportunity cost' or shadow prices to judge the real impact of their burden as costs to the society. Thus, social cost benefit analysis conducts a monetary assessment of the total cost and revenues or benefits of a project, paying particular attention to the social costs and benefits which do not normally feature in conventional costing.

United Nations Industrial Development Organisation (UNIDO) and Organisation of Economic Cooperation and Development (OECD) have done much work on Social Cost Benefit analysis. A great deal of importance is attached to the social desirability of projects like employment generation potential, value addition, foreign exchange benefit, living standard improvement etc. UNIDO and OECD approaches need a serious consideration in the calculation of benefits and costs to the society. This technique has got more relevance in the developing countries where public capital needs precedence over private capital.

### Question 32

*Write a brief note on project appraisal under inflationary conditions.*

*(8 marks) (November, 2003)*

#### Answer

##### **Project Appraisal under Inflationary Conditions**

Project Appraisal normally involves feasibility evaluation from technical, commercial, economic and financial aspects. It is generally an exercise in measurement and analysis of cash flows expected to occur over the life of the project. The project cash outflows usually occur initially and inflows come in the future.

During inflationary conditions, the project cost increases on all heads viz. labour, raw material,

fixed assets such as equipments, plant and machinery, building material, remuneration of technicians and managerial personnel etc. Beside this, inflationary conditions erode purchasing power of consumers and affect the demand pattern. Thus, not only cost of production but also the projected statement of profitability and cash flows are affected by the change in demand pattern. Even financial institutions and banks may revise their lending rates resulting in escalation in financing cost during inflationary conditions. Under such circumstances, project appraisal has to be done generally keeping in view the following guidelines which are usually followed by government agencies, banks and financial institutions.

- (i) It is always advisable to make provisions for cost escalation on all heads of cost, keeping in view the rate of inflation during likely period of delay in project implementation.
- (ii) The various sources of finance should be carefully scrutinised with reference to probable revision in the rate of interest by the lenders and the revision which could be effected in the interest bearing securities to be issued. All these factors will push up the cost of funds for the organization.
- (iii) Adjustments should be made in profitability and cash flow projections to take care of the inflationary pressures affecting future projections.
- (iv) It is also advisable to examine the financial viability of the project at the revised rates and assess the same with reference to economic justification of the project. The appropriate measure for this aspect is the economic rate of return for the project which will equate the present value of capital expenditures to net cash flows over the life of the projects. The rate of return should be acceptable which also accommodates the rate of inflation per annum.
- (v) In an inflationary situation, projects having early payback periods should be preferred because projects with long payback period are more risky.

Under conditions of inflation, the project cost estimates that are relevant for a future date will suffer escalation. Inflationary conditions will tend to initiate the measurement of future cash flows. Either of the following two approaches may be used while appraising projects under such conditions:

- (i) Adjust each year's cash flows to an inflation index, recognising selling price increases and cost increases annually; or
- (ii) Adjust the 'Acceptance Rate' (cut-off) suitably retaining cash flow projections at current price levels.

An example of approach (ii) above can be as follows:

|                            |                              |
|----------------------------|------------------------------|
| Normal Acceptance Rate :   | 15.0%                        |
| Expected Annual Inflation: | 5.0%                         |
| Adjusted Discount Rate :   | $15.0 \times 1.05$ or 15.75% |

It must be noted that measurement of inflation has no standard approach nor is easy. This makes the job of appraisal a difficult one under such conditions.

### Question 34

(a) *Explain briefly Capital Rationing.*

**(a)Capital Rationing:** When there is a scarcity of funds, capital rationing is resorted to. Capital rationing means the utilization of existing funds in most profitable manner by selecting the acceptable projects in the descending order or ranking with limited available funds. The firm must be able to maximize the profits by combining the most profitable proposals. Capital rationing may arise due to (i) external factors such as high borrowing rate or non-availability of

loan funds due to constraints of Debt-Equity Ratio; and (ii) Internal Constraints Imposed by management. Project should be accepted as a whole or rejected. It cannot be accepted and executed in piecemeal.

IRR or NPV are the best basis of evaluation even under Capital Rationing situations. The objective is to select those projects which have maximum and positive NPV. Preference should be given to interdependent projects. Projects are to be ranked in the order of NPV. Where there is multi-period Capital Rationing, Linear Programming Technique should be used to maximize NPV. In times of Capital Rationing, the investment policy of the company may not be the optimal one.

In nutshell Capital Rationing leads to:

- (i) Allocation of limited resources among ranked acceptable investments.
- (ii) This function enables management to select the most profitable investment first.
- (iii) It helps a company use limited resources to the best advantage by investing only in the projects that offer the highest return.
- (iv) Either the internal rate of return method or the net present value method may be used in ranking investments.

**Ways of Resorting Capital Rationing :** There are various ways of resorting to capital rationing, some of which are :

- (i) **By Way of Retained Earnings :** A firm may put up a ceiling when it has been financing investment proposals only by way of retained earnings (ploughing back of profits). Since the amount of capital expenditure in that situation cannot exceed the amount of retained earnings, it is said to be an example of capital rationing.
- (ii) **By Way of Responsibility Accounting :** Capital Rationing may also be introduced by following the concept of „responsibility accounting“, whereby management may introduce capital rationing by authorising a particular department to make investment only upto a specified limit, beyond which the investment decisions are to be taken by higher-ups.
- (iii) **By Making Full Utilization of Budget as Primary Consideration :** In Capital Rationing it may also be more desirable to accept several small investment proposals than a few large investment proposals so that there may be full utilisation of budgeted amount. This may result in accepting relatively less profitable investment proposals if full utilisation of budget is a primary consideration. Thus Capital Rationing does not always lead to optimum results.

#### Question 47

What are the characteristic features of Financial and Operating Lease? (4 Mark) (November ,2006)

#### Answer

##### *Salient features of Financial Lease*

- (i) is an intermediate term to long-term arrangement.
- (ii) During the primary lease period, the lease cannot be cancelled.
- (iii) The lease is more or less fully amortized during the primary lease period.
- (iv) The cost of maintenance, taxes, insurance etc., are to be incurred by the lessee unless the contract provides otherwise.
- (v) The lessee is required to take the risk of obsolescence.
- (vi) The lessor is only the Financier and is not interested in the asset.

##### *Salient features of Operating Lease*

- (i) The lease term is significantly less than the economic life of the equipment.
- (ii) It can be cancelled by the lessee prior to its expiration date.

- (iii) The lease rental is generally not sufficient to fully amortize the cost of the asset.
- (iv) The cost of maintenance, taxes, insurance are the responsibility of the lessor.
- (v) The lessee is protected against the risk of obsolescence.
- (vi) The lessor has the option to recover the cost of the asset from another party on cancellation of the lease by leasing out the asset.

### Question 55

*Comment briefly on the social cost benefit analysis in relation to evaluation of an Industrial project.*

*(4 Marks)( May, 2008)*

### Answer

*Comments on Social Cost-Benefit Analysis of industrial projects:*

This refers to the moral responsibility of both PSU and private sector enterprises to undertake socially desirable projects – that is, the social contribution aspect needs to be kept in view.

Industrial capital investment projects are normally subjected to rigorous feasibility analysis and cost benefit study from the point of view of the investors. Such projects, especially large ones often have a ripple effect on other sections of society, local environment, use of scarce national resources etc. Conventional cost-benefit analysis ignores or does not take into account or ignores the societal effect of such projects. Social Cost Benefit (SCB) is recommended and resorted to in such cases to bring under the scanner the social costs and benefits.

SCB sometimes changes the very outlook of a project as it brings elements of study which are unconventional yet very very relevant. In a study of a famous transportation project in the UK from a normal commercial angle, the project was to run an annual deficit of more than 2 million pounds. The evaluation was adjusted for a realistic fare structure which the users placed on the services provided which changed the picture completely and the project got justified. Large public sector/service projects especially in under-developed countries which would get rejected on simple commercial considerations will find justification if the social costs and benefits are considered.

SCB is also important for private corporations who have a moral responsibility to undertake socially desirable projects, use scarce natural resources in the best interests of society, generate employment and revenues to the national exchequer.

Indicators of the social contribution include

- (a) Employment potential criterion;
- (b) Capital output ratio – that is the output per unit of capital;
- (c) Value added per unit of capital;
- (d) Foreign exchange benefit ratio.

## TYPES OF FINANCING

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### Question 1

*Discuss briefly the impact of taxation on Corporate Financing. (8 marks) (November, 1996)*

#### Answer

**Impact of Taxation on Corporate Financing:** Tax is levied on the profits of the company. Tax is also levied on the dividends distributed to shareholders. However, such dividends are exempt in their hands. Thus, the corporate entity suffers tax twice in a sense. This pushes the cost of equity capital. On the other hand interest paid on the debt capital is a deductible expenditure and hence company does not pay tax on interest on debt capital. This reduces the cost of debts. Debt is a less costly source of funds and if the finance manager prudently mixes debt and equity, the weighted average cost of capital will get greatly reduced.

Depreciation is not an outgo in cash but it is deductible in computing the income subject to tax. There will be saving in tax on depreciation and such savings could be profitably employed. Thus, both interest and depreciation provide tax shield and have a tendency to increase EPS. Further the unabsorbed depreciation can be carried forward indefinitely and this will be helpful for loss making concerns which start earning profits in future. The depreciation loss of one company can be carried forward for set off in another company's profits in the case of amalgamations in specified circumstances and such a provision will help growth of companies and rehabilitation of sick units. The finance manager of amalgamating company will bear this benefit for the tax shield it carries in planning the activities.

Thus, the impact of tax will be felt in cost of capital, earnings per share and the cash in flows which are relevant for capital budgeting and in planning the capital structure.

Tax considerations are important as they affect the liquidity of the concerns. They are relevant in deciding the leasing of the assets, transactions of sale and lease back, and also in floating joint venture in foreign countries where tax rates and concessions may be advantageous. Tax implications will be felt in choosing the size and nature of industry and in its location as the tax laws give fillip to small units producing certain products and incentives are given for backward areas. Tax considerations in these matters are relevant for purposes of preserving and protecting internal funds.

### Question 3

*"Promoters' contribution is one of the principal means of financing the project" – Discuss.*

*(10 marks) (May 1997)*

#### Answer

The promoter is required to provide funds irrespective of whether the project is an existing one or a new venture.

Promoters' contribution consists of:

- (a) Share capital to be subscribed by the promoters in the form of equity share capital and/or preference share capital.
- (b) Equity shares issued as rights shares to the existing shareholders.
- (c) Convertible debentures issued as "rights" to existing shareholders.
- (d) unsecured loans.
- (e) Seed capital assistance.
- (f) Venture capital.
- (g) Internal cash accruals.

In the case of projects established in joint or assisted sector, the contribution of state industrial investment corporation towards share capital is also considered as part of promoters' total contribution.

The Government of India has classified the locations for establishing industrial units into three categories – A, B and C such as:

|            |                                                                     |
|------------|---------------------------------------------------------------------|
| Category A | As no industrial district                                           |
| Category B | as districts where industrial activity has started                  |
| Category C | as districts where industrial activity has gained sufficient ground |

Generally promoters are expected to contribute about 22.5% of cost of the project in the case of listed and unlisted companies. However, the promoters' contribution can be reduced for projects located in the notified backward districts/areas i.e. category 'A' areas. Similarly, it is kept low for projects promoted by technocrat entrepreneurs. In case of projects set up by existing companies, the extent of promoters' contribution is determined keeping in view the nature and location of the project, background of the promoters and the existing cash accruals and as per SEBI's guidelines for disclosure and investor's protection. Promoters' contribution is also reduced below the normal requirements to encourage non-MRTP (Now Competition Act, 2002) companies to enter in the field of certain industries. At present the minimum requirement of promoters' contributions stipulated by All India Financial Institutions is as under:

| <i>Category of the project</i>                                                                                                                                                                                              | <i>Promoters' contribution as percentage of project cost</i> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|
| 1. Normal norms                                                                                                                                                                                                             | 22.5%                                                        |
| 2. Concessional norms                                                                                                                                                                                                       |                                                              |
| (i) New projects set up in notified backward districts (No Industry District) falling under Category 'A' backward areas.                                                                                                    | etc                                                          |
| (ii) New projects set up in notified backward districts falling under Category 'A' backward areas (No Industry Districts) provided the cost of the project is above Rs. 25 crores and its is set up by non- MRTP companies. | pr                                                           |
| (Now as per provisions Competition Act, 2002.) (iii)                                                                                                                                                                        | om                                                           |
| Projects set up in notified backward districts/areas falling under Category 'B'                                                                                                                                             | ote                                                          |
| (iv) Projects set up in notified backward districts/areas falling under Category 'C'                                                                                                                                        | rs                                                           |
| (v) Projects sponsored by technician entrepreneurs                                                                                                                                                                          | co                                                           |
| 17.5%                                                                                                                                                                                                                       | ntri                                                         |
|                                                                                                                                                                                                                             | but                                                          |
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Promoters' contribution indicates the extent of their involvement in a project in terms of their own financial stake. In case the promoters are unable to raise funds to meet the norms of financial institutions, they can avail the benefit of seed capital assistance under any of the schemes of RDC or IDBI or

RCTC etc. The investments made by recognized mutual funds are also considered as promoters' contribution provided the investment is covered by non- disposal undertaking or buy-back clause.

Among different means of finance such as capital incentives, deferred payment guarantees, lease finance/hire purchasing, term loans from financial institutions in the form of rupee loans and foreign currency loans

17.5%

12.5%

17.5%

20.0%

### Question 6

Write short notes on

(a) *Bridge Finance.*

(b) *Call and put option with reference to debentures.* (5 + 5 = 10 marks) (November, 1997)

### Answer

(a) **Bridge Finance:** Bridge finance refers, normally, to loans taken by a business, usually from commercial banks for a short period, pending disbursement of term loans by financial institutions, normally it takes time for the financial institution to finalise procedures of creation of security, tie-up participation with other institutions etc. even though a positive appraisal of the project has been made. However, once the loans are approved in principle, firms, in order not to lose further time in starting their projects arrange for bridge finance. Such temporary loan is normally repaid out of the proceeds of the principal term loans. It is secured by hypothecation of moveable assets, personal guarantees and demand promissory notes. Generally rate of interest on bridge finance is higher as compared with that on term loans.

(b) **Call and put option with reference to debentures:**

- (1) A debenture is an instrument for a fixed period of time mostly at fixed rate of interest.
- (2) Now a days the rate of interest varies significantly.
- (3) With inflow of enormous foreign funds this has assumed greater significance.
- (4) A call option gives a liberty to the issuer of the debenture to pay back the amount earlier to the redemption date at a pre-determined price (strike price) within the specified period. In case the option is not exercised the debenture continues.
- (5) On the other hand, a put option means, a right to investors to demand back the money earlier to the redemption date at a pre-determined price (strike price) within the specified period.
- (6) The debenture holder can get back the money and invest it elsewhere.
- (7) These kinds of options are necessary to make the instrument investor friendly and to ensure liquidity in debentures market.

### Question 17

Write short note on *Restrictive covenants placed by a lender on a borrower in cases of term lending for projects.* (5 marks) (November, 2001)

### Answer

**Restrictive covenants placed by a lender on a borrower in cases of term lending for projects:** For lending term loans for projects, in addition to asset security, a lender to protect itself placed a number of restrictive covenant on a borrower. The restrictive covenants may be categorised as follows:

- (i) *Asset-related covenants:* It requires the borrowing firm to maintain its minimum asset base. This may include to maintain minimum working capital position in terms of

minimum current ratio and not to sell fixed assets without the lender's approval.

- (ii) *Liability related covenants*: It restricted borrowing firm from incurring additional debt or repay existing loan. The borrowing firm may be required to reduce its debt-equity ratio by issuing additional equity and preference capital.
- (iii) *Cash-flow related covenants*: Lenders may restrain the borrowing firm cash outflow by restructuring cash dividends, capital expenditures, salaries and perks of managerial staff.
- (iv) *Control related covenants*: The lender may provide for appointment of suitable staff and the broad-base Board of Directors for managing the operation of borrowing firms.
- (v) *Convertibility*: Lenders may state the terms and conditions of conversion. For instance, FIs in India insist on the option of converting loans into equity.

### Question 31

*What is a re-financing? Briefly explain indicating at least two institutions which offer such re-financing. (4 Marks) (November, 2006)*

### Answer

#### RE-FINANCING

"Re-financing" is a process by which a large financial institution provides funds or reimburses funds to another institution to help development, relief or other similar cause identified as the purpose of the former. It can also, in another way, be described as a wholesale distribution of financial assistance to a retailing institution. Often, governmental support or subsidized funding is reached to the ultimate beneficiaries, through such channel.

NABARD is a governmental organization established with the primary objective of financing the farm sector; it is an arm through which government extends certain concessions/privileges to the farming community. NABARD does not deal with farmers directly but deals with many banks such as scheduled and nationalized banks providing re-financing for quite a few schemes intended for the benefit of the agricultural sector. This is one example.

SIDBI is another governmental organization whose objective is to assist the development of small industries. It is another institution which is engaged in refinancing activities; it funds a few schemes intended for SSIs through scheduled/nationalized banks.

## Introduction to Capital Markets in India

*Q. Explain the role of Merchant Bankers in Public issues.*

*(6 marks)(May 2003)*

### Answer

#### Role of Merchant Bankers in Public Issues:

In the present day capital market scenario the merchant banks play as an encouraging and supporting force to the entrepreneurs, corporate sectors and the investors. The recent modifications of the Indian capital market environment have emerged the various financial institutions as the major sources of finance for the organisations. Several new institutions have appeared in the financial spectrum and merchant bankers have joined to expand the range of financial services. Moreover, the activities of these Merchant Bankers have developed considerably both horizontally and vertically to cope with the changing environment so that these financial institutions can be constituted as a subsidiary of the parent body. Merchant Banks help in promoting and sustaining capital markets and money markets, and they provide a variety of financial services to the corporate sector.

Management of the public issues of shares, debentures or even an offer for sales, has been the traditional service rendered by merchant bankers. Some of the services under issue

management are:

- (i) Deciding on the size and timing of a public issue in the light of the market conditions.
- (ii) Preparing the base of successful issue marketing from the initial documentation to the preparation of the actual launch.
- (iii) Optimum underwriting support.
- (iv) Appointment of bankers and brokers as well as issue houses.
- (v) Professional liaison with share market functionaries like brokers, portfolio managers and financial press for pre-selling and media coverage.
- (vi) Preparation of draft prospectus and other documents.
- (vii) Wide coverage throughout the country for collection of applications.
- (viii) Preparation of advertising and promotional material.

The merchant bankers presence in all the major financial centres as well his long established relationships with the underwriter and broker fraternities, makes possible the high degree of synchronisation required to ensure the success of an issue.

### Question 2

*Write short note on Green shoe option.*

*(4 marks)(November, 2003)*

### Answer

**Green Shoe Option:** It is an option that allows the underwriting of an IPO to sell additional shares if the demand is high. It can be understood as an option that allows the underwriter for a new issue to buy and resell additional shares upto a certain pre-determined quantity.

