UNIT - II

Capital Budgeting

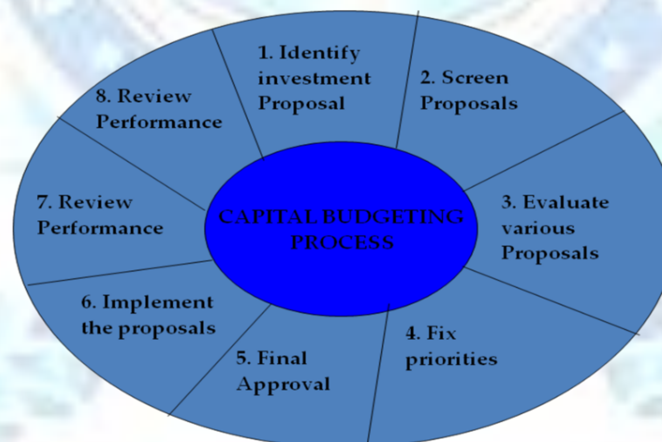
Capital budgeting is the process of making investment decisions in capital expenditures. A capital expenditure may be defined as an expenditure the benefits of which are expected to be received over period of time exceeding one year

"Capital budgeting is long term planning for making and financing proposed capital out lays"

Need and Importance of Capital Budgeting

- Long investments
- Long term commitment of funds
- Irreversible nature
- Long term effect on profitability
- Difficulties of investment decisions
- National importance

Capital Budgeting Process



Methods of Capital Budgeting (or) Evaluation of Investment Proposals

A. Traditional Methods
B. Time –adjusted method or Discounting methods

A) TRADITIONAL METHODS

1. Pay-back period method (or) Payout (or) Pay off method
2. Improvement of traditional approach to pay back period method
3. Rate of return method or accounting method.

1. Pay – back period method

This method represents the period in which the total investment in permanents assets pays back itself.

It measures the period of time for the original cost of a project to be recovered from the additional earnings of the project itself.

The Pay-back period can be ascertained in the following manner:

1. Calculate annual net earnings before depreciation and after taxes, these are called annual cash inflows.
2. Divide the initial outlay (cost) of the project generates constant annual cash flows.

Thus where project generates constant cash inflows

$$\text{Pay – back period} = \frac{\text{Cost of out lay of the project (or) Original cost of the asset}}{\text{Annual Cash inflows}}$$

3. Where the annual cash inflows are unequal the pay back period can be found by adding up the cash inflows until the total is equal to the initial cash outlay of project or original cost of the asset.

Improvements in Traditional Approach to pay back period method

1. Post pay-back profitability method.
2. Pay – back reciprocal method
3. Post pay-back method
4. Discounted pay-back method

1. Post pay-back profitability method

One of the serious limitations of pay-back period method is that it does not take into account the cash inflows earned after pay-back period and hence the true profitability of the project cannot be assessed. Hence, an improvement over this method can be made by taking into account the return receivable beyond the pay-back period. The returns are called post pay-back profits.

$$\text{Post pay-back profitability Index} = \frac{\text{Post Payback Profits}}{\text{Investment}} \times 100$$

Post pay-back profitability = Annual Cash flow x (Estimated life – Pay-back period)

2. Pay-back reciprocal Method

This method helps to measure the expected rate of return of income generate by a project. Pay-back reciprocal is exactly equal to the unadjusted rate of return. Unadjusted rate means a rate which has not been adjusted by taking into account the time value of money.

$$\text{Pay-back Reciprocal} = \frac{\text{Annual Cash flow}}{\text{Total Investment}} \times 100$$

This method should be used only when the following two conditions are satisfied.

- Equal cash inflows are generated every year
- The project under consideration has a long life which must be at least twice the pay-back period.

3. Post pay-back method

One of the limitations of the pay-back period method is that is it ignores the life of the project beyond the pay-back period. Post-back period method taken into account the period beyond the pay-back method. This method is also known as surplus life over pay-back period.

4.Discounted pay-back method

Another serious limitation of the pay-back period method is that it ignores the time value of money. The time period at which the cumulated present value of cash inflows equals the present value of cash out flow is known as discounted pay back period

3. Rate of return Method

This method taken into account the earnings expected from the investment over their whole life. It is known as accounting rate of return method for the reason that under this method. The accounting concept of profit is used rather than cash flows

The return on investment method can be used in several ways as follow

- Average rate of return method.
- Return per units of investment method.
- Return on average investment method.
- Average return on average investment method.