[Academic Script]

Investment Decision

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1. Introduction

Investment decision

The focus of financial management is not just the procurement of funds but its efficient utilisation also. The decisions which are related to selecting and acquiring of assets are known as Investment decisions. These decisions guide the investment policy of the firm.

Financial manager has to allocate the funds efficiently. The right mix of assets is very important for the company. When investments is done in fixed assets, it is studied under capital budgeting and when investments are made in current assets, it is studied under working capital management.

The investments in fixed assets or long term assets involves substantial outflow and are irreversible that is these decisions cannot be reversed easily. These decisions have a long-lasting impact on the firm and hence should be taken very carefully. These decisions deals with the right mix of fixed assets and current assets.

Fixed assets are those assets that are permanent in nature and having a life expectancy of more than one year. On the other hand, the current assets are those assets which are to be converted into cash within a short duration that is less than a year and which is required for management of day to day business. Too much investment in fixed assets results in profitability as fixed assets are the earning assets of the company whereas excessive investment in current assets results in too much of liquidity. The right investment policy should be one which strikes a right balance between profitability and liquidity. It is a challenge for the company to allocate the limited funds as investment decisions are very complex and hence these decisions assume a lot of importance. The most important aspect of investment decisions is the capital budgeting decisions.

The choice is to be made among the various available alternatives. When a firm has to decide about which investment projects it should undertake, it is known as capital budgeting decisions. Capital budgeting can also be defined as the firm's decisions to invest its current funds most efficiently in the long term assets in anticipation of an expected flow of benefits over a series of years.

Capital budgeting helps in the identification, analysis and selection of the best alternative whose returns extends beyond one year on the basis of Net Present value.

There are various kinds of capital budgeting decisions: Accept reject Decision or independent proposals, the mutually exclusive choice decision, the capital rationing decision and contingent investments.

Accept Reject or independent decisions:

The accept reject decision is the evaluation of the investment proposal to determine if it meets the minimum acceptance criterion. All the projects which meet this criterion can be accepted as independent projects which are independent of one another.

MUTUALLY EXCLUSIVE: Mutually exclusive proposals are those proposals in which acceptance of one alternative preclude the acceptance of others.

These proposals compete with each other. The proposal with the highest NPV would be accepted. In other words the projects do not depend upon each other. For example, suppose a company wants to install a water purification plant and say there are four alternatives for the same then choice of one will automatically reject the other options.

Capital Rationing: Capital Rationing is the situation which arises when the firm has limited funds and cannot invest in all the projects which meet the minimum criterion. Thus capital rationing refers to a situation in which a firm has more acceptable investments than it can finance.

In simple words, sometimes the firm may not have adequate funds to invest in all the proposals with positive NPV and in such a case NPV does not present the right decision and in such case Profitability index gives the right decision as it is a relative measure. A firm when finds itself with limited funds planning with ample of investment options then it is known as capital rationing. Under capital rationing, the management has to build up a combination of projects in such a way that it maximizes the Net present value by the allocation of limited funds.
According to Bierman and Smidt (1975) there are two types of capital rationing :
External capital rationing and
Internal capital rationing.
External capital rationing occurs due to imperfections in capital markets. By imperfections we mean, the rigidities that hamper the free flow of capital.

In case of Internal capital rationing there are internal restrictions imposed by the management.

Contingent Investment: Contingent projects are dependent investments which are undertaken to support the main project. For eg, location of a factory in a backward area may require the company to undertake supplementary projects such as building of quarters for the employees, construction of roads, hospitals, schools.

On the basis of firm's existence the capital budgeting decisions can also be grouped as cost reduction decisions and revenue expanding decisions.

In the cost reduction decisions we have, replacement decisions and modernisation decisions whereas in case of revenue expansion we have expansion, diversification and set up of new business decisions.

Replacement decisions are those decisions which are related to replacing of a fixed asset as fixed asset's economic life is expired or it has become obsolete. Such decisions improve the operating efficiency and helps in the reduction of cost.

In the competitive world, companies have to improve their operating efficiency and reduce costs, for which they require to go for modernization of existing machines, plants and facilities.

Replacement and modernization decisions improves the yield and quality of the product.

When the company's decision results into the increase in the production capacity, they are known as expansion decisions. Project expansion generally requires more careful analysis. For eg, increase in capacity utilisation of a firm.

Developing new products in unrelated lines is known as diversification decisions. Diversification is spreading of risk across a number of assets. Diversification are mainly of two types:

Concentric: A company deciding to enter into similar business segment for eg, a company manufacturing liquid soaps plans to manufacture shampoos is concentric diversification.

Conglomerate: A firm decides to enter into totally a new and unrelated business area for eg, ITC having its presence in various kinds of business such as cigarettes, stationery, home care products and so on.

2. PROCESS OF CAPITAL BUDGETING

The process of capital being may be divided into six broad phases/ steps.,

- Idea Generation
- Analysis of alternatives
- Selection of Alternatives
- Financing of Alternative
- Execution and Implementation
- Review

Idea Generation: A firm has to look for all the proposals which show potential. The ideas are generated from various sources and investment proposals pop up. Identification of a new valuable project is a multifaceted and complex exercise.