Looking to the exceptional interest of investors in terms of over-subscription of the issue, certain provisions are made to issue additional shares or bonds to underwriters for distribution. The issuer authorises for additional shares or bonds. In common parlance, it is the retention of over-subscription to a certain extent. It is a special feature of euro-issues. In euro-issues the international practices are followed.

In the Indian context, green shoe option has a limited connotation. SEBI guidelines governing public issues contain appropriate provisions for accepting over-subscriptions, subject to a ceiling, say, 15 per cent of the offer made to public. In certain situations, the green-shoe option can even be more than 15 per cent.

### Examples:

- IDBI had come-up earlier with their Flexi bonds (Series 4 and 5). This is a debt-instrument. Each of the series was initially floated for Rs. 750 crores. SEBI had permitted IDBI to retain an excess of an equal amount of Rs. 750 crores.
- ICICI had launched their first tranche of safety bonds through unsecured redeemable debentures of Rs. 200 crores, with a green shoe option for an identical amount.

More recently, Infosys Technologies has exercised the green shoe option to purchase upto 7,82,000 additional ADSs representing 3,91,000 equity shares. This offer initially involved 5.22 million depository shares, representing 2.61 million domestic equity shares.

### Question 3

*Write a note about the functions of merchant bankers.*

*(6 Marks) (May, 2005)*

### Functions of Merchant Bankers:

The basic function of merchant banker or investment banker is marketing of corporate and other securities. In the process, he performs a number of services concerning various aspects

of marketing, viz., origination, underwriting, and distribution, of securities. During the regime of erstwhile Controller of Capital Issues in India, when new issues were priced at a significant discount to their market prices, the merchant banker's job was limited to ensuring press coverage and dispatching subscription forms to every corner of the country. Now, merchant bankers are designing innovative instruments and perform a number of other services both for the issuing companies as well as the investors. The activities or services performed by merchant bankers, in India, today include:

1. Project promotion services.
2. Project finance.
3. Management and marketing of new issues.
4. Underwriting of new issues.
5. Syndication of credit.
6. Leasing services.
7. Corporate advisory services.
8. Providing venture capital.
9. Operating mutual funds and off shore funds.
10. Investment management or portfolio management services.
11. Bought out deals.
12. Providing assistance for technical and financial collaborations and joint ventures.
13. Management of and dealing in commercial paper.
14. Investment services for non-resident Indians.

## INDIAN STOCK MARKET : AN OVERVIEW

### Question 1

*Write short note on Random Walk Theory.*

*(5 marks) (November, 1996)*

### Answer

**Random Walk Theory:** It is generally believed that stock market prices can never be predicted because they are not a result of any underlying factors but are mere statistical ups and downs. This hypothesis is known as Random Walk Hypothesis. According to this theory there is no relationship between present prices of shares and their future prices. It is argued that stock market prices are independent. M.G. Kendall found that changes in security prices behave nearly as if they are generated by a suitably designed roulette wheel for each outcome is statistically independent of past history. Successive peaks and troughs in prices are unconnected. In layman's language it may be said that prices on the stock exchange behave exactly the way a drunk would behave while going in a blind lane – up and down with an unsteady gait going in any direction he likes, bending backward and forward, going on sides now and then.

### Question 2

*Write short note on Advantages of a depository system.*

*(5 marks) (November, 2001)*

### Answer

**Advantages of a depository system:**

Notes Compiled by Ankur Mittal ( [ankurmittalx@gmail.com](mailto:ankurmittalx@gmail.com) )

The different stake-holders have advantages flowing out of the depository system. They are:-

- (I) For the capital market:
  - (i) It eliminates bad delivery;
  - (ii) It helps to eliminate voluminous paper work;
  - (iii) It helps in the quick settlement of dues and also reduces the settlement time;
  - (iv) It helps to eliminate the problems concerning odd lots;
  - (v) It facilitates stock-lending and thus deepens the market.
- (II) For the investor:
  - (i) It reduces the risks associated with the loss or theft of documents and securities and eliminates forgery;
  - (ii) It ensures liquidity by speedy settlement of transactions;
  - (iii) It makes investors free from the physical holding of shares;
  - (iv) It reduces transaction costs; and
  - (v) It assists investors in securing loans against the securities.
- (III) For the corporate sector or issuers of securities:
  - (i) It provides upto date information on shareholders' names and addresses;
  - (ii) It enhances the image of the company;
  - (iii) It reduces the costs of the secretarial department;
  - (iv) It increases the efficiency of registrars and transfer agents; and
  - (v) It provides better facilities of communication with members.

### Question 3

*Write short note on Asset Securitisation.*

*(4 marks) (May 2002)*

#### Answer

**Asset Securitisation:** Securitisation is a process of transformation of illiquid asset into security which may be traded later in the open market. It is the process of transformation of the assets of a lending institution into negotiable instruments. The term 'securitisation' refers to both switching away from bank intermediation to direct financing via capital market and/or money market, and the transformation of a previously illiquid asset like automobile loans, mortgage loans, trade receivables, etc. into marketable instruments.

This is a method of recycling of funds. It is beneficial to financial intermediaries, as it helps in enhancing lending funds. Future receivables, EMI and annuities are pooled together and transferred to an special purpose vehicle (SPV). These receivables of the future are shifted to mutual funds and bigger financial institutions. This process is similar to that of commercial banks seeking refinance with NABARD, IDBI, etc.

### Question 4

*Write a note on buy-back of shares by companies.*

*(10 marks)(May 2003)*

#### Answer

##### **Buyback of shares:**

Till 1998, buyback of equity shares was not permitted in India. But now they are permitted after suitably amending the Companies Act, 1956. However, the buyback of shares in India are permitted under certain guidelines issued by the Government as well as by the SEBI. Several companies have opted for such buyback including Reliance, Bajaj, Ashok Leyland etc.

to name a few. In India, the corporate sector generally chooses to buyback by the tender method or the open market purchase method. The company, under the tender method, offers to buyback shares at a specific price during a specified period which is usually one month. Under the open market purchase method, a company buys shares from the secondary market over a period of one year subject to a maximum price fixed by the management. Companies seem to now have a distinct preference for the open market purchase method as it gives them greater flexibility regarding time and price.

As impact of buyback, the P/E ratio may change as a consequence of buyback operation. The P/E ratio may rise if investors view buyback positively or it may fall if the investors regard buyback negatively.

**Rationale of buyback:** Range from various considerations. Some of them may be:

- (i) For efficient allocation of resources.
- (ii) For ensuring price stability in share prices.
- (iii) For taking tax advantages.
- (iv) For exercising control over the company.
- (v) For saving from hostile takeover.
- (vi) To provide capital appreciation to investors which may otherwise be not available.

This, however, has some disadvantages also like, manipulation of share prices by its promoters, speculation, collusive trading etc.

#### **Question 5**

*Write a short note on 'Book building'.*

*(5 marks) (May 2001), (1 mark) (November, 2002) and (4 marks) (November, 2003)*

#### **Answer**

**Book Building:** Book building is a technique used for marketing a public offer of equity shares of a company. It is a way of raising more funds from the market. After accepting the free pricing mechanism by the SEBI, the book building process has acquired too much significance and has opened a new lead in development of capital market.

A company can use the process of book building to fine tune its price of issue. When a company employs book building mechanism, it does not pre-determine the issue price (in case of equity shares) or interest rate (in case of debentures) and invite subscription to the issue. Instead it starts with an indicative price band (or interest band) which is determined through consultative process with its merchant banker and asks its merchant banker to invite bids from prospective investors at different prices (or different rates). Those who bid are required to pay the full amount. Based on the response received from investors the final price is selected. The merchant banker (called in this case Book Runner) has to manage the entire book building process. Investors who have bid a price equal to or more than the final price selected are given allotment at the final price selected. Those who have bid for a lower price will get their money refunded.

In India, there are two options for book building process. One, 25 per cent of the issue has to be sold at fixed price and 75 per cent is through book building. The other option is to split 25 per cent of offer to the public (small investors) into a fixed price portion of 10 per cent and a reservation in the book built portion amounting to 15 per cent of the issue size. The rest of the book-built portion is open to any investor.

The greatest advantage of the book building process is that this allows for price and demand

discovery. Secondly, the cost of issue is much less than the other traditional methods of raising capital. In book building, the demand for shares is known before the issue closes. In fact, if there is not much demand the issue may be deferred and can be rescheduled after having realised the temper of the market.

### Question 6

*Write short note on Stock Lending Scheme.*

*(6 marks)(May 2004)*

### Answer

**Stock Lending:** In 'stock lending', the legal title of a security is temporarily transferred from a lender to a borrower. The lender retains all the benefits of ownership, other than the voting rights. The borrower is entitled to utilize the securities as required but is liable to the lender for all benefits.

A securities lending programme is used by the lenders to maximize yields on their portfolio. Borrowers use the securities lending programme to avoid settlement failures.

Securities lending provide income opportunities for security-holders and creates liquidity to facilitate trading strategies for borrowers. It is particularly attractive for large institutional shareholders as it is an easy way of generating income to off set custody fees and requires little involvement of time. It facilitates timely settlement, increases the settlements, reduces market volatility and improves liquidity.

The borrower deposits collateral securities with the approved, intermediary. In case the borrower fails to return the securities, he will be declared a defaulter and the approved intermediary will liquidate the collateral deposited with it. In the event of default, the approved intermediary is liable for making good the loss caused to the lender. The borrower cannot discharge his liabilities of returning the equivalent securities through payment in cash or kind.

### Current Status in India:

National Securities Clearing Corporation Ltd. launched its stock lending operations (christened Automated Lending & Borrowing Mechanism – ALBM) on February 10, 1999. This was the beginning of the first real stock lending operation in the country. Stock Holding Corporation of India, Deutsche Bank and Reliance are the other three stock lending intermediaries registered with SEBI.

Under NSCCL system only dematerialized stocks are eligible. The NSCCL'S stock lending system is screen based, thus instantly opening up participation from across the country wherever there is an NSE trading terminal. The transactions are guaranteed by NSCCL and the participating members are the clearing members of NSCCL. The main features of NSCCL system are:

- (i) The session will be conducted every Wednesday on NSE screen where borrowers and lenders enter their requirements either as a purchase order indicating an intention to borrow or as sale, indicating intention to lend.
- (ii) Previous day's closing price of a security will be taken as the lending price of the security.
- (iii) The fee or interest that a lender gets will be market determined and will be the difference between the lending price and the price arrived at the ALBM session.
- (iv) Corresponding to a normal market segment, there will be an ALBM session.
- (v) Funds towards each borrowing will have to be paid in on the securities lending day.
- (vi) A participant will be required to pay-in-funds equal to the total value of the securities borrowed.

- (vii) The same amount of securities has to be returned at the end of the ALBM settlement on the day of the pay-out of the ALBM settlement.
- (viii) The previous day's closing price is called the lending price and the rate at which the lending takes place is called the lending fee. This lending fee alone is determined in the course of ALBM session.
- (ix) Fee adjustment shall be made for any lender not making full delivery of a security. The lender's account shall be debited for the quantity not delivered.
- (x) The borrower account shall be debited to the extent of the securities not lend on account of funds shortage.

#### **Question 7**

- (a) Briefly explain 'Buy Back of Securities' and give the management objectives of buying Back Securities.
- (b) Explain the term 'Insider Trading' and why Insider Trading is punishable.

(5 + 5 = 10 marks)(November, 2004)

#### **Answer**

##### **(a) Buy Back of securities:**

Companies are allowed to buy back equity shares or any other security specified by the Union Government. In India Companies are required to extinguish shares bought back within seven days. In USA Companies are allowed to hold bought back shares as treasury stock, which may be reissued. A company buying back shares makes an offer to purchase shares at a specified price. Shareholders accept the offer and surrender their shares.

The following are the management objectives of buying back securities:

- (i) To return excess cash to shareholders, in absence of appropriate investment opportunities.
- (ii) To give a signal to the market that shares are undervalued.
- (iii) To increase promoters holding, as a percentage of total outstanding shares, without additional investment. Thus, buy back is often used as a defence mechanism against potential takeover.
- (iv) To change the capital structure.

##### **(b) Insider Trading:**

Insider Trading is a buying or selling or dealing in securities of a listed company, by a director, member of management, an employee or any other person such as internal or statutory auditor, agent, advisor, analyst consultant etc. who have knowledge of material, 'inside' information not available to general public. The dealing in securities by an insider is illegal when it is predicated upon utilization of inside information to profit at the expense of other investors who do not have access to such investment information. The word insider has wide connotation. An outsider may be held to be an insider by virtue of his engaging himself in this practice on the strength of inside information.

Insider trading which is an unethical practice resorted by those in power in corporates has manifested not only in India but elsewhere in the world causing huge losses to common investors thus driving them away from capital market. Therefore, it is

punishable.

### Question 8

*Explain the term "Offer for Sale".*

*(4 marks (May, 2005))*

### Answer

Offer for sale is also known as bought out deal (BOD). It is a new method of offering equity shares, debentures etc., to the public. In this method, instead of dealing directly with the public, a company offers the shares/debentures through a sponsor. The sponsor may be a commercial bank, merchant banker, an institution or an individual. It is a type of wholesale of equities by a company. A company allots shares to a sponsor at an agreed price between the company and sponsor. The sponsor then passes the consideration money to the company and in turn gets the shares duly transferred to him. After a specified period as agreed between the company and sponsor, the shares are issued to the public by the sponsor with a premium. After the public offering, the sponsor gets the shares listed in one or more stock exchanges. The holding cost of such shares by the sponsor may be reimbursed by the company or the sponsor may get the profit by issue of shares to the public at premium.

Thus, it enables the company to raise the funds easily and immediately. As per SEBI guidelines, no listed company can go for BOD. A privately held company or an unlisted company can only go for BOD. A small or medium size company which needs money urgently chooses to BOD. It is a low cost method of raising funds. The cost of public issue is around 8% in India. But this method lacks transparency. There will be scope for misuse also. Besides this, it is expensive like the public issue method. One of the most serious short coming of this method is that the securities are sold to the investing public usually at a premium. The margin thus between the amount received by the company and the price paid by the public does not become additional funds of the company, but it is pocketed by the issuing houses or the existing shareholders.

### Question 9

*Write short notes on the following:*

1. *Debt Securitisation.*
2. *Stock Lending Scheme – its meaning, advantages and risk involved.*

### Answer

#### **(1) Debt Securitisation:**

Debt securitisation is a method of recycling of funds. It is especially beneficial to financial intermediaries to support the lending volumes. Assets generating steady cash flows are packaged together and against this assets pool market securities can be issued. The process can be classified in the following three functions.

1. *The origination function:* A borrower seeks a loan from finance company, bank or housing company. On the basis of credit worthiness repayment schedule is structured over the life of the loan.
2. *The pooling function:* Similar loans or receivables are clubbed together to create an underlying pool of assets. This pool is transferred in favour of a SPV (Special Purpose Vehicle), which acts as a trustee for the investor. Once, the assets are transferred they are held in the organizers portfolios.
3. *The securitisation function:* It is the SPV's job to structure and issue the securities on the basis of asset pool. The securities carry coupon and an expected maturity, which can be asset based or mortgage based. These are generally sold to investors through merchant bankers. The investors interested in this type of

securities are generally institutional investors like mutual fund, insurance companies etc. The originator usually keeps the spread.

Generally, the process of securitisation is without recourse i.e. the investor bears the credit risk of default and the issuer is under an obligation to pay to investors only if the cash flows are received by issuer from the collateral.

**(2) Stock Lending Scheme:**

Stock lending means transfer of security. The legal title is temporarily transferred from a lender to a borrower. The lender retains all the benefits of ownership, except voting power/rights. The borrower is entitled to utilize the securities as required but is liable to the lender for all benefits such as dividends, rights etc. The basic purpose of stock borrower is to cover the short sales i.e. selling the shares without possessing them. SEBI has introduced scheme for securities lending and borrowing in 1997.

**Advantages:**

- (1) Lenders to get return (as lending charges) from it, instead of keeping it idle.
- (2) Borrower uses it to avoid settlement failure and loss due to auction.
- (3) From the view-point of market this facilitates timely settlement, increase in settlement, reduce market volatility and improves liquidity.
- (4) This prohibits fictitious bull run.

**Question 11**

*Explain the terms ESOS and ESPS with reference to the SEBI guidelines for The Employees Stock Option Plans (ESOPs). (4 Marks) (November, 2005)*

Q . Distinguish between:

- (i) Forward and Futures contracts.
- (ii) Intrinsic value and Time value of an option.

(8 Marks) (May, 2006)

**Answer**

**(i) Forward and Future Contracts:**

Forward contracts are private bilateral contracts which have well established commercial usage. On the other hand future contracts are standardized tradeable contract fixed in terms of size, contract and other features and traded on an exchange.

In forward contracts, price is not publicly disclosed, whereas in future contracts, price is transparent.

Forward contract is exposed to the problem of liquidity whereas to futures there is no liquidity problem.

Forward contracts are usually settled on one specified delivery date. In the case of futures, there is a range of delivery dates.

Forward contracts are settled at the end of contract, but futures are settled daily.

In forwards, delivery or final cash settlement usually takes place whereas in futures, contract is closed out prior to maturity.

**(ii) Intrinsic value and the time value of An Option:** Intrinsic value of an option and the time value of an option are primary determinants of an option's price. By being familiar with these terms and knowing how to use them, one will find himself in a much better position to choose the option contract that best suits the particular investment requirements.

Intrinsic value is the value that any given option would have if it were exercised today. This is defined as the difference between the option's strike price (x) and the stock actual current price (c.p). In the case of a call option, one can calculate the intrinsic value by taking  $CP - X$ . If the result is greater than Zero (In other words, if the stock's current price is greater than the option's strike price), then the amount left over after subtracting  $CP - X$  is the option's intrinsic value. If the strike price is greater than the current stock price. Then the intrinsic value of the option is zero – it would not be worth anything if it were to be exercised today. An option's intrinsic value can never be below zero. To determine the intrinsic value of a put option, simply reverse the calculation to  $X - CP$

**Example:** Let us assume Wipro Stock is priced at Rs.105/-. In this case, a Wipro 100 call option would have an intrinsic value of  $(Rs.105 - Rs.100 = Rs.5)$ . However, a Wipro 100 put option would have an intrinsic value of zero  $(Rs.100 - Rs.105 = -Rs.5)$ . Since this figure is less than zero, the intrinsic value is zero. Also, intrinsic value can never be negative. On the other hand, if we are to look at a Wipro put option with a strike price of Rs.120. Then this particular option would have an intrinsic value of Rs.15  $(Rs.120 - Rs.105 = Rs.15)$ .

**Time Value:** This is the second component of an option's price. It is defined as any value of an option other than the intrinsic value. From the above example, if Wipro is trading at Rs.105 and the Wipro 100 call option is trading at Rs.7, then we would conclude that this option has Rs.2 of time value  $(Rs.7 \text{ option price} - Rs.5 \text{ intrinsic value} = Rs.2 \text{ time value})$ . Options that have zero intrinsic value are comprised entirely of time value.

Time value is basically the risk premium that the seller requires to provide the option buyer with the right to buy/sell the stock upto the expiration date. This component may be regarded as the Insurance premium of the option. This is also known as "Extrinsic value." Time value

decays over time. In other words, the time value of an option is directly related to how much

time an option has until expiration. The more time an option has until expiration. The greater the chances of option ending up in the money.

