

SHERSHAH COLLEGE, SASARAM

FINANCIAL MANAGEMENT

BBA PART II, PAPER VI

CAPITAL BUDGETING

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❖ Discounted Cash Flow Method:-

The traditional method does not take into consideration the time value of money. They give equal weightage to the present and future flow of incomes. The DCF methods are based on the concept that a rupee earned today is more worth than a rupee earned tomorrow. These methods take into consideration the profitability and also time value of money.

1. Net present value method (NPV method):-

The NPV takes into consideration the time value of money. The cash flows of different years are valued differently and made comparable in terms of present values for this the net cash inflows of various periods are discounted using required rate of return which is predetermined.

NPV is the difference between the present value of cash inflows of a project and the initial cost of the project.

The formula for NPV is

NPV= Present value of cash inflows – investment.

Note:- According to the NPV technique, only one project will be selected whose NPV is positive or above zero. If a project(s) NPV is less than 'Zero', it gives negative NPV hence it must be rejected. If there are more than one project with positive NPV then those project should be selected whose NPV is the highest.

Merits:-

- I. It recognizes the time value of money.
- II. It is based on the entire cash flows generated during the useful life of the asset.
- III. It is consistent with the objective of maximization of wealth of the owners.
- IV. The ranking of projects is independent of the discount rate used for determining the present value.

Demerits:-

- I. It is different to understand and use.
- II. The NPV is calculated by using the cost of capital as a discount rate. But the concept of cost of capital is difficult to understood and determine.
- III. It does not give solutions when the comparable projects are involved in different amounts of investment.
- IV. It does not give correct answer to a question whether alternative projects or limited funds are available with unequal lines.

2. Internal Rate Of Return Method:-

It is another DCF method and is advocated by "Joel Dean". The IRR for an investment proposal is that discount rate which equates the present value of cash inflows with the present value of cash out flows of an investment. The IRR is also known as cutoff or handle rate. It is usually the concern's cost of capital.

The IRR is not a predetermine rate, rather it is to be trial and error method. It implies that one has to start with a discounting rate to calculate the present value of cash inflows. If the obtained present value is higher than the initial cost of the project one has to try with a higher rate. Likewise if the present value of expected cash inflows obtained is lower than the present value of cash flow. Lower rate is to be taken up. The process is continued till the net present value becomes Zero. As this discount rate is determined internally, this method is called internal rate of return method.

$$\text{IRR} = A + \frac{C - O}{C - D} \times (B - A)$$

Where,

A= Discount factor of low trial

B= Discount factor of high trial

C= Present value of cash inflow in low trial

D= Present value of cash inflow in high trial

O= Original or initial outlay

Merits:

1. It consider the time value of money
2. It takes into account the cash flows over the entire useful life of the asset.
3. It has a psychological appear to the user because when the highest rate of return projects are selected, it satisfies the investors in terms of the rate of return an capital
4. It always suggests accepting to projects with maximum rate of return.
5. It is inconformity with the firm's objective of maximum owner's welfare.

Demerits:

1. It is very difficult to understand and use.
2. It involves a very complicated computational work.
3. It may not give unique answer in all situations.

3. Profitability Index Method (PI METHOD):-

Like IRR & NPV methods PI is conceptually sound method of appraising investment proposals. It provide ready comparison between investment proposals of different magnitudes. PI is the ratio of PV of future cash benefits at the required rate of return at the initial cash outflow of the investment.

$$PI = \frac{PV \text{ of cash inflow}}{Initial \text{ cash outlay}}$$

Note:- If the PI is more than one (>1), the proposal is accepted else rejected. If there are more than one investment proposal with the more than one PI the one with the highest PI will be selected. This method is more useful incase of projects with different cash outlays cash outlays and hence is superior to the NPV method.

Merits:-

1. It requires less computational work then IRR method.
2. It helps to accept / reject investment proposal on the basis of value of the index.
3. It is useful to rank the proposals on the basis of the highest/lowest value of the index.

4. It is useful to rank the proposals on the basis of the highest/lowest value of the index.

5. It takes into consideration the entire stream of cash flows generated during the useful life of the asset.

Demerits:-

1. It is somewhat difficult to understand.

2. It is very difficult to understand the analytical part of the decision on the basis of probability index.