Analysis of alternatives: Financial, technical, operational and marketing feasibility is a must for the success of the investment proposal. The analysis would mean collecting of all the relevant information about the various alternatives and its cost benefit analysis.

Selection of alternatives: After the careful evaluation of proposals, the firm has to select the proposals for actual investments. While selecting the projects, the objective of financial management that is maximisation of shareholders wealth should be given due consideration. Only those proposals should be selected which leads to the maximisation of shareholder's wealth. The projects with highest NPV should be selected and in case of capital rationing, Profitability index should be the decision criterion. The risk involved should also be considered before selecting the project.

Financing of Alternative: Once the project alternative is chosen, the next step is arranging of finance. The amount required to finance the project is known as capitalization and the sources through which the finance is to be raised will form its capital structure. The two broad sources of financing are the equity and debt. Equity includes shareholder's funds- paid up share capital, share premium, and retained earnings. Debt includes loan funds, debentures and working capital advances. While financing, various factors affecting capital structure should be considered.

Execution and Implementation: Conversion of plans into implementation is most important stage of capital budgeting. The project techniques like PERT and CPM are very much helpful in the implementation of the project as per the time schedule and at pre decided cost.

Review of the project: Review is the important aspect of control. Time to time review is important for the successful implementation of the project. Actual performance should be compared with the standard performance.

3. Concept of Cash Flows and its Estimation

Cash Flows are the key element in Investment evaluation. The cash flow approach of measuring future benefits of a project is superior to the Accounting profit approach as accounting profit is a very vague term. There are various types of cash flows

- Conventional Cash Flows
- Non Conventional cash Flows
- Relevant cash flows
- Incremental cash flows

Conventional cash flows are those cash flows which involves cash outflows followed by cash inflows.

Non Conventional cash flows: It refers to the cash flow pattern in which an initial cash outlay is not followed by a series of inflows.

Relevant cash flow: It is the incremental after tax cash outflow and resulting subsequent inflows associated with a proposed capital expenditure (M Y Khan, PK Jain "Financial Management", fifth edition,Tata Mc Graw hill publishing company ltd. Pg 9.8)

Incremental cash flows: It is the additional cash flows expected to result from a proposed capital expenditure (M Y Khan, PK Jain "Financial Management", fifth edition,Tata Mc Graw hill publishing company ltd. Pg 9.8)

Estimating cash flows is the most important step in capital budgeting. In order to evaluate a project, the relevant cash flows needs to be determined. Relevant here means the incremental after tax cash flows associated with the project. The cash flows for a investment proposal constitutes of three elements

- Initial investment in a project
- Operating cash inflows
- Terminal cash inflows

The initial investment is the after tax cash outlay and the net working capital (Financial Management Theory and Practice, eighth edition Prasanna Chandra p306). It is the cash outflow in the period in which the project or asset is purchased. This also includes the installation cost and any changes in the working capital requirement.

The operating cash inflows are the after tax cash inflows resulting from the operations of the project during the economic life of the project. As the investment is expected to generate a series of future cash inflows which needs to be adjusted for depreciation and taxes. Depreciation is added back as it is a non cash expense as no cash actually goes out on account of depreciation. All the other cash expenses needs to be deducted from sales revenue.

Now the question is how to determine it?

Operating expenses needs to be deducted from the sales revenue to get EBDT that is Earnings before depreciation and taxes. In the next step depreciation is to be deducted and then the tax to obtain EAT that is Earnings after tax. Now, Depreciation is added back to get CFAT that is cash flow after tax but before depreciation.

The terminal cash inflow is the after tax cash flow resulting from the liquidation of the project at the end of its economic life. In the replacement situation, the sale of the old asset will impact the cash flows.

Lets understand the determination of cash flows with the help of a numerical example:

Cash flows: Single proposal

A company is purchasing plant and equipment for Rs 500000 for which it incurs Rs 10000 as installation charges and the requirement of working capital is increased by Rs 5000. Find the outflow associated with the project

Cost of Plant and Equipment	Rs 500000
Add Installation cost	Rs 10000
Add Increase in working capital	Rs 5000
Total outflow	Rs 515000.

Cash Flows for replacement situation

In the case of replacement of an existing asset by the new one , the relevant cash outflows would be calculated by adjusting the sale proceeds of the old asset.

Example: If a company purchases a new asset worth Rs 1000000 whose installation charges are Rs 50000 and the decrease in working capital is by Rs 5000. The old asset is sold for Rs 30000. Find the net cash outflow.

Cost of new asset	1000000
Add Installation charges	50000
Less decrease in working capital	(5000)
Less sale proceed from the old asset	(30000)
Net cash out flow	1015000.

Cash flows and Mutually Exclusive situations

In the case of mutually exclusive proposals, the selection of one proposal precludes the choice of others. The calculation of the cash flows is on similar lines to the replacement situation.

4. Summary

Fixed capital management involves allocation of firm's capital to different long term assets. Decisions relating to capital budgeting are very important as it involves huge investment, has a long term impact on the growth of the company, involves great amount of risk and are irreversible. Management of fixed assets is an important facet as fixed assets have the income generating capacity and directly influences the profitability of the company. The process of capital budgeting requires careful planning and implementation.