### Question 13

*What is the procedure for the book building process? Explain the recent changes made in the allotment process.*  
(6 Marks) (May, 2006)

### Answer

The modern and more popular method of share pricing these days is the **BOOK BUILDING** route. After appointing a merchant banker as a book runner, the company planning the IPO, specifies the number of shares it wishes to sell and also mentions a price band. Investors place their orders in Book Building process that is similar to bidding at an auction. The willing investors submit their bids above the floor price indicated by the company in the price band to the book runner. Once the book building period ends, the book runner evaluates the bids on the basis of the prices received, investor quality and timing of bids. Then the book runner and the company conclude the final price at which the issuing company is willing to issue the stock and allocate securities. Traditionally, the number of shares are fixed and the issue size gets determined on the basis of price per share discovered through the book building process.

Public issues these days are targeted at various segments of the investing fraternity. Companies now allot certain portions of the offering to different segments so that everyone gets a chance to participate. The segments are traditionally three -qualified institutional bidders (QIBs), high net worth individuals (HNIs) and retail investors (general public). Indian companies now have to offer about 50% of the offer to QIBs, about 15% to high net worth individuals and the remaining 35% to retail investors. Earlier retail and high net worth individuals had 25% each. Also the QIBs are allotted shares on a pro-rata basis as compared to the earlier norm when it was at the discretion of the company management and the investment bankers. These investors (QIB) also have to pay 10% margin on application. This is also a new requirement. Once the offer is completed, the company gets listed and investors and shareholders can trade the shares of the company in the stock exchange.

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10% margin on application. This is also a new requirement. Once the offer is completed, the company gets listed and investors and shareholders can trade the shares of the company in the stock exchange.

### Question 16

*Explain briefly the advantages of holding securities in 'demat' form rather than in physical form.*

*(4 Marks) (November, 2006)*

### Answer

#### ADVANTAGES OF HOLDING SECURITIES IN 'DEMAT' FORM

The Depositories Act, 1996 provides the framework for the establishment and working of depositories enabling transactions in securities in scripless (or demat) form. With the arrival of depositories on the scene, many of the problems previously encountered in the market due to physical handling of securities have been to a great extent minimized. In a broad sense, therefore, it can be said that 'dematting' has helped to broaden the market and make it smoother and more efficient.

From an individual investor point of view, the following are important advantages of holding securities in demat form:

- It is speedier and avoids delay in transfers.
- It avoids lot of paper work.
- It saves on stamp duty.

From the issuer-company point of view also, there are significant advantages due to dematting, some of which are:

- Savings in printing certificates, postage expenses.
- Stamp duty waiver.
- Easy monitoring of buying/selling patterns in securities, increasing ability to spot takeover attempts and attempts at price rigging.

### Question 20

*(i) What are Stock futures?*

*(ii) What are the opportunities offered by Stock futures?*

*(iii) How are Stock futures settled?*

*(4 marks)(May, 2007)*

### Answer

- Stock future is a financial derivative product where the underlying asset is an individual stock. It is also called equity future. This derivative product enables one to buy or sell the underlying Stock on a future date at a price decided by the market forces today.
- Stock futures offer a variety of usage to the investors. Some of the key usages are mentioned below:

Investors can take long-term view on the underlying stock using stock futures.

- Stock futures offer high leverage. This means that one can take large position with less capital. For example, paying 20% initial margin one can take position for 100%, i.e., 5 times the cash outflow.
- Futures may look over-priced or under-priced compared to the spot price and can

offer opportunities to arbitrage and earn riskless profit.

- (c) When used efficiently, single-stock futures can be effective risk management tool. For instance, an investor with position in cash segment can minimize either market risk or price risk of the underlying stock by taking reverse position in an appropriate futures contract.
- (iii) Up to March 31, 2002, stock futures were settled in cash. The final settlement price is the closing price of the underlying stock. From April 2002, stock futures are settled by delivery, i.e., by merging derivatives position into cash segment.

### Question 23

- (i) *What are derivatives?*
- (ii) *Who are the users and what are the purposes of use?*
- (iii) *Enumerate the basic differences between cash and derivatives market.*

### Answer

- (i) Derivative is a product whose value is to be derived from the value of one or more basic variables called bases (underlying assets, index or reference rate). The underlying assets can be Equity, Forex, Commodity.

|       | Users                  | Purpose                                                                               |
|-------|------------------------|---------------------------------------------------------------------------------------|
| (i)   | Corporation            | To hedge currency risk and inventory risk                                             |
| (ii)  | Individual Investors   | For speculation, hedging and yield enhancement.                                       |
| (iii) | Institutional Investor | For hedging asset allocation, yield enhancement and to avail arbitrage opportunities. |
| (iv)  | Dealers                | For hedging position taking, exploiting inefficiencies and earning dealer spreads.    |

The basic differences between Cash and the Derivative market are enumerated below:-

In cash market tangible assets are traded whereas in derivate markets contracts based on tangible or intangibles assets likes index or rates are traded.

- (a) In cash market tangible assets are traded whereas in derivative market contracts based on tangible or intangibles assets like index or rates are traded.
- (b) In cash market, we can purchase even one share whereas in Futures and Options minimum lots are fixed.
- (c) Cash market is more risky than Futures and Options segment because in "Futures and Options" risk is limited upto 20%.
- (d) Cash assets may be meant for consumption or investment. Derivate contracts are for hedging, arbitrage or speculation.
- (e) The value of derivative contract is always based on and linked to the underlying security. Though this linkage may not be on point-to-point basis.
- (f) In the cash market, a customer must open securities trading account with a securities depository whereas to trade futures a customer must open a future trading account with a derivative broker.
- (g) Buying securities in cash market involves putting up all the money upfront whereas buying futures simply involves putting up the margin money.
- (h) With the purchase of shares of the company in cash market, the holder becomes part owner of the company. While in future it does not happen.

**Question 25***Distinguish between Forward and Futures contract.**( 5 marks) ( Nov 2008)***Answer****FORWARD AND FUTURE CONTRACTS:**

| S.No. | Features            | Forward                                                                                                                    | Futures                                                                                                                                                            |
|-------|---------------------|----------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.    | Trading             | Forward contracts are traded on personal basis or on telephone or otherwise.                                               | Futures Contracts are traded in a competitive arena.                                                                                                               |
| 2.    | Size of Contract    | Forward contracts are individually tailored and have no standardized size                                                  | Futures contracts are standardized in terms of quantity or amount as the case may be                                                                               |
| 3.    | Organized exchanges | Forward contracts are traded in an over the counter market.                                                                | Futures contracts are traded on organized exchanges with a designated physical location.                                                                           |
| 4.    | Settlement          | Forward contracts settlement takes place on the date agreed upon between the parties.                                      | Futures contracts settlements are made daily via. Exchange's clearing house.                                                                                       |
| 5.    | Delivery date       | Forward contracts may be delivered on the dates agreed upon and in terms of actual delivery.                               | Futures contracts delivery dates are fixed on cyclical basis and hardly takes place. However, it does not mean that there is no actual delivery.                   |
| 6.    | Transaction costs   | Cost of forward contracts is based on bid – ask spread.                                                                    | Futures contracts entail brokerage fees for buy and sell orders.                                                                                                   |
| 7.    | Marking to market   | Forward contracts are not subject to marking to market                                                                     | Futures contracts are subject to marking to market in which the loss on profit is debited or credited in the margin account on daily basis due to change in price. |
| 8.    | Margins             | Margins are not required in forward contract.                                                                              | In futures contracts every participants is subject to maintain margin as decided by the exchange authorities                                                       |
| 9.    | Credit risk         | In forward contract, credit risk is born by each party and, therefore, every party has to bother for the creditworthiness. | In futures contracts the transaction is a two way transaction, hence the parties need not to bother for the risk.                                                  |

*Write a brief note about regulation of NBFCs in India.**(8 Marks) (May, 2005)***Answer**

- (a) (i) **Meaning of NBFC's:** An NBFC is a company or an institution basically engaged in acceptance of deposits under different schemes and to invest these monies in any manner. NBFC may be registered as a Company under Companies Act, 1956, or may be other form of organization. The Reserve Bank of India Act defines an NBFC as (1) a financial institution which is a company. (ii) a non-banking institution which is a company having its principal business the receiving of deposits under any scheme or lending in any manner (iii) such other non-banking institution as the RBI may specify with the approval of Central Government. Non-banking financial companies, normally, provides supplementary finance to the corporate sector. For the purpose of growing economy the role of NBFC's is important. The finance and

related services is the major activity of NBFC's.

(ii) By implication any non-banking financial institution engaged in deposits and lending activities is called NBFC. On the basis of types of activities, NBFCs may be consisting of

- (i) Loan Companies
- (ii) Investment companies.
- (iii) Hire purchase finance companies.
- (iv) Equipment leasing companies.
- (v) Mutual benefit finance companies.
- (vi) Housing finance companies.
- (vii) Miscellaneous finance companies.
- (viii) Other and residuary finance companies
- (ix) Chit fund companies

The RBI regulates the activities of NBFCs through the following sets of directions:

- (i) NBFC acceptance of public deposits (Reserve Bank of India) directions, 1998.
- (ii) NBFC prudential norms (Reserve Bank of India) directions, 1998.
- (iii) NBFC Auditors Report (Reserve Bank of India) directions, 1998.
- (iv) NBFC (Reserve Bank of India) directions, 1987.
- (v) Miscellaneous Non-Banking Companies (Reserve Bank of India) directions, 1977.

The RBI has amended the NBFCs' regulations from time to time so that NBFCs grow on sound and healthy lines and to protect the interest of NBFC depositors.  
Procedure for obtaining registration.

Application must be in the form prescribed by RBI and should be submitted to the Regional Office of the RBI.

Processing of application by RBI.

RBI ensures capacity of the NBFC to meet the creditors claim in full, general character of the management and the capital structure. The activity of NBFC shall not be prejudicial to the operation and consolidation of the financial sector and also shall not be prejudicial to the public interest.

Cancellation of registration.

Registration can be cancelled under section 44IA (6) wherein certain conditions are prescribed under the section such as

- Non-compliance of directions issued by the RBI.
- Fails to maintain accounts in accordance with any law or order issued by RBI.
- Failed to submit or offer for inspection its books of accounts or other relevant documents when demanded by RBI.
- Failed to comply with any conditions specified by RBI while granting certificate of registration.

Procedure for cancellation of registration

NBFC should be given a reasonable opportunity of being heard. NBFC must

generally be given an opportunity by RBI for taking necessary steps to comply with the conditions, except in cases where RBI is of the opinion that the delay in canceling the certificate of registration shall be prejudicial to public interest or to the interest of the depositors of the NBFC.

#### Appellate Remedy

The NBFC can prefer and appeal to Central Government within 30 days from the date on which the cancellation order was communicated to it. If no appeal has been prescribed then the decision of RBI shall be final.

### Question 5

*What is Credit rating?*

*(4 Marks) (May, 2006)*

#### Answer

**Credit rating:** Credit rating is a symbolic indication of the current opinion regarding the relative capability of a corporate entity to service its debt obligations in time with reference to the instrument being rated. It enables the investor to differentiate between instruments on the basis of their underlying credit quality. To facilitate simple and easy understanding, credit rating is expressed in alphabetical or alphanumerical symbols.

Credit rating aims to (i) provide superior information to the investors at a low cost; (ii) provide a sound basis for proper risk-return structure; (iii) subject borrowers to a healthy discipline and (iv) assist in the framing of public policy guidelines on institutional investment. Thus, credit rating financial services represent an exercise in faith building for the development of a healthy financial system. In India the rating coverage is of fairly recent origin, beginning 1988 when the first rating agency CRISIL was established. At present there are few other rating agencies like .

- (i) Credit Rating Information Services of India Ltd. (CRISIL).
- (ii) Investment Information and Credit Rating Agency of India (ICRA).
- (iii) Credit Analysis and Research Limited (CARE).
- (iv) Duff & Phelps Credit Rating India Pvt. Ltd. (DCR I)
- (v) ONICRA Credit Rating Agency of India Ltd.

## PORTFOLIO MANAGEMENT

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*(a) Explain briefly the two basic principles of effective portfolio management.*

**(a)** Portfolio management refers to the selection of securities and their continuous shifting in the portfolio to optimize returns to suit the objectives of the investor.

#### **Two Basic Principles of Portfolio management:**

The two basic principles for effective portfolio management are:

- (i) Effective investment planning for the investment in securities by considering the following factors:

- (a) Fiscal, financial and monetary policies of the Government of India and the \*Reserve Bank of India.
- (b) Industrial and economic environment and its impact on industry prospects in terms of prospective technological changes, competition in the market, capacity utilisation with industry and demand prospects etc.
- (ii) Constant review of investment: Portfolio managers are required to review their investment in securities on a continuous basis to identify more profitable avenues for selling and purchasing their investment. For this purpose they will have to carry the following analysis:
  - (a) Assessment of quality of management of the companies in which investment has already been made or is proposed to be made.
  - (b) Financial and trend analysis of companies' balance sheets/ profits and loss accounts to identify sound companies with optimum capital structure and better performance and to disinvest the holding of those companies whose performance is found to be slackening.
  - (c) The analysis of securities market and its trend is to be done on a continuous basis.

The above analysis will help the portfolio manager to arrive at a conclusion as to whether the securities already in possession should be disinvested and new securities be purchased. This analysis will also reveal the timing for investment or disinvestment.

- (a) *"Higher the return, higher will be the risk". In this context discuss the various risks associated with portfolio planning.*
- (a) There are four different types of risks in portfolio planning.
  1. *Interest rate risk:* It is due to changes in interest rates from time to time. Price of the securities move inversely with change in the rate of interest.
  2. *Purchasing power risk:* As inflation affects purchasing power adversely. Inflation rates vary over time and the investors are caught unaware when the rate of inflation changes abruptly.
  3. *Business risk:* It arises from sale and purchase of securities affected by business cycles and technological changes.
  4. *Financial risk:* This arises due to changes in the capital structure of the company. It is expressed in terms of debt-equity ratio. Although a leveraged company's earnings are more, too much dependence on debt financing may endanger solvency and to some extent the liquidity.

#### Question 4

Write short note on objectives of portfolio management.

(5 marks) (November, 1998)

#### Answer

**Objectives of portfolio management:** Portfolio management refers to the selection of securities and their continuous shifting in the portfolio for optimizing the return for investor. The following are the objectives of portfolio management:

- (i) *Security/safety of principal:* Security not only involves keeping the principal sum intact

but also keeping intact its purchasing power.

- (ii) *Stability of income*: So as to facilitate planning more accurately and systematically the reinvestment or consumption of income.
- (iii) *Capital growth*: Which can be attained by reinvesting in growth securities or through purchase of growth securities.
- (iv) *Marketability*: The ease with which security can be bought or sold. This is essential to provide flexibility to investment portfolio.
- (v) *Liquidity*: It is desirable for an investor to take advantage of attractive opportunities in the market.
- (vi) *Diversification*: The basic objective of building a portfolio is to reduce the risk of loss of capital/income by investing in various types of securities and over a wide range of industries.
- (vii) *Favourable tax status*: The effective yield an investor gets from his investment depends on tax to which it is subjected. By minimizing tax burden, yield can be improved effectively.

### Question 5

*Write short note on Systematic and Unsystematic Risk in connection with Portfolio Investment.*

*(5 marks) (May 1999)*

### Answer

#### **Systematic and Unsystematic Risk in connection with Portfolio Investment:**

**Systematic Risk:** It is the risk which cannot be eliminated by diversification. This part of risk arises because every security has a built in tendency to move in with the fluctuations in the market. The investors are exposed to market risk even when they hold well diversified portfolio of securities. It is because all individual securities move together in the same manner and therefore no investors can avoid or eliminate this risk, whatsoever precautions or diversification may be resorted to.

The examples of systematic risk are:

The government changes the interest rate policy; the corporate tax rate is increased; the government resort to massive deficit financing; the inflation rate increases etc.

**Unsystematic Risk:** It is the risk which can be eliminated by diversification. This risk represents the fluctuations in return of a security due to factors specific to particular firm only and not to the market as a whole. The investors can totally reduce this risk through diversification. It is because when a large number of securities enter a portfolio, many random fluctuations in returns from these securities will automatically set off each other.

The examples of unsystematic risks are:

Workers declared strike in a company; the Research and Development expert of the company leaves; a formidable competitor enters the market; the company loses a big contract in a bid etc.

### Question 7

*Write short note on Factors affecting investment decisions in portfolio management.*

*(5 marks) (May 2000)*

### Answer

Notes Compiled by Ankur Mittal ( [ankurmittalx@gmail.com](mailto:ankurmittalx@gmail.com) )

**Factors affecting investment decisions in portfolio management:**

- (i) **Objectives of investment portfolio:** There can be many objectives of making an investment. The manager of a provident fund portfolio has to look for security (low risk) and may be satisfied with none too higher return. An aggressive investment company may, however, be willing to take a high risk in order to have high capital appreciation.
- (ii) **Selection of investment:**
  - (a) What types of securities to buy or invest in? There is a wide variety of investments opportunities available i.e. debentures, convertible bonds, preference shares, equity shares, government securities and bonds, income units, capital units etc.
  - (b) What should be the proportion of investment in fixed interest/dividend securities and variable interest/dividend bearing securities?
  - (c) In case investments are to be made in the shares or debentures of companies, which particular industries shows potential of growth?
  - (d) Once industries with high growth potential have been identified, the next step is to select the particular companies, in whose shares or securities investments are to be made.
- (iii) **Timing of purchase:** At what price the share is acquired for the portfolio depends entirely on the timing decision. It is obvious if a person wishes to make any gains, he should “buy cheap and sell dear” i.e. buy when the shares are selling at a low price and sell when they are at a high price.

*Briefly explain Capital Asset Pricing Model (CAPM).*

*(5 marks) (November, 1997) & (6 marks) (May 2003)*

## Answer

### Capital Asset Pricing Model:

The mechanical complexity of the Markowitz's portfolio model kept both practitioners and academics away from adopting the concept for practical use. Its intuitive logic, however, spurred the creativity of a number of researchers who began examining the stock market implications that would arise if all investors used this model. As a result what is referred to as the Capital Asset Pricing Model (CAPM), was developed.

The Capital Asset Pricing Model was developed by Sharpe, Mossin and Lintner in 1960. The model explains the relationship between the expected return, non-diversifiable risk and the valuation of securities. It considers the required rate of return of a security on the basis of its contribution to the total risk. It is based on the premise that the diversifiable risk of a security is eliminated when more and more securities are added to the portfolio. However, the systematic risk cannot be diversified and is correlated with that of the market portfolio. All securities do not have same level of systematic risk. Therefore, the required rate of return goes with the level of systematic risk. The systematic risk can be measured by beta,  $\beta$ . Under CAPM, the expected return from a security can be expressed as:

Expected return on security =  $R_f + \text{Beta} (R_m - R_f)$

The model shows that the expected return of a security consists of the risk-free rate of interest and the risk premium. The CAPM, when plotted on a graph paper is known as the Security Market Line (SML). A major implication of CAPM is that not only every security but all portfolios too must plot on SML. This implies that in an efficient market, all securities are expected to yield returns commensurate with their riskiness, measured by  $\beta$ .

