



STUDY NOTE - 6

INVESTMENT DECISIONS

SECTION - 1

COST, BENEFITS AND RISKS ANALYSIS FOR PROJECTS

This Section includes

- **Investment Appraisal**
- **Investment Appraisal Methods**

1.1. INVESTMENT APPRAISAL

- 1.1.1 One of the key analysis in long-term decision-making that firms must tackle is that of cost benefit analysis before a decision is taken to commit funds by purchasing land, buildings, machinery and so on, in anticipation of being able to earn an income greater than the funds committed. In order to handle these decisions, firms have to make an assessment of the size of the outflows and inflows of funds, the lifespan of the investment, the degree of risk attached, the cost of obtaining funds and return thereon. Decisions on investment, which take time to mature, have to be based on the returns which the investments will make. Capital budgeting is obviously a vital activity in business. Vast sums of money can be easily wasted if the investment turns out to be wrong or uneconomic.
- 1.1.2 The main stages in the capital budgeting cycle can be summarised as follows:
1. Identifying project(s).
 2. Forecasting investment needs.
 3. Appraising the suitable alternatives.
 4. Selecting the best out of alternatives.
 5. Committing the expenditure.
 6. Monitoring the project at periodical intervals
 7. variance analysis; and
 8. timely corrective steps.
- 1.1.3 Investment appraisal involves appraising the investment alternatives and selecting the best alternatives.



INVESTMENT DECISIONS

- 1.1.4 Capital expenditure projects can be classified into four broad categories:
- New Projects
 - Modernisation - replacing old or obsolete assets to keep pace with technology for productivity improvement.
 - Expansion - increasing capacity of existing products to meet increase in demand;
 - Diversification – exploring new lines of business.
- 1.1.5 Even the projects that are unlikely to generate profits should be subjected to investment appraisal. This should help to identify the best way of achieving the project's aims. For instance, investment appraisal may help to find the cheapest way to provide a new staff canteen, even though such a project may be unlikely to earn profits for the company.

1.2. INVESTMENT APPRAISAL METHODS

- 1.2.1 One of the most important steps in the capital budgeting cycle is working out if the benefits of investing large capital sums outweigh the costs of these investments. The range of methods that business organizations use can be categorised one of two ways: traditional methods and discounted cash flow techniques. Traditional methods include the Average Rate of Return (ARR) and the Payback method; discounted cash flow (DCF) methods use Net Present Value (NPV) and Internal Rate of Return techniques.
- 1.2.2 Various aspects of the above investment appraisal techniques and risk analysis have been discussed in detail in Module 2.
- 1.2.3 Linking investment with customer requirements: Investment decisions must be related to the competitive advantage of the firm. The investments in technology or expansion or modernization etc must result in customer value creation. This is possible only if a firm constantly stays focused on customer value discovery and creation. The competitive advantage of a company can be sustained only by continuous creation of customer value. The competition among firms is only for delivering a better customer value when compared to that of competitors. The key challenge for a firm is to choose the right investment that will ensure better customer value. Thorough market intelligence is of paramount importance for taking an investment decision.
- 1.2.4 The process of customer value creation starts with customer value discovery. This means that a firm should be listening to the customer's voice. There has to be systems and procedures for capturing the customer's requirements. It will include market research, focus group interviews and constant engagement and interaction management. There has to be a systematic way of capturing this voice. This exercise is done for identification of value gap i.e. in the current product features, where is the value gap for the customer.
- 1.2.5 When once this is done, the R & D department has to design and develop a prototype for mass production. Here, the company needs project management skills. It is a very

scientific way of orchestrating all the resources and managing the time to market efficiently. The company has to think long term for identification of opportunities for competitive advantage. Sometimes, take over of another company may be a good investment opportunity. Similarly, forward integration or backward integration may be adding to competitive advantage through enhanced customer value.

- 1.2.6 Designing capital structure: When once the new investment opportunities have been identified, the firm needs to design an appropriate capital structure for funding the project. Here there are several options. If the company is reasonably sure of the success of the project, its profitability and its cash flows, the company may use more of debt. If the project is conceived as a new idea, the company can approach Venture Capital Funds or Private Equity funds. The company can also raise funds through the Initial Public Offering or Seasonal Public Offering. Optimum capital structure is hard to define. There has been a lot of debate about this in the finance literature. Debt is certainly a low cost fund compared to equity from the perspective of risk and return. Debt cost is also lower due to the tax shield offered by way of interest. Equity cost is determined by the capital asset pricing model. If we go on substituting high cost equity with low cost debt, the weighted average cost of capital will be very low with 90% debt and 10% equity. But, the point to be noted is that beyond a certain point, every additional unit of debt will increase the cost of debt due to the threat of bankruptcy as debt involving fixed commitment becomes a threat in times of lower profitability. There is also a theory of matching the capital structure of a company to the product life cycle and investments.
- 1.2.7 Long Term and Short Term investment decisions and matching similar funds for the projects is very essential to avoid Asset Liability mis-match. ALM is one of the key functions of a finance person in any company.
- 1.2.8 Taxation is an important aspect that needs to be considered in the feasibility analysis of projects. For example, setting up factories in backward areas will entitle a tax holiday for a firm which can save a lot of money. Similarly, starting a firm in Free Trade Zone or locating the factory in a Tax Haven country etc are ways of tax planning which can significantly alter the economics of a project. Of late, Special Economic Zones are gaining importance due to special tax concessions enjoyed by them.