The CAPM is based on following eight assumptions:

- (i) The Investor's objective is to maximise the utility of terminal wealth;
- (ii) Investors make choices on the basis of risk and return;
- (iii) Investors have homogenous expectations of risk and return;
- (iv) Investors have identical time horizon;
- (v) Information is freely and simultaneously available to investors;
- (vi) There is a risk-free asset, and investors can borrow and lend unlimited amounts at the risk-free rate;
- (vii) There are no taxes, transaction costs, restrictions on short rates, or other market imperfections;
- (viii) Total asset quantity is fixed, and all assets are marketable and divisible.

CAPM can be used to estimate the expected return of any portfolio with the following formula.

$$E(R_p) = R_f + \beta_p [E(R_m) - R_f]$$

$E(R_p)$  = Expected return of the portfolio

$R_f$  = Risk free rate of return

$\beta_p$  = Portfolio beta i.e. market sensitivity index

$E(R_m)$  = Expected return on market portfolio.

$E(R_m) - R_f$  = Market risk premium.

CAPM provides a conceptual framework for evaluating any investment decision where capital is

committed with a goal of producing future returns.

#### Question 14

- (a) *What sort of investor normally views the variance (or Standard Deviation) of an individual security's return as the security's proper measure of risk?*
- (b) *What sort of investor rationally views the beta of a security as the security's proper measure of risk? In answering the question, explain the concept of beta.*

(3 + 7=10 marks)(May 2004)

#### Answer

- (a) A rational risk-averse investor views the variance (or standard deviation) of her portfolio's return as the proper risk of her portfolio. If for some reason or another the investor can hold only one security, the variance of that security's return becomes the variance of the portfolio's return. Hence, the variance of the security's return is the security's proper measure of risk.

While risk is broken into diversifiable and non-diversifiable segments, the market generally does not reward for diversifiable risk since the investor himself is expected to diversify the risk himself. However, if the investor does not diversify he cannot be considered to be an efficient investor. The market, therefore, rewards an investor only for the non-diversifiable risk. Hence, the investor needs to know how much non-diversifiable risk he is taking. This is measured in terms of beta.

An investor therefore, views the beta of a security as a proper measure of risk, in evaluating how much the market reward him for the non-diversifiable risk that he is assuming in relation to a security. An investor who is evaluating the non-diversifiable element of risk, that is, extent of deviation of returns viz-a-viz the market therefore consider beta as a proper measure of risk.

- (b) If an individual holds a diversified portfolio, she still views the variance (or standard deviation) of her portfolios return as the proper measure of the risk of her portfolio. However, she is no longer interested in the variance of each individual security's return. Rather she is interested in the contribution of each individual security to the variance of the portfolio.

Under the assumption of homogeneous expectations, all individuals hold the market portfolio. Thus, we measure risk as the contribution of an individual security to the variance of the market portfolio. The contribution when standardized properly is the beta of the security. While a very few investors hold the market portfolio exactly, many hold reasonably diversified portfolio. These portfolios are close enough to the market portfolio so that the beta of a security is likely to be a reasonable measure of its risk.

In other words, beta of a stock measures the sensitivity of the stock with reference to a broad based market index like BSE sensdex. For example, a beta of 1.3 for a stock would indicate that this stock is 30 per cent riskier than the sensdex. Similarly, a beta of a 0.8 would indicate that the stock is 20 per cent (100 – 80) less risky than the sensdex. However, a beta of one would indicate that the stock is as risky as the stock market index.

#### Question 17

- (i) *Who can be appointed as Asset Management Company (AMC)?*

(ii) Write the conditions to be fulfilled by an AMC.

(iii) What are the obligations of AMC?

(4 Marks) (May, 2005)

**Answer**

(i) **Asset Management Company (AMC):** A company formed and registered under Companies Act 1956 and which has obtained the approval of SEBI to function as an asset management company may be appointed by the sponsor of the mutual fund as AMC.

(ii) The following conditions should be fulfilled by an AMC

(1) Any director of the asset management company shall not hold the place of a director in another asset management company unless such person is independent director referred to in clause (d) of sub-regulation (1) of regulation 21 of the Regulations and the approval of the Board of asset management company of which such person is a director, has been obtained.

(2) The asset management company shall forthwith inform SEBI of any material change in the information or particulars previously furnished which have a bearing on the approval granted by SEBI.

(a) No appointment of a director of an asset management company shall be made without the prior approval of the trustees.

(b) The asset management company undertakes to comply with SEBI (Mutual Funds) Regulations, 1996.

(c) No change in controlling interest of the asset management company shall be made unless prior approval of the trustees and SEBI is obtained.

(i) a written communication about the proposed change is sent to each unit holder and an advertisement is given in one English Daily newspaper having nation wide circulation and in a newspaper published in the language of the region where the head office of the mutual fund is situated.

(ii) The unit holders are given an option to exit at the prevailing Net Asset Value without any exit load.

(iii) The asset management company shall furnish such information and documents to the trustees as and when required by the trustees.

(iii) Obligations of the AMC:

(1) The AMC shall manage the affairs of the mutual funds and operate the schemes of such fund.

(2) The AMC shall take all reasonable steps and exercise due diligence to ensure that the investment of the mutual funds pertaining to any scheme is not contrary to the provisions of SEBI Regulations and the trust deed of the mutual fund.

*Write short notes on:*

*Assumptions of CAPM.*

(6 Marks) (May, 2006)

**Answer**

**Assumptions of Capital Assets Pricing Model (CAPM)**

The Capital Assets Pricing Model is based on the following eight assumptions.

- (a) The Investor's objective is to maximize the utility of terminal wealth.
- (b) Investor's make choices on the basis of risk and return.
- (c) Investors have homogenous expectations of Risk and Return.
- (d) Investors have identical time horizon.
- (e) Information is freely and simultaneously available to investors.
- (f) There is a risk-free asset and investors can borrow and lend unlimited amount at the risk-free rate.
- (g) There are no taxes, transaction costs, restrictions on short term rates or other market imperfections.
- (h) Total asset quantity is fixed and all assets are marketable and divisible.

## CREDIT RATING

### Question 1

*Briefly explain the meaning and importance of 'Credit-rating'.*

*(4 marks) (May 2002)*

#### Answer

Credit rating essentially reflects the probability of timely repayment of principal and interest by a borrower company. It indicates the risk involved in a debt instrument as well its qualities. Higher the credit rating, greater is the probability that the borrower will make timely payment of principal and interest and vice-versa.

It has assumed an important place in the modern and developed financial markets. It is a boon to the companies as well as investors. It facilitates the company in raising funds in the capital market and helps the investor to select their risk-return trade-off. By indicating credit-worthiness of a borrower, it helps the investor in arriving at a correct and rational decision about making investments.

Credit rating system plays a vital role in investor protection. Fair and good credit ratings motivate the public to invest their savings.

As a fee-based financial advisory service, credit rating is obviously extremely useful to the investors, the corporates (borrowers) and banks and financial institutions. To the investors, it is an indicator expressing the underlying credit quality of a (debt) issue programme. The investor is fully informed about the company as any effect of changes in business/economic conditions on the company is evaluated and published regularly by the rating agencies. The Corporate borrowers can raise funds at a cheaper rate with good rating. It minimizes the role of the 'name recognition' and less known companies can also approach the market on the basis of their rating. The fund ratings are useful to the banks and other financial institutions while deciding lending and investment strategies.

### Question 2

*Write short note on Credit rating in India.*

*(4 marks)(November, 2003)*

#### Answer

**Credit Rating in India:** It is a fee-based financial advisory service provided by accredited credit rating agencies to lend a reasonable reliability to the financial position of prospective

corporate bodies intending to raise debt funds from public. Though not a final guarantee for a debt programme but it only serves as an indicator to the investors for deciding upon the choice of subscription. Presently some of the credit rating agencies working in India are namely CRISIL, CARE, ICRA, DCR and ONICRA. All credit rating agencies have their own methodology of rating the instruments in the market but they all, however, confine on basic criteria like business risk, financial risk and some business specific risk related to that project. On the basis of their rating they provide different grades but these gradings should not be treated as perfect substitute of investors' own assessments. In our country the capital market regulator, SEBI, has provided different guidelines for these credit rating agencies. Most of the debt instruments are mandatorily to be rated by the credit rating agencies. Some of the instruments rated by these agencies are commercial papers, debentures, public deposits, bonds etc. Different symbols are used for short-term and long-term instruments. In fact, the credit rating is not the assessment of credit worthiness of individuals but of the risk associated with entering into a transaction with an individual/corporate entity at a point of time.

## MUTUAL FUNDS : OPERATIONS AND REGULATIONS

### Question 1

*Write short note on methods of Venture Capital Financing.*

*(5 marks) (May 1999)*

### Answer

**Methods of Venture Capital Financing:** The venture capital financing refers to financing and funding of the small scale enterprises, high technology and risky ventures. Some common methods of venture capital financing are as follows:

- (i) *Equity financing:* The venture capital undertakings generally requires funds for a longer period but may not be able to provide returns to the investors during the initial stages. Therefore, the venture capital finance is generally provided by way of equity share capital. The equity contribution of venture capital firm does not exceed 49% of the total equity capital of venture capital undertakings so that the effective control and ownership remains with the entrepreneur.
- (ii) *Conditional Loan:* A conditional loan is repayable in the form of a royalty after the venture is able to generate sales. No interest is paid on such loans. In India Venture Capital Financers charge royalty ranging between 2 to 15 per cent; actual rate depends on other factors of the venture such as gestation period, cash flow patterns, riskiness and other factors of the enterprise. Some Venture Capital Financers give a choice to the enterprise of paying a high rate of interest (which could be well above 20 per cent) instead of royalty on sales once it becomes commercially sound.
- (iii) *Income Note:* It is a hybrid security which combines the features of both conventional loan and conditional loan. The entrepreneur has to pay both interest and royalty on sales but at substantially low rates. IDBI's Venture Capital Fund provides funding equal to 80-87.5% of the projects cost for commercial application of indigenous technology or adopting imported technology to domestic applications.
- (iv) *Participating Debenture:* Such security carries charges in three phases – in the start up phase, no interest is charged, next stage a low rate of interest is charged upto a particular level of operations, after that, a high rate of interest is required to be paid.

### Question 2

*Write short notes on the role of Mutual Funds in the Financial Market. (6 marks)(May 2003)*

### **Answer**

#### **Role of Mutual Funds in the Financial Market:**

Mutual funds have opened new vistas to investors and imparted much needed liquidity to the system. In this process, they have challenged the hitherto dominant role of the commercial banks in the financial market and national economy.

In 1997, the share of mutual funds in house-hold financial assets was over 5% in USA, 8% in Germany, 3% in Japan, 3% in Italy and about 5% in India. In India, there has been a steady increase in the share of mutual funds in house-hold savings since 1988-89, i.e. after the entry of public sector mutual funds. The most significant growth during 1980-81 to 1992-93 was in respect of UTI.

According to Centre for Monitoring Indian Economy, "Mutual Funds" cornered 12% of the total market capitalisation, the share of the UTI being 9.4% of the total market capitalisation of Indian stock markets.

### **Question 4**

*(a) Explain, how to establish a Mutual Fund.*

- (a) Establishment of a Mutual Fund:** A mutual fund is required to be registered with the Securities and Exchange Board of India (SEBI) before it can collect funds from the public. All mutual funds are governed by the same set of regulations and are subject to monitoring and inspections by the SEBI. The Mutual Fund has to be established through the medium of a sponsor. A sponsor means any body corporate who, acting alone or in combination with another body corporate, establishes a mutual fund after completing the formalities prescribed in the SEBI's Mutual Fund Regulations.

The sponsor should have a sound track record and general reputation of fairness and integrity in all his business transactions.

The Mutual Fund has to be established as either a trustee company or a Trust, under the Indian Trust Act and the instrument of trust shall be in the form of a deed. The deed shall be executed by the sponsor in favour of the trustees named in the instrument of trust. The trust deed shall be duly registered under the provisions of the Indian Registration Act, 1908. The trust deed shall contain clauses specified in the Third Schedule of the Regulations.

An Asset Management Company, who holds an approval from SEBI, is to be appointed to manage the affairs of the Mutual Fund and it should operate the schemes of such fund. The Asset Management Company is set up as a limited liability company, with a minimum net worth of Rs. 10 crores.

The sponsor should contribute at least 40% to the networth of the Asset Management Company. The Trustee should hold the property of the Mutual Fund in trust for the benefit of the unit holders.

SEBI regulations require that atleast two-thirds of the directors of the trustee company or board of trustees must be independent, that is, they should not be associated with the sponsors. Also, 50 per cent of the directors of AMC must be independent.

*Explain briefly about net asset value (NAV) of a Mutual Fund Scheme.*

*(4 marks)(May, 2004) & (6 marks)(November, 2004)*

**Answer**

Net Asset Value (NAV) is the total asset value (net of expenses) per unit of the fund calculated by the Asset Management Company (AMC) at the end of every business day. Net Asset Value on a particular date reflects the realizable value that the investor will get for each unit that he is holding if the scheme is liquidated on that date.

The performance of a particular scheme of a mutual fund is denoted by Net Asset Value (NAV). Net Asset Value may also be defined as the value at which new investors may apply to a mutual fund for joining a particular scheme.

It is the value of net assets of the fund. The investors' subscription is treated as the capital in the balance sheet of the fund, and the investments on their behalf are treated as assets. The NAV is calculated for every scheme of the MF individually. The value of portfolio is the aggregate value of different investments.

The Net Asset Value (NAV) = Net Assets of the scheme / No of unit outstanding

Net Assets of the scheme will normally be:

Market value of investments + Receivables + Accrued Income + Other Assets – Accrued Expenses – Payables – Other Liabilities

Since investments by a Mutual Fund are marked to market, the value of the investments for computing NAV will be at market value.

NAV of MF schemes are published on a daily basis in Newspapers and electronic media and play an important part in investors' decisions to enter or to exit. Analyst use the NAV to determine the yield on the schemes.

The Securities and Exchange Board of India (SEBI) has notified certain valuation norms calculating net asset value of Mutual fund schemes separately for traded and non-traded schemes.

*What are the investors' rights & obligations under the Mutual Fund Regulations? Explain different methods for evaluating the performance of Mutual Fund (8 Marks) (November, 2005)*

**Answer**

**(a)** Investors' rights and obligations under the Mutual Fund Regulations:

Important aspect of the mutual fund regulations and operations is the investors' protection and disclosure norms. It serves the very purpose of mutual fund guidelines. Due to these norms it is very necessary for the investor to remain vigilant. Investor should continuously evaluate the performance of mutual fund.

Following are the steps taken for improvement and compliance of standards of mutual fund:

1. All mutual funds should disclose full portfolio of their schemes in the annual report within one month of the close of each financial year. Mutual fund should either send it to each unit holder or publish it by way of an advertisement in one English daily and one in regional language.
2. The Asset Management Company must prepare a compliance manual and design

internal audit systems including audit systems before the launch of any schemes. The trustees are also required to constitute an audit committee of the trustees which will review the internal audit systems and the recommendation of the internal and statutory audit reports and ensure their rectification.

3. The AMC shall constitute an in-house valuation committee consisting of senior executives including personnel from accounts, fund management and compliance departments. The committee would on a regular basis review the system practice of valuation of securities.
4. The trustees shall review all transactions of the mutual fund with the associates on a regular basis.

#### **Investors' Rights:**

1. Unit holder have proportionate right in the beneficial ownership of the schemes assets as well as any dividend or income declared under the scheme.
2. Receive dividend warrant within 42 days.
3. AMC can be terminated by 75% of the unit holders.
4. Right to inspect major documents i.e. material contracts, Memorandum of Association and Articles of Association (M.A. & A.A) of the AMC, Offer document etc.
5. 75% of the unit holders have the right to approve any changes in the close ended scheme.
6. Every unit holder have right to receive copy of the annual statement.

#### **Legal limitations to investors' rights:**

1. Unit holders cannot sue the trust but they can initiate proceedings against the trustees, if they feel that they are being cheated.
2. Except in certain circumstances AMC cannot assure a specified level of return to the investors. AMC cannot be sued to make good any shortfall in such schemes.

#### **Investors' Obligations:**

1. An investor should carefully study the risk factors and other information provided in the offer document. Failure to study will not entitle him for any rights thereafter.
2. It is the responsibility of the investor to monitor his schemes by studying the reports and other financial statements of the funds.

#### **The criteria for evaluating the performance is as follows:**

1. Sharpe Ratio

The excess return earned over the risk free return on portfolio to the portfolio's total risk measured by the standard deviation. This formula uses the volatility of portfolio return.

$$S = \frac{\text{Return of portfolio} - \text{Return of risk free investment}}{\text{Standard Deviation of Portfolio}}$$

2. Treynor Ratio

This ratio is similar to the Sharpe Ratio except it uses Beta of portfolio instead of standard deviation.

$$T = \frac{\text{Return of portfolio} - \text{Return of risk free investment}}{\text{Beta of Portfolio}}$$

3. Jensen's Alpha

The comparison of actual return of the fund with benchmark portfolio with the same risk. Normally, for the comparison of portfolios of mutual funds this ratio is applied and compared with market return. It shows the comparative risk and reward from the said portfolio. Alpha is the excess of actual return compared with expected return.

### Question No 11

#### Answer

The advantages of investing in a Mutual Fund are:

1. **Professional Management:** Investors avail the services of experienced and skilled professionals who are backed by a dedicated investment research team which analyses the performance and prospects of companies and selects suitable investments to achieve the objectives of the scheme.
2. **Diversification:** Mutual Funds invest in a number of companies across a broad cross-section of industries and sectors. Investors achieve this diversification through a Mutual Fund with far less money and risk than one can do on his own.
3. **Convenient Administration:** Investing in a Mutual Fund reduces paper work and helps investors to avoid many problems such as bad deliveries, delayed payments and unnecessary follow up with brokers and companies.
4. **Return Potential:** Over a medium to long term, Mutual Fund has the potential to provide a higher return as they invest in a diversified basket of selected securities.
5. **Low Costs:** Mutual Funds are a relatively less expensive way to invest compared to directly investing in the capital markets because the benefits of scale in brokerage, custodial and other fees translate into lower costs for investors.
6. **Liquidity:** In open ended schemes investors can get their money back promptly at net asset value related prices from the Mutual Fund itself. With close-ended schemes, investors can sell their units on a stock exchange at the prevailing market price or avail of the facility of direct repurchase at NAV related prices which some close ended and interval schemes offer periodically.
7. **Transparency:** Investors get regular information on the value of their investment in addition to disclosure on the specific investments made by scheme, the proportion invested in each class of assets and the fund manager's investment strategy and outlook.

## MERGERS AND ACQUISITION

(b) Explain the following:

- (i) Take over by Reverse bid.      (ii) Demerger

### (b) (i) Take over by Reverse Bid

**Take Over by Reverse Bid :** When the smaller company gains control of a larger one. Then it is called "Take-over by reverse bid". This concept has been successfully followed for revival of sick industries. The concept of take-over by reverse bid, or of reverse merger, is thus not the usual case of amalgamation of a sick unit which is non-viable with a healthy or prosperous unit but is a case whereby the entire undertaking of the healthy and prosperous company is to be merged and

vested in the sick company which is non-viable. Under the Sick Industrial Companies (Special Provision) Act, 1985, a company becomes a sick industrial company when there is erosion of its net worth. This alternative is also known as taking over by reverse bid.

The three tests in a takeover by reverse bid that are required to be satisfied are, namely, (i) the assets of the transferor company are greater than the transferee company; (ii) equity capital to be issued by the transferee company pursuant to the acquisition exceeds its original issued capital, and (iii) the change of control in the transferee company will be through the introduction of minority holder or group of holders.

In reverse takeover control goes to the shareholders (and usually management) of the company that is formally the target of the bid.

The term reverse takeover is also be applied to the purchase of a listed company by an unlisted company with control passing to the shareholders and management of the unlisted company. This is sometimes known as a 'back door listing'.

A reverse takeover will almost always take place by way of a pure equity acquisition, also called a share swap.

A reverse takeover for the purpose of obtaining a back door listing is accomplished by the shareholders of the unlisted company selling all of their shares to the listed company in exchange for shares of the listed company.

This is a cost effective method of obtaining a public listing because it avoids the expenses associated with a floatation. Sometimes, the unlisted company usually takes over a listed company, a company i.e., listed but not actively traded on the stock exchange.

- (ii) **Demerger:** The word 'demerger' is defined under the Income-tax Act, 1961. It refers to a situation where pursuant to a scheme for reconstruction/restructuring, an 'undertaking' is transferred or sold to another purchasing company or entity. The important point is that even after demerger, the transferring company would continue to exist and may do business.

Demerger is used as a suitable scheme in the following cases:

- ◆ Restructuring of an existing business
- ◆ Division of family-managed business
- ◆ Management 'buy-out'.

While under the Income tax Act there is recognition of demerger only for restructuring as provided for under sections 391 – 394 of the Companies Act, in a larger context, demerger can happen in other situations also.

*Explain the term 'Buy-Outs'.*

*(8 marks) (November, 2003)*

### **Answer**

A very important phenomenon witnessed in the Mergers and Acquisitions scene, in recent times is one of buy - outs. A buy-out happens when a person or group of persons gain control of a company by buying all or a majority of its shares. A buyout involves two entities, the acquirer and the target company. The acquirer seeks to gain controlling interest in the company being acquired normally through purchase of shares. There are two common types of buy-outs: Leveraged Buyouts (LBO) and Management Buy-outs (MBO). LBO is the purchase of assets or the equity of a company where the buyer uses a significant amount of debt and very little equity capital of his own for payment of the consideration for acquisition. MBO is the purchase of a business by its management, who when threatened with the sale of its business to third parties or frustrated by the slow growth of the company, step-in and

acquire the business from the owners, and run the business for themselves. The majority of buy-outs are management buy-outs and involve the acquisition by incumbent management of the business where they are employed. Typically, the purchase price is met by a small amount of their own funds and the rest from a mix of venture capital and bank debt.

Internationally, the two most common sources of buy-out operations are divestment of parts of larger groups and family companies facing succession problems. Corporate groups may seek to sell subsidiaries as part of a planned strategic disposal programme or more forced reorganisation in the face of parental financing problems. Public companies have, however, increasingly sought to dispose off subsidiaries through an auction process partly to satisfy shareholder pressure for value maximisation.

In recessionary periods, buy-outs play a big part in the restructuring of a failed or failing businesses and in an environment of generally weakened corporate performance often represent the only viable purchasers when parents wish to dispose off subsidiaries.

Buy-outs are one of the most common forms of privatisation, offering opportunities for enhancing the performances of parts of the public sector, widening employee ownership and giving managers and employees incentives to make best use of their expertise in particular sectors.

## **INTRODUCTION TO INTERNATIONAL FINANCIAL MANAGEMENT – INCLUDING RAISING OF CAPITAL ABROAD (ADRs, GDRs, ECBs)**

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### **Question 1**

*Write short note on Global Depository Receipts or Euro Convertible Bonds.*

*(5 marks) (May 1996) & (4 marks) (May 2003)*

### **Answer**

**Global Depository Receipts (GDRs):** It is a negotiable certificate denominated in US dollars which represents a Non-US company's publically traded local currency equity shares. GDRs are created when the local currency shares of an Indian company are delivered to Depository's local custodian Bank against which the Depository bank issues depository receipts in US dollars. The GDRs may be traded freely in the overseas market like any other dollar – expressed security either on a foreign stock exchange or in the over-the-counter market or among qualified institutional buyers.

By issue of GDRs Indian companies are able to tap global equity market to raise foreign currency funds by way of equity. It has distinct advantage over debt as there is no repayment of the principal and service costs are lower. (Students may refer to MAFA study Material for detailed discussion)

**OR**

**Euro Convertible Bonds:** They are bonds issued by Indian companies in foreign market with the option to convert them into pre-determined number of equity shares of the company. Usually price of equity shares at the time of conversion will fetch premium. The Bonds carry fixed rate of interest.

**The issue of bonds may carry two options:**

**Call option:** Under this the issuer can call the bonds for redemption before the date of maturity. Where the issuer's share price has appreciated substantially, i.e., far in excess of the redemption value of bonds, the issuer company can exercise the option. This call option forces the investors to convert the bonds into equity. Usually, such a case arises when the share prices reach a stage near 130% to 150% of the conversion price.

**Put option:** It enables the buyer of the bond a right to sell his bonds to the issuer company at a pre-determined price and date. The payment of interest and the redemption of the bonds will be made by the issuer-company in US dollars.

**Question 2**

*Write short note on American Depositary Receipts (ADRS).*

*(5 marks) (November, 1996) & (6 marks) (November, 2002)*

**Answer**

**American Depositary Receipts (ADRs):** A depository receipt is basically a negotiable certificate denominated in US dollars that represents a non- US company's publicly traded local currency (INR) equity shares/securities. While the term refer to them is global depository receipts however, when such receipts are issued outside the US, but issued for trading in the US they are called ADRs

An ADR is generally created by depositing the securities of an Indian company with a custodian bank. In arrangement with the custodian bank, a depository in the US issues the ADRs. The ADR subscriber/holder in the US is entitled to trade the ADR and generally enjoy rights as owner of the underlying Indian security. ADRs with special/unique features have been developed over a period of time and the practice of issuing ADRs by Indian Companies is catching up.

Only such Indian companies that can stake a claim for international recognition can avail the opportunity to issue ADRs. The listing requirements in US and the US GAAP requirements are fairly severe and will have to be adhered. However if such conditions are met ADR becomes an excellent sources of capital bringing in foreign exchange.

These are depository receipts issued by a company in USA and are governed by the provisions of Securities and Exchange Commission of USA. As the regulations are severe, Indian companies tap the American market through private debt placement of GDRS listed in London and Luxemburg stock exchanges.

Apart from legal impediments, ADRS are costlier than Global Depositary Receipts (GDRS). Legal fees are considerably high for US listing. Registration fee in USA is also substantial. Hence, ADRS are less popular than GDRS.

**Question 3**

*Write short note on Euro convertible bonds.*

*(5 marks) (May 1998)*

**Answer**

**Euro Convertible bonds:** Euro Convertible bonds are quasi-debt securities (unsecured) which can be converted into depository receipts or local shares. ECBs offer the investor an option to convert the bond into equity at a fixed price after the minimum lock in period. The price of equity shares at the time of conversion will have a premium element. The bonds carry a fixed rate of interest. These are bearer securities and generally the issue of such bonds may carry two options viz., call option and put option. A call option allows the company to

force conversion if the market price of the shares exceed a particular percentage of the conversion price. A put option allows the investors to get his money back before maturity. In the case of ECBs, the payment of interest and the redemption of the bonds will be made by the issuer company in US dollars. ECBs issues are listed at London or Luxemburg stock exchanges.

Indian companies which have opted ECBs issue are Jindal Strips, Reliance, Essar Gujarat, Sterlite etc. Indian companies are increasingly looking at Euro-Convertible bond in place of Global Depository Receipts because GDRs are falling into disfavour among international fund managers.

An issuing company desirous of raising the ECBs is required to obtain prior permission of the Department of Economic Affairs, Ministry of Finance, Government of India, Companies having 3 years of good track record will only be permitted to raise funds. This condition is not applicable in the case of projects in infrastructure sector. The proceeds of ECBs would be permitted only for following purposes:

- (i) Import of capital goods.
- (ii) Retiring foreign currency debts.
- (iii) Capitalising Indian joint venture abroad.
- (iv) 25% of total proceedings can be used for working capital and general corporate restructuring.

The impact of such issues has been to procure for the issuing companies finances at very competitive rates of interest. For the country a higher debt means a forex outgo in terms of interest.

#### **Question 4**

*Write short note on Forfaiting.*

*(1 mark)(November, 2002)*

#### **Answer**

**Forfaiting:** During recent years the forfaiting has acquired immense importance as a source of financing. It means 'surrendering' or relinquishing rights to something. This is very commonly used in international practice among the exporters and importers. In the field of exports, it implies surrenders by an exporter of the claim to receive payment for goods or services rendered to an importer in return for cash payment for those goods and services from the forfaiter (generally a bank), who takes over the importer's promissory notes or the exporters' bills of exchange. The forfaiter, thus assumes responsibility for the collection of such documents from the importer. This arrangement is to help exporter, however, there is always a fixed cost of finance by way of discounting of the debt instruments by the forfaiter. Forfaiting assumes the nature of a purchase transaction without recourse to any previous holder in respect of the instrument of debts at the time of maturity in future.

The exporter generally takes bill or promissory notes to the forfaiter which buys the instrument at a discount from the face value. The importer party's bank has already guaranteed payment unconditionally and irrevocably, and the exporter party's bank now takes complete responsibility for collection without recourse to exporter. Thus a forfaiting arrangement eliminates all credit risks. It also protects against the possibility that interest rate may fluctuate before the bills or notes are paid off. Any adverse movement in exchange rate, any political uncertainties or business conditions may change to the disadvantage of the parties concerned. The forfaiting business is very common in Europe and has come as an important source of export financing in leading currencies.

#### **Question 5**

Write short note on Global Depository Receipts.

(6 marks)(May 2004)

**Answer**

**Global Depository Receipt:** It is an instrument in the form of a depository receipt or certificate created by the Overseas Depository Bank outside India denominated in dollar and issued to non-resident investors against the issue of ordinary shares or FCCBs of the issuing company. It is traded in stock exchange in Europe or USA or both. A GDR usually represents one or more shares or convertible bonds of the issuing company.

A holder of a GDR is given an option to convert it into number of shares/bonds that it represents after 45 days from the date of allotment. The shares or bonds which a holder of GDR is entitled to get are traded in Indian Stock Exchanges. Till conversion, the GDR does not carry any voting right. There is no lock-in-period for GDR.

**Impact of GDR's on Indian Capital Market**

Since the inception of GDR's a remarkable change in Indian capital market has been observed as follows:

- (i) Indian stock market to some extent is shifting from Bombay to Luxembourg.
- (ii) There is arbitrage possibility in GDR issues.
- (iii) Indian stock market is no longer independent from the rest of the world. This puts additional strain on the investors as they now need to keep updated with-world wide economic events.
- (iv) Indian retail investors are completely sidelined. GDR's/Foreign Institutional Investors' placements + free pricing implies that retail investors can no longer expect to make easy money on heavily discounted rights/public issues.

As a result of introduction of GDR's a considerable foreign investment has flown into India. This has also helped in the creation of specific markets like

- (i) GDR's are sold primarily to institutional investors.
- (ii) Demand is likely to be dominated by emerging market funds.
- (iii) Switching by foreign institutional investors from ordinary shares into GDR's is likely.
- (iv) Major demand is also in UK, USA (Qualified Institutional Buyers), South East Asia (Hong Kong, Singapore), and to some extent continental Europe (principally France and Switzerland).

The following parameters have been observed in regard to GDR investors.

- (i) Dedicated convertible investors.
- (ii) Equity investors who wish to add holdings on reduced risk or who require income enhancement.
- (iii) Fixed income investors who wish to enhance returns.
- (iv) Retail investors: Retail investment money normally managed by continental European banks which on an aggregate basis provide a significant base for Euro-convertible issues.

**Question 6**

Explain the term 'Exposure Netting', with an example.

(5 marks)(November, 2004)

**Answer**

Exposure Netting refers to offsetting exposures in one currency with Exposures in the same or another currency, where exchange rates are expected to move in such a way that losses or gains on the first exposed position should be offset by gains or losses on the second currency exposure.

The objective of the exercise is to offset the likely loss in one exposure by likely gain in another. This is a manner of hedging forex exposures though different from forward and option contracts. This method is similar to portfolio approach in handling systematic risk.

For example, let us assume that a company has an export receivables of US\$ 10,000 due 3 months hence, if not covered by forward contract, here is a currency exposure to US\$.

Further, the same company imports US\$ 10,000 worth of goods/commodities and therefore also builds up a reverse exposure. The company may strategically decide to leave both exposures open and not covered by forward, it would be doing an exercise in exposure netting.

Despite the difficulties in managing currency risk, corporates can now take some concrete steps towards implementing risk mitigating measures, which will reduce both actual and future exposures. For years now, banking transactions have been based on the principle of netting. Where only the difference of the summed transactions between the parties is actually transferred. This is called settlement netting. Strictly speaking in banking terms this is known as settlement risk. Exposure netting occurs where outstanding positions are netted against one another in the event of counter party default.

#### **Question 7**

*Distinguish between Forfeiting and Factoring.*

*(4 marks)(November, 2004)*

#### **Answer**

Forfeiting was developed to finance medium to long term contracts for financing capital goods. It is now being more widely used in the short-term also especially where the contracts involve large values. There are specialized finance houses that deal in this business and many are linked to some of main banks.

This is a form of fixed rate finance which involves the purchase by the forfeiture of trade receivables normally in the form of trade bills of exchange or promissory notes, accepted by the buyer with the endorsement or guarantee of a bank in the buyer's country.

The benefits are that the exporter can obtain full value of his export contract on or near shipment without recourse. The importer on the other hand has extended payment terms at fixed rate finance.

The forfeiture takes over the buyer and country risks. Forfeiting provides a real alternative to the government backed export finance schemes.

Factoring can however, broadly be defined as an agreement in which receivables arising out of sale of goods/services are sold by a "firm" (client) to the "factor" (a financial intermediary) as a result of which the title to the goods/services represented by the said receivables passes on to the factor. Henceforth, the factor becomes responsible for all credit control, sales accounting and debt collection from the buyer(s). In a full service factoring concept (without recourse facility) if any of the debtors fails to pay the dues as a result of his financial instability/insolvency/bankruptcy, the factor has to absorb the losses.

Some of the points of distinction between forfeiting and factoring have been outlined in the following table.

#### **Factoring**

#### **Forfeiting**

This may be with recourse or without recourse to the supplier.

It usually involves trade receivables of short maturities.

It does not involve dealing in negotiable instruments.

The seller (client) bears the cost of factoring.

Usually it involves purchase of all book debts or all classes of book debts.

Factoring tends to be a 'case of' sell of debt obligation to the factor, with no secondary market.

This is without recourse to the exporter. The risks are borne by the forfeiter.

It usually deals in trade receivables of medium and long term maturities.

It involves dealing in negotiable instrument like bill of exchange and promissory note.

The overseas buyer bears the cost of forfeiting.

Forfeiting is generally transaction or project based. Its structuring and costing is case to case basis.

There exists a secondary market in forfeiting. This adds depth and liquidity to forfeiting.

### Question 8

Write a brief note on external Commercial borrowings.

(5 Marks)(November, 2005)

### Answer

ECB include bank loans, supplier credit, securitised instruments, credit from export credit agencies and borrowings from multilateral financial institutions. These securitised instruments may be FRNs, FRBs etc. Indian corporate sector is permitted to raise finance through ECBs within the framework of the policies and procedures prescribed by the Central Government. Multilateral financial institutions like IFC, ADB, AFIC, CDC are providing such facilities while the ECB policy provides flexibility in borrowing consistent with maintenance of prudential limits for total external borrowings, its guiding principles are to keep borrowing maturities long, costs low and encourage infrastructure/core and export sector financing which are crucial for overall growth of the economy. The government of India, from time to time changes the guidelines and limits for which the ECB alternative as a source of finance is pursued by the corporate sector. During past decade the government has streamlined the ECB policy and procedure to enable the Indian companies to have their better access to the international financial markets.

The government permits the ECB route for variety of purposes namely expansion of existing capacity as well as for fresh investment. But ECB can be raised through internationally recognized sources. There are caps and ceilings on ECBs so that macro economy goals are better achieved. Units in SEZ are permitted to use ECBs under a special window.

## FOREIGN EXCHANGE

(i) Explain the term "Foreign Exchange Rate Risk".

(i) **Foreign Exchange Rate Risk:** This risk relates to the uncertainty attached to the exchange rates between two currencies. For example, the amount borrowed in foreign currency is to be repaid in the same currency or in some other acceptable currency.

Thus if the foreign currency becomes stronger than (say) Indian rupees, the Indian borrower has to repay the loan in terms of more rupees than the rupees he obtained by way of loan. The extra rupees he pays is not due to an increase in interest rate but because of unfavourable exchange rate. Conversely he will gain if the rupee is stronger. The fluctuation in the exchange rate causes uncertainty and this uncertainty gives rise to exchange rate risk.

(ii) Mention any four of the tools available to cover Exchange Rate Risk.

(ii) The following tools are available to cover exchange rate risk:

- (a) Spot contracts.
- (b) Rupee forward contract.
- (c) Rupee roll over contract.
- (d) Cross-currency forward contract.
- (e) Cross currency roll over contract.
- (f) Cross currency options.
- (g) Currency futures.
- (h) Currency and interest rate swaps.

- (i) Arbitrage.

## Question 2

Write short notes on:

(a) Cross Currency Roll Over Contracts.

(b) Financial Swaps.

(5 + 5 = 10 marks) (May 1997)

## Answer

- (a) **Cross Currency Roll Over Contracts:** Cross Currency Roll Over contracts are contracts to cover overseas leg of long-term foreign exchange liabilities or assets. The cover is initially obtained for six months and later extended for further period of six months and so on.

Roll over charge or benefit depends on forward premium or discount, which in turn, is a function of interest rate differentials between US dollar and the other currency. There is no risk of currency appreciation or depreciation in the overseas leg:

Roll over for a maturity period exceeding six months is not possible because in the inter-bank market, quotations beyond six months are not available.

Under the Roll Over Contract the basic rate of exchange is fixed but loss or gain arises at the time of each Roll over depending upon the market conditions.

- (b) **Financial Swaps:** Financial swaps are a funding technique which permit a borrower to access one market and then exchange the liability for another type of liability. Investors can exchange one type of asset for another with a preferred income stream. Swaps by themselves are not a funding instrument, they are a device to obtain the desired form of financing indirectly which otherwise might be inaccessible or too expensive.

All swaps involve exchange of a series of periodic payments between two parties, usually through an intermediary which is a large international financial institution. The two payment streams are estimated to have identical present values at the outset when discounted at the respective cost of funds in the relevant primary financial markets.

The two major types of financial swaps are interest rate swaps and currency swaps. The two are combined to give a cross-currency interest rate swap. A number of variations are possible within each major type. In the following para the concept of interest rate and currency swaps has been described.

**Interest rate swaps:** With an interest rate swap, interest-payment obligations are exchanged between two parties, but they are denominated in the same currency. The swap can be longer term in nature than either the forward or the future contracts. Term may extend upto 15 years or more, whereas the range for forward or futures contracts is upto five years. The market for swaps is unregulated and began in the early 1980's. The most common interest rate swap is the floating-fixed rate exchange. For example, a corporate that has borrowed on a fixed rate term basis may swap with a counter party to make floating rate interest payments.

**Currency swaps:** Yet another device for shifting risk is the currency swap. In a currency swap, two parties exchange debt obligations denominated in different currencies. Each party agrees to pay the other's interest obligation. At maturity, principal amounts are exchanged, usually at a rate of exchange agreed upon in advance. The currency swap market traces its roots to the 1960's, when parallel loans were arranged between two borrowers of different nationalities.

In currency swaps both the principal and interest in one currency are swapped for

principal and interest in another currency. On maturity the principal amounts are swapped back.

Usually in practice swap is intermediated by a bank which takes away a part of the savings, leaving the balance to be shared by the parties. Swap gains or losses arises because of spread compression which varies in different financial markets.

### Question 3

*Write short on Forward as hedge instrument.*

*(5 marks) (November, 1997)*

#### Answer

**Forward as hedge instrument:** International transactions both trade and financial give rise to currency exposures. A currency exposure if left unmanaged leaves a corporate open to profits or losses arising on account of fluctuations in currency ratio. One way in which corporate can protect itself from effects of fluctuations in currency rates is through buying or selling in forward markets.

A forward transaction is a transaction requiring delivery at future date of a specified amount of one currency for a specific amount of another currency. The exchange rate is determined at the time of entering into the contract but the payment and delivery takes place on maturity. Corporates use forwards to hedge themselves against fluctuations in currency price that would have a significant impact on their financial position. Banks use forward to offset the forward contracts entered into with non-bank customers.

*Write short note on Debt route for foreign exchange funds.*

*(5 marks) (May 2000)*

#### Answer

**Debt route for foreign exchange funds:** The following are some of the instruments used for borrowing of funds from the international market:

- (i) *Syndicated bank loans:* The borrower should obtain a good credit rating from the rating agencies. Large loans can be obtained in a reasonably short period with few formalities. Duration of the loan is generally 5 to 10 years. Interest rate is based on LIBOR plus spread depending upon the rating. Some covenants are laid down by the lending institutions like maintenance of key financial ratios.
- (ii) *Euro bonds:* These are basically debt instruments denominated in a currency issued outside the country of the currency. For example, Yen bond floated in France. Primary attraction of these bonds is the shelter from tax and regulations which provide scope for arbitrage yields. These are usually bearer bonds and can take the form of (i) traditional fixed rate bonds (ii) floating rate notes (FRN's) (iii) Convertible bonds.
- (iii) *Foreign bonds:* Foreign bonds, are foreign currency bonds and sold at the country of that currency and are subject to the restrictions as placed by that country on the foreigners' funds.
- (iv) *Euro Commercial Papers:* These are short term money market securities usually issued at a discount, for maturity in less than one year.
- (v) *External Commercial Borrowings (ECB's):* These include commercial bank loans, buyer's credit and supplier's credit, securitised instruments such as floating rate notes and fixed rate bonds, credit from official export credit agencies and commercial borrowings from multi-lateral financial institutions like IFCI, ADB etc. External Commercial borrowings have been a popular source of financing for most of capital goods imports. They are

gaining importance due to liberalization of restrictions. ECB's are subject to overall ceilings with sub-ceilings fixed by the government from time to time.

(vi) All other loans are approved by the government.

Q )Write short note on *Marking to market*.

(4 marks) (November, 2003)

#### Answer

**Marking to market:** It implies the process of recording the investments in traded securities (shares, debt-instruments, etc.) at a value, which reflects the market value of securities on the reporting date. In the context of derivatives trading, the futures contracts are marked to market on periodic (or daily) basis. Marking to market essentially means that at the end of a trading session, all outstanding contracts are repriced at the settlement price of that session. Unlike the forward contracts, the future contracts are repriced every day. Any loss or profit resulting from repricing would be debited or credited to the margin account of the broker. It, therefore, provides an opportunity to calculate the extent of liability on the basis of repricing. Thus, the futures contracts provide better risk management measure as compared to forward contracts.

Suppose on 1<sup>st</sup> day we take a long position, say at a price of Rs. 100 to be matured on 7<sup>th</sup> day. Now on 2<sup>nd</sup> day if the price goes up to Rs. 105, the contract will be repriced at Rs. 105 at the end of the trading session and profit of Rs. 5 will be credited to the account of the buyer. This profit of Rs. 5 may be drawn and thus cash flow also increases. This marking to market will result in three things – one, you will get a cash profit of Rs. 5; second, the existing contract at a price of Rs. 100 would stand cancelled; and third you will receive a new futures contract at Rs. 105. In essence, the marking to market feature implies that the value of the futures contract is set to zero at the end of each trading day.

#### Question 23

Explain the terms '*Intrinsic value of an option*' and the '*Time value of an option*'.

(4 marks)(November, 2004)

#### Answer

**Intrinsic value of an Option:** Intrinsic value of an option and the time value of an option are primary determinants of an option's price. By being familiar with these terms and knowing how to use them, any one will find himself in a much better position to choose the option contract that best suits his particular investment requirements.

Intrinsic Value is the value that any given option would have if it were exercised today. It is defined as the difference between the option's strike price (X) and the stock's actual current price (CP). In the case of a call option, you can calculate this intrinsic value by taking  $CP - X$ . If the result is greater than zero (in other words, if the stock's current price is greater than the option's strike price), then the amount left over after subtracting  $CP - X$  is the option's intrinsic value. If the strike price is greater than the current stock price, then the intrinsic value of the option is zero – it would not be worth anything if it were to be exercised today (please note that an option's intrinsic value can never be below zero. To determine the intrinsic value of a put option, simply reverse the calculation to  $X - CP$ ).

To illustrate, let us assume Wipro stock is priced at Rs. 105. In this case, a Wipro 100 *call* option would have an intrinsic value of (Rs. 105 – Rs. 100 = Rs 5). However, a Wipro 100 *put* option would have an intrinsic value of zero (Rs. 100 – Rs. 105 = Rs. –5). Since this figure is less than zero, the intrinsic value is zero. Again, intrinsic value can never be negative). On the other hand, if we were to look at a Wipro *put* option with a strike price of 120, then this particular option would have an intrinsic value of Rs. 15 (Rs. 120 – Rs. 105 = Rs. 15).

**Time Value:** This is the second component of an option's price. It is defined as any value of an option other than its intrinsic value. Looking at the example above, if Wipro is trading at Rs. 105 and the Wipro 100 call option is trading at Rs. 7, then we would say that this option has Rs. 2 of time value (Rs. 7 option price – Rs. 5 intrinsic value = Rs. 2 time value). Options that have zero intrinsic value are comprised entirely of time value. Time value is basically the risk premium that the seller requires to provide the option buyer with the right to buy/sell the stock up to the expiration date. This component may be regarded as the “insurance premium” of the option. This is also known as extrinsic value. Time value decays over time. In other words, the time value of an option is directly related to how much time an option has until expiration. The more time an option has until expiration, the greater the chances of option ending up in the money.

(a) *Write a short note on the application of Double taxation agreements on Global depository receipts. (4 Marks)(Nov 2007)*

(b) *“Operations in foreign exchange market are exposed to a number of risks.” Discuss.*

*(3 Marks)( Nov 2007)*

### **Answer**

- (a) (i) During the period of judiciary ownership of shares in the hands of the overseas depository bank, the provisions of avoidance of double taxation agreement entered into by the Government of India with the country of residence of the overseas depository bank will be applicable in the matter of taxation of income from dividends from the underline shares and the interest on foreign currency convertible bonds.
- (ii) During the period if any, when the redeemed underline shares are held by the non-residence investors on transfer from judiciary ownership of the overseas depository bank, before they are sold to resident purchasers, the avoidance of double taxation agreement entered into by the government of India with the country of residence of the non-resident investor will be applicable in the matter of taxation of income from dividends from the underline shares, or interest on foreign currency convertible bonds or any capital gains arising out of the transfer of the underline shares.
- (b) A firm dealing with foreign exchange may be exposed to foreign currency exposures. The exposure is the result of possession of assets and liabilities and transactions denominated in foreign currency. When exchange rate fluctuates, assets, liabilities, revenues, expenses that have been expressed in foreign currency will result in either foreign exchange gain or loss. A firm dealing with foreign exchange may be exposed to

the following types of risks:

- (i) **Transaction Exposure:** A firm may have some contractually fixed payments and receipts in foreign currency, such as, import payables, export receivables, interest payable on foreign currency loans etc. All such items are to be settled in a foreign currency. Unexpected fluctuation in exchange rate will have favourable or adverse impact on its cash flows. Such exposures are termed as transactions exposures.
- (ii) **Translation Exposure:** The translation exposure is also called accounting exposure or balance sheet exposure. It is basically the exposure on the assets and liabilities shown in the balance sheet and which are not going to be liquidated in the near future. It refers to the probability of loss that the firm may have to face because of decrease in value of assets due to devaluation of a foreign currency

despite the fact that there was no foreign exchange transaction during the year.

- (iii) **Economic Exposure:** Economic exposure measures the probability that fluctuations in foreign exchange rate will affect the value of the firm. The intrinsic value of a firm is calculated by discounting the expected future cash flows with appropriate discounting rate. The risk involved in economic exposure requires measurement of the effect of fluctuations in exchange rate on different future cash flows.

## THE MONEY MARKET AND THEIR OPERATION

*Write short note on commercial paper.*

*(6 marks) (May 2003)*

**Answer**

**Commercial Paper:**

Commercial paper (CP) has its origin in the financial markets of America and Europe. When the process of financial dis-intermediation started in India in 1990, RBI allowed issue of two instruments, viz., the Commercial Paper (CP) and the Certificate of Deposit (CD) as a part of reform in the financial sector as suggested by Vaghul Committee. A notable feature of RBI Credit Policy announced on 16.10.1993 was the liberalisation of terms of issue of CP. At present it provides the cheapest source of funds for corporate sector and banks. Its market has picked up considerably in India due to interest rate differentials in the inter-bank and commercial lending rates.

Commercial Paper (CP) is an unsecured debt instrument in the form of a promissory note issued by highly rated borrowers for tenors ranging between 15 days and one year. "Corporates raise funds through CPs on an on-going basis throughout the year".

Thus, CP is a short term unsecured promissory note issued by high quality corporate bodies directly to investors to fund their business activities.

**Question 2**

*Write short note on Treasury bills.*

*(4 marks) (November, 2003)*

**Answer**

**Treasury Bills:** Treasury bills are short-term debt instruments of the Central Government, maturing in a period of less than one year. Treasury bills are issued by RBI on behalf of the Government of India for periods ranging from 91 days to 364 days through regular auctions. They are highly liquid instruments and issued to tide over short-term liquidity shortfalls.

Treasury bills are sold through an auction process according to a fixed auction calendar announced by the RBI. Banks and primary dealers are the major bidders in the competitive auction process. Provident Funds and other investors can make non-competitive bids. RBI makes allocation to non-competitive bidders at a weighted average yield arrived at on the basis of the yields quoted by accepted competitive bids. These days the treasury bills are becoming very popular on account of falling interest rates. Treasury bills are issued at a discount and redeemed at par. Hence, the implicit yield on a treasury bill is a function of the size of the discount and the period of maturity. Now, these bills are becoming part of debt market. In India, the largest holders of the treasury bills are commercial banks, trust, mutual funds and provident funds.

#### Question 4

Explain briefly 'Call Money' in the context of financial market.

(2 marks)(May 2004)

#### Answer

**Call Money:** The Call Money is a part of the money market where, day to day surplus funds, mostly of banks, are traded. Moreover, the call money market is most liquid of all short-term money market segments.

The maturity period of call loans vary from 1 to 14 days. The money that is lent for one day in call money market is also known as 'overnight money'. The interest paid on call loans are known as the call rates. The call rate is expected to freely reflect the day-to-day lack of funds.

These rates vary from day-to-day and within the day, often from hour-to-hour. High rates indicate the tightness of liquidity in the financial system while low rates indicate an easy liquidity position in the market.

In India, call money is lent mainly to even out the short-term mismatches of assets and liabilities and to meet CRR requirement of banks. The short-term mismatches arise due to variation in maturities i.e. the deposits mobilized are deployed by the bank at a longer maturity to earn more returns and duration of withdrawal of deposits by customers vary. Thus, the banks borrow from call money markets to meet short-term maturity mismatches.

Moreover, the banks borrow from call money market to meet the cash Reserve Ratio (CRR) requirements that they should maintain with RBI every fortnight and is computed as a percentage of Net Demand and Time Liabilities (NDTL).

- (i) What is interest rate risk, reinvestment risk & default risk & what are the types of risk involved in investments in G-Sec.?
- (ii) What is a Repo and a Reverse Repo? (5 Marks) (November, 2005)( 4 marks, May, 2008)

#### Answer

- (i) **Interest Rate Risk:** Interest Rate Risk, market risk or price risk are essentially one and the same. These are typical of any fixed coupon security with a fixed period to maturity. This is on account of inverse relation of price and interest. As the interest rate rises the price of a security will fall. However, this risk can be completely eliminated in case an investor's investment horizon identically matches the term of security.

**Re-investment Risk:** This risk is again akin to all those securities, which generate intermittent cash flows in the form of periodic coupons. The most prevalent tool deployed to measure returns over a period of time is the yield-to-maturity (YTM) method. The YTM calculation assumes that the cash flows generated during the life of a security is reinvested at the rate of YTM. The risk here is that the rate at which the interim cash flows are reinvested may fall thereby affecting the returns.

**Default Risk:** This type of risk in the context of a Government security is always zero. However, these securities suffer from a small variant of default risk i.e. maturity risk. Maturity risk is the risk associated with the likelihood of government issuing a new security in place of redeeming the existing security. In case of Corporate Securities it is referred to as credit risk.

G. Secs are usually referred to as risk free securities. However, these securities are subject to only one type of risk i.e. interest rate risk. Subject to changes in the overall interest rate scenario, the price of these securities may appreciate or depreciate.

- (ii) A Repo deal is one where eligible parties enter into a contract another to borrow money

at a predetermined rate against the collateral of eligible security for a specified period of time. The legal title of the security does change. The motive of the deal is to fund a position. Though the mechanics essentially remains the same and the contract virtually remains the same, in case of reverse Repo deal the underlying motive of the deal is to meet the security/instrument specific needs or to lend the money. Indian Repo market is governed by Reserve Bank of India. At present Repo is permitted between 64 players against Central and State Government Securities (including T-Bills) at Mumbai.

#### **Question 11**

*Discuss the major sources available to an Indian Corporate for raising foreign currency finances. (8 Marks) ( May, 2007)*

#### **Answer**

The major sources are:-

Foreign currency term loan from Financial Institutions.

Export credit schemes.

External commercial borrowings.

Euro Issues

Issues in foreign domestic markets. They are discussed

here below:-

1. **Foreign currency term loan from Financial Institutions:-** Financial Institutions provide foreign currency term loan for meeting the foreign currency expenditures towards import of plant, machinery, and equipment and also towards payment of foreign technical know how fees.
2. **Export Credit Schemes:-** Export credit agencies have been established by the government of major industrialized countries for financing exports of capital goods and related technical services. These agencies follow certain consensus guidelines for supporting exports under a convention known as the Berne Union. As per these guidelines, the interest rate applicable for export credits to Indian companies for various maturities are regulated. Two kinds of export credit are provided i.e., buyer's and supplier's credit.  
**Buyer's Credit:-** Under this arrangement, credit is provided directly to the Indian buyer for purchase of capital goods and/or technical service from the overseas exporter.  
**Supplier's Credit:-** This is a credit provided to the overseas exporters so that they can make available medium-term finance to Indian importers.
3. **External commercial borrowings:** Subject to certain terms and conditions, the Government of India permits Indian firms to resort to external commercial borrowings for the import of plant and machinery. Corporates are allowed to raise up to a stipulated amount from the global markets through the automatic route. Companies wanting to raise more than the stipulated amount have to get an approval of the MOF. ECBs include bank loans, supplier's and buyer's credit, fixed and floating rate bonds and borrowing from private sector windows of Multilateral Financial Institution such as International Finance Corporation.
4. **Euro Issues:** The two principal mechanisms used by Indian companies are Depository Receipts mechanism and Euro convertible Issues. The former represents indirectly equity investment while the latter is debt with an option to convert it into equity.

5. **Issues in foreign domestic markets:** Indian firms can also issue bonds and Equities in the domestic capital market of a foreign country. In recent year, Indian companies like Infosys Technologies and ICICI have successfully tapped the US equity market by issuing American Depository Receipts(ADRs). Like GDRs, ADRs represent claim on a specific number of shares. The principal difference between the two is that the GDRs are issued in the euro market whereas ADRs are issued in the U.S. domestic capital market

## DIVIDEND POLICY

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*Write short note on Walter's approach to Dividend Policy.*

*(5 marks) (May 1998)*

### **Answer**

**Walter's approach to Dividend Policy:** Walter's approach to Dividend Policy supports the doctrine that the investment policy of a firm cannot be separated from its dividend policy and both are according to him interlinked. He argues that in the long run, share prices reflect only the present value of expected dividends. Retention influences stock prices only through their effect on future dividends.

The relationship between dividend and share price on the basis of Walter's formula is shown below:

$$V_c = \frac{D + R_a \frac{(E - D)}{R_c}}{R_c}$$

Where,

$V_c$  = Market value of ordinary shares of the company.

$R_a$  = Return on internal retention, i.e. the rate company earns on retained profits.

$R_c$  = Capitalisation rate, i.e. the rate expected by investors by way of return from particular category of shares.

$E$  = Earning per share.  $D$  =

Dividend per share.

Prof. Walter's formula is based on the relationship between the firm's (i) return on investment or internal rate of return ( $R_a$ ) and (ii) Cost of Capital or required rate of return (i.e.  $R_c$ ).

The optimum dividend policy of a firm is determined by the relationship of  $R_a$  and  $R_c$ . If  $R_a > R_c$  i.e. the firm can earn higher return than what the shareholders can earn on their investments, the firm should retain the earning. Such firms are termed as growth firms, and in their case the optimum dividend policy would be to plough back the earnings. If  $R_a < R_c$  i.e. the firm does not have profitable investment opportunities, the optimum dividend policy would be to distribute the entire earnings as dividend.

In case of firms, where  $R_a = R_c$ , it does not matter whether the firm retains or distribute its earning.

*Assumptions:* Walter's dividend policy is based on the following assumptions:

- (i) The firm does the entire financing through retained earnings. It does not use external sources of funds such as debt or new equity capital.
- (ii) The firm  $R_c$  and  $R_a$  remain constant with additional investment. (iii)

There is no change in the key variables, namely, beginning  $E$ ,  $D$ . (iv) The firm has a very long life.

#### Question 4

*Write short note on Factors influencing the dividend policy of the firm. (5 marks) (May 1999)*

#### Answer

**Factors influencing the dividend policy of the firm:** The following are the important factors which generally determine the dividend policy of a firm.

- (i) *Dividend payout ratio:* A major aspect of the dividend policy of a firm is its Dividend Payout (D/P) ratio, i.e., the percentage share of the net earnings distributed to shareholders as dividends. Since dividend policy of the firm affects both the shareholders' wealth and the long term growth of the firm, an optimum dividend policy should strike out a balance between current dividends and future growth which maximises the price of the firm's shares. The D/P ratio of a firm should be determined with reference to two basic objectives maximizing the wealth of the firm's owners and providing sufficient funds to finance growth/expansion plans.
- (ii) *Stability of dividends:* Stability of dividends is another major aspect of dividend policy. The term dividend stability refers to the consistency or lack of variability in the stream of future dividends. Precisely, it means that a certain minimum amount of dividend is paid out regularly.
- (iii) *Legal, contractual and internal constraints and restrictions:* The firms' dividend decision is also affected by certain legal, contractual and internal requirements and commitments. Legal factors stem from certain statutory requirements, contractual restrictions arise from certain loan covenants and internal constraints are the result of the firm's liquidity position. Though legal rules do not require a dividend declaration, they specify the conditions under which dividends can be

declared. Such conditions pertain to (a) capital impairment, (b) net profits, (c) insolvency, (d) illegal accumulation of excess profit and, (e) payment of statutory dues before declaration of dividends.

- (iv) *Tax consideration:* The firm's dividend policy is directed by the provisions of income-tax law. If a firm has a large number of owners, in high tax bracket, its dividend policy may be to have higher retention. As against this if the majority of shareholders are in lower tax bracket requiring regular income the firm may resort to higher dividend payout, because they need current income and the greater certainty associated with receiving the dividend now, instead of the less certain prospect of capital gains later.
- (v) *Capital market consideration:* If the firm has an access to capital market for fund raising, it may follow a policy of declaring liberal dividend. However, if the firm has only limited access to capital markets, it is likely to adopt-low dividend payout ratio. Such firms are likely to rely more heavily on retained earnings.
- (vi) *Inflation:* Lastly, inflation is also one of the factors to be reckoned with at the time of formulating the dividend policy. With rising prices, accumulated depreciation may be inadequate to replace obsolete equipments. These firms have to rely upon retained earnings as a source of funds to make up the deficiency. This consideration becomes all the more important if the assets are to be replaced in the near future. Consequently, their dividend payout ratio tends to be low during periods of inflation.

#### **Question 5**

*Write short note on effect of a Government imposed freeze on dividends on stock prices and the volume of capital investment in the background of Miller-Modigliani (MM) theory on dividend policy.  
(5 marks) (November, 2000)*

#### **Answer**

##### **Effect of a Government imposed freeze on dividends on stock prices and the volume of capital investment in the background of (Miller-Modigliani) (MM) theory on dividend policy:**

According to MM theory, under a perfect market situation, the dividend of a firm is irrelevant as it does not affect the value of firm. Thus under MM's theory the government imposed freeze on dividend should make no difference on stock prices. Firms if do not pay dividends will have higher retained earnings and will either reduce the volume of new stock issues, repurchase more stock from market or simply invest extra cash in marketable securities. In all the above cases, the loss by investors of cash dividends will be made up in the form of capital gains. Whether the Government imposed freeze on dividends have effect on volume of capital investment in the background of MM theory on dividend policy have two arguments. One argument is that if the firms keep their investment decision separate from their dividend and financing decision then the freeze on dividend by the Government will have no effect on volume of capital investment. If the freeze restricts dividends the firm can repurchase shares or invest excess cash in marketable securities e.g. in shares of other companies. Other argument is that the firms do not separate their investment decision from dividend and financing decisions. They prefer to make investment from internal funds. In this case, the freeze of dividend by government could lead to increased real investment.

*Write short note on Factors determining the dividend policy of a company.*

*(5 marks) (November, 2001)*

#### **Answer**

##### **Factors determining the dividend policy of a company:**

- (i) *Liquidity*: In order to pay dividends, a company will require access to cash. Even very profitable companies might sometimes have difficulty in paying dividends if resources are tied up in other forms of assets.
- (ii) *Repayment of debt*: Dividend payout may be made difficult if debt is scheduled for repayment.
- (iii) *Stability of Profits*: Other things being equal, a company with stable profits is more likely to pay out a higher percentage of earnings than a company with fluctuating profits.
- (iv) *Control*: The use of retained earnings to finance new projects preserves the company's ownership and control. This can be advantageous in firms where the present disposition of shareholding is of importance.
- (v) *Legal consideration*: The legal provisions lay down boundaries within which a company can declare dividends.
- (vi) Likely effect of the declaration and quantum of dividend on market prices.
- (vii) Tax considerations and
- (viii) Others such as dividend policies adopted by units similarly placed in the industry, management attitude on dilution of existing control over the shares, fear of being branded as incompetent or inefficient, conservative policy Vs non-aggressive one.
- (ix) *Inflation*: Inflation must be taken into account when a firm establishes its dividend policy.

**Determinants of Dividend Policy:** Many factors determine the dividend policy of a company. The factors determining the dividend policy are as follows:

- (a) **Dividend payout Ratio:** A certain share of earnings to be distributed as dividend has to be worked out. This involves the decision to pay out or to retain. The payment of dividends results in the reduction of cash and therefore depletion of assets. In order to maintain the desired level of assets as well as to enhance the investment opportunities, the company has to decide upon the pay-out ratio. Dividend Payout Ratio should be determined with the basic objectives of maximising the wealth of the firm's owners and providing sufficient funds to finance growth.
- (b) **Stability of Dividend:** Generally investors favour a stable dividend policy. The policy should be consistent and there should be a certain minimum dividend that should be paid regularly. The policy can take any form, namely, constant dividend per share, stable D/P Ratio and constant dividend per share plus something extra.
- (c) **Legal, Contractual and Internal Constraints and Restriction :** Legal and Contractual requirements have to be followed. All requirements of Companies Act, SEBI Guidelines, Capital Impairment Guidelines, net profit and insolvency etc., have to be kept in mind while declaring dividends. Also, there may be some contractual requirements which are to be honoured. Maintenance of certain debt-equity ratio may be one of such requirements. In addition, there may be certain internal constraints which are unique to the firm concerned. There may be growth prospects, financial requirements, availability of funds, earning stability and control etc.

### Question 17

*How tax considerations are relevant in the context of a dividend decision of a company?*

*(4 Marks) (November, 2006)*

**Answer**

## DIVIDEND DECISION AND TAX CONSIDERATIONS

Traditional theories might have said that distribution of dividend being from after-tax profits, tax considerations do not matter in the hands of the payer-company. However, with the arrival of Corporate Dividend Tax on the scene in India, the position has changed. Since there is a clear levy of such tax with related surcharges, companies have a consequential cash outflow due to their dividend decisions which has to be dealt with as and when the decision is taken.

In the hands of the investors too, the position has changed with total exemption from tax being made available to the receiving-investors. In fact, it can be said that such exemption from tax has made the equity investment and the investment in Mutual Fund Schemes very attractive in the market.

Broadly speaking Tax consideration has the following impacts on the dividend decision of a company:

**Before introduction of dividend tax:** Earlier, the dividend was taxable in the hands of investor. In this case the shareholders of the company are corporates or individuals who are in higher tax slab, it is preferable to distribute lower dividend or no dividend. Because dividend will be taxable in the hands of the shareholder @ 30% plus surcharges while long term capital gain is taxable @ 10%. On the other hand, if most of the shareholders are the people who are in no tax zone, then it is preferable to distribute more dividend.

We can conclude that before distributing dividend, company should look at the shareholding pattern.

**After introduction of dividend tax:** Dividend tax is payable @ 12.5% - surcharge + education cess, which is effectively near to 14%. Now if the company were to distribute dividend, shareholder will indirectly bear a tax burden of 14% on their income. On the other hand, if the company were to provide return to shareholder in the form of appreciation in market price – by way of Bonus shares – then shareholder will have a reduced tax burden. For securities on which STT is payable, short term capital gain is taxable @ 10% while long term capital gain is totally exempt from tax.

Therefore, we can conclude that if the company pays more and more dividend (while it still have reinvestment opportunities) then to get same after tax return shareholders will expect more before tax return and this will result in lower market price per share.

### Question 1

*Describe the interface of Financial Policy with Corporate Strategic Management.*

*(7 marks) (November, 1998)*

### Answer

The two important functions of the finance manager are: (i) allocation of funds (viz. investment decision) and (ii) generation of funds (viz. financing decision). The theory of finance makes two crucial assumptions to provide guidance to the finance manager in making these decisions. These are:

1. The objective of the firm is to maximize the wealth of shareholders.
2. The capital markets are efficient.

The corporate finance theory implies that:

1. Owners have the primary interest in the firm.
2. The current value of share is the measure of shareholders' wealth.
3. The firm should accept only those investments which generate positive net present values.
4. The firm's capital structure and dividend decisions are irrelevant as they are solely guided by efficient capital markets and management has no control over them.

However, the theory of finance has undergone fundamental changes over the past. It is felt that finance theory is not complete and meaningful without its linkage with the strategic management.

Strategic management establishes an efficient and effective match between the firm's competence and opportunities with the risk created by the environmental changes.

### **Interface of Finance Policy and Strategic Management:**

- (1) Finance policy require the resource deployments such as materials, labour etc. strategic management considers all markets such as material, labour and capital as imperfect and changing. Strategies are developed to manage the business firm in uncertain and imperfect market conditions and environment. For forecasting, planning and formulation of financial policies, for generation and allocation of resources the finance manager is required to analyze changing market conditions and environment.
- (2) The strategy focuses as to how to compete in a particular product-market segment or industry. For framing strategy it is considered that the shareholders are not the only interested group; in the firm. There are many other influential constituent such as lenders, employees, customers, suppliers, etc. The success of a company depends on its ability to service in the product-market environment which is possible only when the company consider to maintain and improve its product-market positions. Such consideration have important implications for framing corporate financial policies.
- (3) The strategic management is multi-dimensional. It focuses on growth, profitability and flow of funds rather than only on the maximization of market value of shares. This focus helps the management to create enough corporate wealth for achieving market dominance and the ultimate successful survival of the company. It requires to frame financial policy keeping in view the interest of other parties such as government, employees, society etc. and not only of shareholders.

Hence, the financial policy of a company is closely linked with its corporate strategy. The company strategy establishes an efficient and effective match between its competencies and opportunities and environmental risks. Financial policies of a company should be developed in the context of its corporate strategy. Within the overall framework of the firm's strategy, there should be consistency between financial policies-investment, debt and dividend. For example, a company can sustain a high growth strategy only when investment projects generate high profits and it follows a policy of low payout and high debt.

### **Question 2**

*Write short note on Inflation and financial management.*

*(5 marks) (November, 1998)*

### **Answer**

**Inflation and financial management:** Financial management is basically concerned with the proper management of finance which is regarded as the life blood of business enterprise. The direct consequence of inflation has been to distort the significance of operating results and utility of financial statements (based on historical cost) for various managerial accounting and decision making purposes. Even though it is beyond the scope of finance manager to control inflation. He, however, tries to measure the impact of inflation on his business so as to re - orient various financial management policies according to the fast changing circumstances. Some of the prominent areas which are affected by inflation and are required to be re-oriented are as follows:

1. *Financing decisions:* This involves identifying the sources from which the finance manager should raise the quantum of funds required by a company. The debentureholder and preference shareholders are interested in fixed income while equity shareholders are interested in higher profits to earn high dividend. The finance manager is required to estimate the amount of profits he is going to earn in future. While

estimating the revenue and costs, he must take into consideration the inflation factor.

2. *Investment decisions:* The capital budgeting decisions will be biased if the impact of inflation is not correctly factored in the analysis. This is because the cash flows of an investment project occur over a long period of time. Therefore, the finance manager should be concerned about the impact of inflation on the project's profitability.
3. *Working Capital decisions:* The finance manager is required to consider the impact of inflation while estimating the requirements of working capital. This is because of the increasing input prices and manufacturing costs, more funds may have to be tied up in inventories and receivables.
4. *Dividend payout policy:* This involves the determination of the percentage of profits earned by the enterprise which is to be paid to the shareholders. While taking this decision, the finance manager has to keep in mind the inflation factor. Therefore, while making this decision he has to see that the capital of the company remain intact even after the payment of dividend. This is because in a inflationary situation the depreciation provided on the basis of historical costs of assets would not provide adequate funds for replacement of fixed assets at the expiry of their useful lives.

### Question 3

*Write short note on Inter-relationship between investment, financing and dividend decisions.*

*(5 marks) (November, 1999)*

### Answer

#### **Inter-relationship between investment, financing and dividend decisions:**

The finance functions are divided into three major decisions, viz., investment, financing and dividend decisions. It is correct to say that these decisions are inter-related because the underlying objective of these three decisions is the same, i.e. maximization of shareholders' wealth. Since investment, financing and dividend decisions are all interrelated, one has to consider the joint impact of these decisions on the market price of the company's shares and these decisions should also be solved jointly. The decisions to invest in a new project needs the finance for the investment. The financing decision, in turn, is influenced by dividend decision because retained earnings used in internal financing deprive shareholders of their dividends. An efficient financial management can ensure optimal joint decisions. This is possible by evaluating each decisions in relation to its effect on the shareholders' wealth.

The above three decisions are briefly examined below in the light of their inter-relationship and to see how they can help in maximizing the shareholders' wealth i.e. market price of the company's shares:

*Investment decision:* The investment of long term funds is made after a careful assessment of the various projects through capital budgeting and uncertainty analysis. However, only that investment proposal is to be accepted which is expected to yield at least so much return as is adequate to meet its cost of financing. This have an influence on the profitability of the company and ultimately on its wealth.

*Financing decision:* Funds can be raised from various sources. Each source of funds involves different issues. The finance manager has to maintain a proper balance between long-term and short-term funds. Within the total volume of long-term funds, he has to ensure a proper mix of loan funds and owners' funds. The optimum financing mix will increase return to equity shareholders and thus maximize their wealth.

*Dividend decision:* The finance manager is also concerned with the decisions to pay or declare dividend. He assists the top management in deciding as to what portion of the profit should be paid to the shareholders by way of dividends and what portion should be retained in the business. An optimal dividend pay-out ratio maximizes shareholders' wealth.

The above discussion makes it clear that investment, financing and dividend decisions are interrelated

and are to be taken jointly keeping in view their joint effect on the shareholders' wealth.

#### **Question 4**

*Write short note on Current cost accounting method adjusting financial statements.*

*(5 marks) (November, 1999)*

#### **Answer**

##### **Current cost accounting method adjusting financial statements:**

It is a well-known method of adjusting financial statements according to changing price level i.e., inflation. Generally, two main accounting problems are encountered when there is severe inflation in the economy. These are:

- (a) How to adjust profit/loss shown by conventional profit and loss statement so that it shows a realistic operating result; and
- (b) How to reflect the shareholders' investment (or the net assets) more truly.

Under the inflationary condition, if financial statements are prepared under conventional accounting system, profit figure is overstated and financial position understated. In order to remove these limitations, items of the financial statements are brought to their current values using specific price index. It thus requires the following adjustments:

- (i) Depreciation adjustment
- (ii) Cost of sales adjustment
- (iii) Monetary working capital adjustment
- (iv) Gearing adjustment.

As a result of these adjustments, fixed assets are shown in the Balance Sheet at their current value and not at their depreciated original cost value. Similarly, stocks are shown at their value to the business and not at the lower of cost or market value.

It thus enables a realistic assessment of performance (accounting and economic profit will not differ) and helps in making a better comparison of two companies set-up at different points of time, makes the rate of return more meaningful, provides a more meaningful information for investment and credit decisions, and prevents distortion in share prices.

#### **Question 5**

*Write short note on Impact of corporate taxation on corporate financing. (5 marks) (May 2000)*

#### **Answer**

##### **Impact of corporate taxation on corporate financing:**

Tax is levied on the profits of the company. Tax is also levied on the dividends payable by a company. This dividend tax is in addition to the corporate tax payable by a company. Thus the corporate entity suffer tax twice. This pushes the cost of equity capital. On the other hand interest paid on the debt capital is a deductible expenditure and hence company does not pay tax on interest on debt capital. This reduces the cost of debts. Debt is a less costly source of funds and if the finance manager prudently mixes debt and equity, the weighted average cost of capital will get greatly reduced.

Depreciation is not an outgo in cash but it is deductible in computing the income subject to tax.

There will be saving in tax on depreciation and such savings could be profitably employed. Thus, both interest and depreciation provide tax shield and have a tendency to increase EPS. Further, the unabsorbed depreciation can be carried forward indefinitely and this will be helpful for loss making concerns which start earning profits in future. The business loss and depreciation loss of one

company can be carried forward and set off in another company's profit in case of amalgamations in specified circumstances and such a provision will help in the growth of companies and rehabilitation of sick units. The finance manager of amalgamating company will bear this benefit for tax shield it carries in planning the activities.

Thus, the impact of tax will be felt in cost of capital, earnings per share and the cash in flows which are relevant for capital budgeting and in planning the capital structure.

Tax considerations are important as they affect the liquidity of the concerns. They are relevant in deciding the leasing of assets, transactions of sale and lease back, and also in floating joint venture in foreign countries where tax rates and concessions may be advantageous. Tax implications will be felt in choosing the size and nature of industry and incentives are given for backward areas. Tax considerations in these matters are relevant for purposes of preserving and protecting internal funds.

### Question 6

*Write short notes on*

(a) *Effect of Inflation on Inventory Management.*

(b) *Advantage of Debt Securitisation.*

(5 + 5 = 10 marks) (May 2001)

### Answer

**(a) Effect of Inflation on Inventory Management:** The main objective of inventory management is to determine and maintain the optimum level of investment in inventories. For inventory management a moderate inflation rate say 3% can be ignored but if inflation rate is higher it becomes important to take into consideration the effect of inflation on inventory management. The effect of inflation on goods which the firm stock is relatively constant can be dealt easily, one simply deducts the expected Annual rate of inflation from the carrying cost percentage and uses this modified version in the EOQ model to compute the optimum stock. The reason for making this deduction is that inflation causes the value of the Inventory to rise, thus offsetting somewhat the effects of

depreciation and other carrying cost factors. Since carrying cost will now be smaller, the calculated EOQ and hence the average Inventory will increase. However, if rate of inflation is higher the interest rates will also be higher, and this will cause carrying cost to increase and thus lower the EOQ and average inventories.

Thus, there is no evidence as to whether inflation raises or lowers the optimal level of Inventories of firms in the aggregate. It should still be thoroughly considered, however, for it will raise the individual firm's optimal holdings if the rate of inflation for its own inventories is above average and is greater than the effects of inflation on interest rates and vice-versa.

**(b) Advantage of Debt Securitisation:** Debt securitisation is a method of recycling of funds and is especially beneficial to financial intermediaries to support lending volumes. Simply stated, under debt securitisation a group of illiquid assets say a mortgage or any asset that yields stable and regular cash flows like bank loans, consumer finance, credit card payment are pooled together and sold to intermediary. The intermediary then issue debt securities.

The advantages of debt securitisation to the originator are the following:

1. The assets are shifted off the Balance Sheet, thus giving the originator recourse to off-balance sheet funding.
2. It converts illiquid assets to liquid portfolio.
3. It facilitates better balance sheet management, assets are transferred off balance sheet facilitating satisfaction of capital adequacy norms.
4. The originator's credit rating enhances.

For the investors securitisation opens up new investment avenues. Though the investor bears the credit risk, the securities are tied up to definite assets.

### Question 7

*Write short note on Economic Value Added method (EVA). (5 marks) (November, 2001)*

### Answer

**Economic Value Added method (EVA):** It is defined in terms of returns earned by the company in excess of the minimum expected return of the shareholders. EVA is calculated as follows:

$$\text{EVA} = \text{EBIT} - \text{Taxes} - \text{Cost of funds employed} = \text{Net operating profit after taxes} - \text{Cost of Capital employed.}$$

Where, net operating profit after taxes = Profit available to provide a return to lenders and the shareholders.

$$\text{Cost of Capital employed} = \text{Weighted average cost of capital} \times \text{Capital employed}$$

EVA is a residual income which a company earns after capital costs are deducted. It measures the profitability of a company after having taken into account the cost of all capital including equity. Therefore, EVA represents the value added to the shareholders by generating operating profits in excess of the cost of capital employed in the business. EVA

increases if:

- (i) Operating profits grow without employing additional capital.
- (ii) Additional capital is invested in projects that give higher returns than the cost of incurring new capital and
- (iii) Unproductive capital is liquidated i.e. curtailing the unproductive uses of capital.

In India, EVA has emerged as a popular measure to understand and evaluate financial performance of a company. Several Companies have started showing EVA during a year as a part of the Annual Report. Infosys Technologies Ltd. and BPL Ltd. are a few of them.

### Question 8

*Discuss briefly the impact of taxation on Corporate Financial Management.*

*(4 marks) (May 2002)*

### Answer

#### **The Impact of taxation on Corporate Financial Management:**

The tax payments represent a cash outflow from business and therefore, these tax cash outflows are critical part of the financial decision making in a business. Taxation affects a firm in numerous ways, the most significant effects are as under:

1. *Tax implications and Financial Planning:* While considering the financial aspects or arranging the funds for carrying out the business, the tax implications arising therefrom should also be taken into account. The Income of all business undertakings is subject to tax at the rates given in Finance Act.  
  
The weighted average cost of capital is reduced because interest payments are allowable for computing taxable income.
2. Where a segment of the firm incurs loss, but the firm gets overall profits from other segments, loss of loss making segment will reduce the overall tax liability of the firm by set off of losses.
3. The Income Tax Act allows depreciation on machinery, plant, furniture and buildings owned by

the assessee and used by him for carrying on his business, occupation, profession. This depreciation is allowed for full year if an asset was used for the purposes of business or profession for more than 180 days. Unabsorbed depreciation can be carried forward indefinitely. Further, depreciation will also be available on intangible assets acquired on or after 1.4.1998 owned by the assessee and used for the purpose of his business.

4. *Capital Budgeting decisions:* The setting up of a new project involves consideration of the tax effects. The decision to set up a project under a particular form of business organisation, at a particular place, choice of the nature of the business and the type of activities to be undertaken etc. requires that a number of tax considerations should be taken into account before arriving at the appropriate decision from the angle of sound

financial management. The choice of a particular manufacturing activity may be influenced by the special tax concessions available such as

- (i) Higher depreciation allowance
- (ii) Amortisation of expenditures on know-how, scientific research related to business, preliminary expenses, etc.
- (iii) Deductions in respect of profit derived from the publications of books etc. (iv)

Deductions in respect of profit derived from export business.

#### **Question 9**

*Distinguish between Factoring and Bill discounting.*

*(2 marks) (May 2002)*

#### **Answer**

**Factoring and Bill discounting:** The main differences between Factoring and Bill discounting are:

- (1) While factoring is management of book-debts, bill discounting is a sort of borrowing from commercial banks.
- (2) In factoring no grace period is given, whereas in bill discounting grace period is 3 days. (3) For factoring there is no Specific Act, whereas in case of bill discounting Negotiable Instruments Act applies.
- (4) Factoring is a portfolio of complementary financial services whereas bill discounting is usually on case to case basis.
- (5) In factoring the basis of financing is turnover. Whereas in bill discounting it is the security provision as well as the requirement of finance which determine the amount of financing.
- (6) In factoring the risk of bad debts is passed on to the factor, whereas in bill discounting it is still retained by the business.

#### **Question 10**

*Write short notes on*

- (i) *Curvilinear Break-even-Analysis*
- (ii) *Financial Intermediation*
- (iii) *Financial Engineering*
- (iv) *Shareholder Value Analysis*
- (v) *Sustainable Growth Rate*

*(5 × 4 = 20 marks) (May 2002)*

#### **Answer**

- (i) **Curvilinear Break-even-Analysis:** Under marginal costing approach, the main

assumption is that selling price and variable cost per unit will remain constant at any level of activity. The basic assumption is that of cost-volume-profit relationship is linear.

The practical business scene, increased sales-volume may be obtained by offering price concessions to customers. The costs behave variedly due to economies of scale. The effect of the decreasing price per unit with increase in demand and the increasing cost per unit due to diminishing returns is to have a profit figure that increases upto a point and then decreases until it is converted into a loss. The break-even chart, therefore, becomes curvilinear instead of linear model. In the curvilinear model, the optimum production level is where the total revenue line exceeds the total cost line by the largest amount.

- (ii) **Financial Intermediation:** it involves financial institutions acquiring funds from the public by issuing their own instruments and then using the funds to buy primary securities. It is a sort of indirect financing in which savers deposit funds with financial institutions rather than directly buying bonds and the financial institutions, in turn, lend to the ultimate borrowers.

Financial intermediaries are in a better position than individuals to bear and spread the risks of primary security ownership. Because of their large size, intermediaries can diversify their portfolios and minimize the risk involved in holding any security. They employ skilled portfolio managers, possess expertise in evaluation of borrower credit characteristics and take advantage of economies in large scale buying and selling.

Financial Intermediaries are firms that provide services and products that customers may not be able to get more efficiently by themselves in the financial market. A good example of a financial intermediary is a mutual fund, which pools the financial resources of a number of people and invests in a basket of securities.

- (iii) **Financial Engineering:** 'Financial Engineering' involves the design, development and implementation of innovative financial instruments and processes and the formulation of creative solutions to problems in finance. Financial Engineering lies in innovation and creativity to promote market efficiency. It involves construction of innovative asset-liability structures using a combination of basic instruments so as to obtain hybrid instruments which may either provide a risk-return configuration otherwise unviable or result in gain by heading efficiently, possibly by creating an arbitrage opportunity. It is of great help in corporate finance, investment management, money management, trading activities and risk management.

Over the years, Financial Managers have been coping up with the challenges of changing situations. Different new techniques of financial analysis and new financial instruments have been developed. The process that seeks to adopt existing financial instruments and develop new ones so as to enable financial market participants to cope more effectively with changing conditions is known as financial engineering.

In recent years, the rapidity with which corporate finance and investment finance have changed in practice has given birth to a new area of study known as financial engineering. It involves use of complex mathematical modeling and high speed computer solutions. Financial Engineering refers to and includes all this. It also involves any moral twist to an existing idea and is not limited to corporate finance. It has been practised by commercial banks in offering new and tailor made products to different types of customers. Financial engineering has been used in schemes of merges and acquisitions.

The term financial engineering is often used to refer to risk management also because it involves a strategic approach to risk management.

- (iv) **Shareholder Value Analysis:** SVA is an approach to Financial Management developed in 1980s. Which focuses on the creation of economic value for shareholders, as measured by share price performance and flow of funds. SVA is used as a way of linking management

strategy and decisions to the creation of value for shareholders. The factors, called 'value drivers' are identified which will influence the shareholders' value. They may be – growth in sales, improvement in profit margin, capital investment decisions, capital structure decisions etc. The management is required to pay attention to such value drivers while taking investment and finance decisions. SVA helps the management to concentrate on activities which create value to the shareholders rather than on short-term profitability.

### Question 11

*Explain what is meant by 'Debt securitisation'.*

*(6 marks)(May 2004)*

### Answer

Debt securitisation is the process by which financial assets such as loan receivables, mortgage backed receivables, credit card balances, hire-purchase debtors, lease receivables, trade debtors, etc., are transformed into securities. Debt Securitisation is different from 'factoring'. 'Factoring' involves transfer of debts without transformation thereof into securities. A securitisation transaction, normally, has the following features:

Financial assets such as loan assets, mortgages, credit card balances, hire -purchase debtors, trade debtors, etc., or defined rights therein, are transferred, fully or partly, by the owner (the Originator) to a Special Purpose Entity (SPE) in return for an immediate cash payment and/or other consideration. The assets so transferred are the 'securitised assets' and the assets or rights, if any, retained by the Originator are the 'retained assets'.

The SPE finances the assets transferred to it by issue of securities such as Pass Through Certificates (PTCs) and/or debt securities to investors.

A usual feature of securitisation is 'credit enhancement', i.e. an arrangement which is designed to protect the holders of the securities issued by an SPE from losses and/or cash flow mismatches arising from shortfall or delays in collections from the securitised assets. The arrangement often involves one or more of the following:

*Provision of cash collateral*, i.e., a deposit of cash which in specified circumstances can be used by the SPE for discharging its financial obligation in respect of the securities held by the investors.

*Over collateralisation*, i.e., making available to the SPE assets in excess of the securitised assets, the realisation of which can be used in specified circumstances to fund the shortfalls and/or mismatches in fulfillment of its financial obligations by the SPE.

*Resource obligation accepted by the Originator.*

*Third party guarantee*, i.e., a guarantee given by a third party by accepting the obligation to fund any shortfall on the part of the SPE in meeting its financial obligations in respect of the securitisation transaction.

*Structuring of the instruments issued by an SPE into senior and subordinated securities* so that the senior securities (issued to investors) are cushioned against the risk of shortfalls in realization of securitised assets by the subordinated securities (issued normally to the Originator). Payments on subordinated securities are due only after the amounts due on the senior securities are discharged.

The Originator may continue to service the securitised assets (i.e., to collect amounts due from borrowers, etc.) with or without servicing fee for the same.

The Originator may securities or agree to securities future receivables, i.e., receivables that are not existing at the time of agreement but which would be arising in future. IN case of such securitisation, the future receivable are estimated at the time of entering into the transaction and the purchase

consideration for the same is received by the Originator in advance. Securitisation can also be in the form of 'Revolving Period Securitisation' where future receivables are transferred as and when they arise or at specified intervals; the transfers being on prearranged terms.

Debt securitisation is thus a financial market process by which individual /retail debts are pooled and restructured into a security instrument. Such restructured instrument assumes appropriate personality to be recognized in a larger market, bought and sold.

Essentially, there are three phases in a securitisation process:

- (i) *The origination phase:* In this phase, a borrower seeks a loan from a financial institution. The latter assesses the creditworthiness of the borrower, determines the terms and conditions and extends the loans.
- (ii) *The pooling phase:* Many small loans are pooled together to create an underlying pool of receivables/assets.
- (iii) *The securitisation phase:* The pooled assets are often transferred to a Special Purpose Vehicle (SPV) which structures the market security based on the underlying pool. The SPV issues pass through securities or some other types of securities to beneficiaries (retail investors).

Securitisation helps to reduce the cost of capital and improves recycling of funds. Usually SPV takes the form of a trust.

### **Question 13**

*Write brief notes on Leveraged Buyouts (LBOs).*

*(4 Marks) ( May, 2007)*

### **Answer**

#### *Leveraged Buyouts (LBOs)*

- (1) A popular technique that was widely used during the 1980s to make acquisition is the leveraged buyouts, which involves the use of a large amount of debt to purchase a firm.
- (2) While some leveraged buyouts involve a company in its entirety, most involve a business unit of a company. After the buyout, the company invariably becomes a Private Company.
- (3) A large part of the borrowing is secured by the firms assets, and the lenders, because of a high risk, take a portion of the firms equity. Junk bonds have been routinely used to raise amounts of debt needed to finance the LBO transaction.
- (4) The success of the entire operation depends on their ability to improve the performance of the unit, contain its business risk, exercise cost controls and liquidate disposable assets. If they fail to do so, the high fixed financial costs can jeopardize the venture.
- (5) An attractive candidate for acquisition through leveraged buyout should possess three basic attributes:
  - (a) It must have a good position in its industry with a solid profit history and reasonable expectations of growth.
  - (b) The firm should have a relatively low level of debt and a high level of bankable assets that can be used as loan collateral.
  - (c) It must have a stable and predictable cash flows that are adequate to meet interest and principal payment on the debt and provide adequate working capital.

Of course, a willingness on the part of existing ownership and management to sell the company on a leveraged basis is also needed.

#### Question 14

*What do you mean by 'Financial Engineering'? State its significance in the present regime of globalization. ( 6 marks) ( Nov 2008)*

#### Answer

##### **FINANCIAL ENGINEERING:**

"Financial Engineering" involves the design, development and implementation of innovative financial instruments and processes and the formulation of creative solutions and problems in finance. Financial engineering lies in innovation and creativity to promote market efficiency. It involves construction of innovative asset-liability structures using a combination of basic instruments so as to obtain hybrid instruments which may either provide a risk-return configuration otherwise unviable or result in gain by heading efficiently, possibly by creating

an arbitrage opportunity. It is of great help in corporate finance, investment management, trading activities and risk management.

Over the years, Financial managers have been coping up with the challenges of changing situations. Different new techniques of financial analysis and new financial instruments have been developed. The process that seeks to adopt existing financial instruments and develop new ones so as to enable financial market participants to cope more effectively with changing conditions is known as financial engineering.

In recent years, the rapidity with which corporate finance and investment finance have changed in practice has given birth to new area of study known as financial engineering. It involves use of complex mathematical modeling and high speed computer solutions. Financial engineering includes all this. It also involves any moral twist to an existing idea and is not limited to corporate finance. It has been practiced by commercial banks in offering new and tailor made products to different types of customers. Financial engineering has been used in schemes of merger and acquisitions.

The term financial engineering is often used to refer to risk management.

#### Question 15

*Write short notes on the following:*

- (a) *Venture capital financing*
- (b) *Inter-bank participation certificate*
- (c) *Distinction between Money market and Capital market*
- (d) *Credit cards as part of Consumer finance*
- (e) *Stock Lending Scheme.*

*(4 x 5 = 20 Marks)( May, 2008)*

#### Answer

- (a) Venture capital financing refers to financing of new high-risk ventures promoted by qualified entrepreneurs who lack experience and funds to give shape to their ideas. A venture capitalist invests in equity or debt securities floated by such entrepreneurs who undertake highly risky ventures with a potential of success.

Common methods of venture capital financing include:

- (i) **Equity financing:** The undertaking's requirements of long-term funds are met by contribution by the venture capitalist but not exceeding 49% of the total equity capital;
- (ii) **Conditional Loan:** Which is repayable in the form of royalty after the venture is able to generate sales;

(iii) **Income Note:** A hybrid security combining features of both a conventional and conditional loan, where the entrepreneur pays both interest and royalty but at substantially lower rates;

(iv) **Participating debenture:** The security carries charges in three phases – start phase, no interest upto a particular level of operations; next stage, low interest; thereafter a high rate.

(b) **Inter-bank Participation Certificate (IBPC):** This is a Money Market instrument to even out the short-term liquidity within the banking system. It is issued by a bank requiring funds and is subscribed to by another bank wanting to deploy surplus funds. It is issued against an underlying 'standard' advance and during the term of participation should always be covered by the outstanding balance in the account concerned.

IBPC can provide advantage to both the issuing bank and the participating bank. To the issuing bank it provides an opportunity to obtain funds against its advances without actually diluting the asset portfolio. To the participating lender-bank it provides an opportunity to deploy short-term funds profitably against assets qualified for bank funding.

IBPC is an instrument that has to comply with Reserve Bank of India's norms and can be issued by any scheduled commercial bank. IBPC's can be issued in two types – one with risk to the lender and the other without risk to the lender. If it is with risk to the lender, the issuing bank will reduce the amount of participation from the advances outstanding and the participating bank will show the participation as part of its advances. When the issue is without risk passing on, the issuing bank will show the participation as borrowings from banks and the participating bank will show it as advances to other banks. Inter-bank Participation Certificates are short-term instruments to even out issues of short-term liquidity within the banking system.

The primary objective is to provide some degree of flexibility in the credit portfolio of banks.

(c) There is a basic difference between the money market and capital market. The operation in the money market are for a duration upto one year and deals in short term financial assets whereas in the capital market operations are for a larger period beyond one year and therefore deals in medium and long term financial assets. Secondly, the money market is not a well-defined place like the capital market where business is normally done at a defined place like a stock-exchange. The transactions in the money market are done through electronic media and other written documents.

(a) In the capital market, there is a classification between primary market and secondary market. There is no such sub-division of the money market. Lately, however issues are afoot to develop a secondary money market.

(b) Capital market deals for fund requirements of a long-term whilst money market generally caters to short-term requirements.

(c) The quantum of transactions in the capital market is decidedly not as large as in the money market.

(d) The type of instruments dealt in the money market are like inter bank call money, notice money upto 14 days, short-term deposits upto three months, 91 days/182 days treasury bills, commercial paper etc.

(e) The players in the capital market are general/retail investors, brokers, merchant bankers, registrars to the issue, under-writers, corporate investors, FIIs and bankers while the money market participants are the Government, Reserve Bank of India and the banks.

(d) Credit cards are a simple and convenient means of access to short term credit for consumers. They enable the consumer to:

- (a) Dispense with using cash for every transaction. (b) Make Monthly payments.
- (c) No interest charges if paid on due date every month. (d) Insurance benefits are available.
- (e) Special discounts can be availed which are not applicable on cash transactions.
- (f) For high value purchases the consumer can use the roll over facility and pay for his purchases in instalments.

The disadvantages of credit cards are:

- (a) The consumer commits his future income.
- (b) If not used wisely the consumer lands into a debt trap.
- (c) The rate of interest on credit cards for long term finance (roll over) is around 40% per annum.

(e) In stock lending, the legal title of a security is temporarily transferred from a lender to a borrower. The lender retains all the incidents of ownership, other than the voting rights. The borrower is entitled to use the securities/shares as required but is liable to the lender for all benefits such as dividends, interest, rights etc. The stock lending scheme is a means to cover short sales viz., selling shares without possessing them.

The procedure is used by the lenders to maximize yield on their portfolio. Incidentally, borrowers use the shares/securities lending programme to avoid settlement failures.

Securities/stock lending provides income opportunities for security-holders and creates liquidity to facilitate trading strategies among borrowers. Stock lending is particularly attractive for large institutional areas, as this is an easy way of generating income to off - set custody fees and requires little, if any, of their involvement or time.

Stock lending gives borrowers access to tender portfolios which provide the flexibility necessary when borrowing for strategic posturing and financing inventories. From the point of view of market, stock lending and borrowing facilitates timely settlement, increases the settlements, reduces market volatility and improves liquidity.