Chapter 5

Investment Decisions and Capital Budgeting

5.1. Investment Decision Making

5.1.1. Introduction

One of the important functions of financial management is investment decisions. The success of a business unit depends upon the investment of resource in such a way that brings in benefits or best possible returns from any investment. The investment in general means an expenditure in cash or its equivalent during one or more time periods in anticipation of enjoying a net cash inflows or its equivalent in some future time period or periods.

The investment in any project will bring in desired profits or benefits in future. If the financial resources were in abundance, it would be possible to accept several investment proposals which satisfy the norms of approval or acceptability. Since, we are sure that resources are limited; a choice has to be made among the various investment proposals by evaluating their comparative merit. This would help us to select the relatively superior proposals keeping in view the limited available resources. For this purpose, we have to develop some evaluating techniques for the appraisal of investment proposals.

5.1.2. Importance of Investment Decisions

The terms in financial management like investment decisions, investment projects, and investment proposals are generally associated with application of long-term resources. What is long-term? There is no hard and fast rule to define it, but by common practice and accordance with the financing policies, practices and regulations of the financial institutions and banks a period of ten years and above may be treated as long period. The decisions related to long-term investment is also known as capital budgeting techniques. It is important because of the following reasons:

1) The investment decisions are the vehicles of a company to reach the desired destiny of the company. An appropriate decision would yield spectacular results whereas a wrong decision may upset the whole financial plan and

endanger the very survival of the firm. Even firm may be forced into bankruptcy.

2) Capital budgeting techniques involve huge amounts of funds and imply permanent commitment. Once you invest in the form of fixed assets it is not easy to reverse the decision unless you incur heavy loss.
3) A capital expenditure decision has its effect over a long period of time span and inevitably affects the company's future cost.
4) Investment decisions are among the firm's most difficult decisions. They are the predictors of future events which are difficult to predict. It is a complex problem investment. The cash flow uncertainty is caused by economic, political, social and technological forces.

5.1.3. Types of investment proposals

The long-term funds are required for the following purposes:

Expansion: A company adds capacity to its existing product lines to expand existing operations. For example, a manufacturing unit producing one hundred thousand units per year. If it intends to double the output by two hundred thousands, this will obviously increase the need for funds for acquiring fixed and current assets.

Diversification: Sometimes the management of a company may decide to add new product line to the existing product lines. Philips, a famous company for radio and electric bulbs etc. diversified into production of other electrical appliances and television sets.

Replacements: Machines used in production may either wear out or may be rendered obsolete on account of new technology. The productive capacity of the enterprise and its competitive ability may be adversely affected. Extra funds are required for modernization or renovation of the entire plant. The investment obviously is going to be long terms.

Research and Development: There has been an increased realization that the efficiency of production and the total operations can be improved by application of new and more sophisticated techniques of production and management. To acquire the technology huge funds are needed.

The useful way of classifying investments is as under

1. Accept - Reject Decisions
2. Mutually Exclusive Decisions
3. Capital Rationing

Accept-Reject Decisions

Under this, if a project is accepted, the firm is going to invest, otherwise it is not going to invest its funds. In general, the project proposals that yield a rate of return greater than the certain required rate of return or cost of capital are accepted and others are rejected. By applying this criteria more than one independent project are accepted subject to availability of funds. Various appraisal techniques are used to evaluate each project.

Mutually Exclusive Decisions

These are the projects which compete with each other in such a way that the acceptance of one will exclude the acceptance of the other one. The alternatives are mutually exclusive one may be chosen.

Capital Rationing

We are aware that the financial resources are limited. But, a large number of investment proposals compete for those limited funds. The firm, therefore ration them. The firm allocates funds to projects in a manner that it maximizes long-run returns. Thus, capital rationing refers to the situation in which the firm has more acceptable investments, requiring a greater amount of finance than is available with the firm. It is concerned with the selection of a group of investment proposals out of making investment proposals acceptable under the accept-reject decision. The projects are ranked as per their merits of acceptance basing on certain predetermined criteria.

5.1.4. Data required for investment decisions

Initial Investment: The total amount of cash required to buy various assets like land, buildings, plant, machinery, equipment, etc and there installation expenses have to be estimated. In addition to fixed cost, the cost of maintaining stocks, contingency reserves to cover the cost of supporting the additional receivables. Benefit of credit from suppliers will have the effect of reducing the quantum of additional working capital required.

Subsequent Investment: The cost of maintenance, replacement and updating are to be treated as outflows during the period in which they are expected to be incurred.

Economic Life of the project: The economic life of a project is to be distinguished from the life of an individual asset. The building may have life of fifty years, plant may have ten years, and some equipment may have five years only. The economic life of the project is determined by the duration of the "earnings flow" generated by the project.

The economic life may end:

a) The cost of replacement becomes uneconomical in relation to the likely benefits.
b) When the viability is adversely affected due to obsolescence.
c) When maintenance costs exceed the disposable value, and
d) When the development of new technology necessitates new investment

Salvage Values: Sometimes the plant assets may have value for the enterprise at the end of the life of the project or there may be some anticipated sales value of the plant. Such amount is to be treated as an inflow at the end of the life of the project.

Annual Cash Flows: The calculation of annual cash flows in investment appraisal plays a key role. The computation of cash flows is a simple task. The following areas are to be considered.

Sales revenue: This is going to be the function of sales any wrong calculation in this regard will bear impact on the investment opportunity. Care has to be taken to forecast accurately and the additional revenue generated by the investment should be taken into account. The investment must also result into the reduction of operating cost either by modernization or replacement models where the savings benefit or cash flows will increase. In simple terms annual cash flow is equivalent to net profit after tax plus depreciation. Procedurally,

ACF = Sales – (Operating expenses + Non-operating expense + Tax) + Depreciation

Example: The following is the information related to ABC Ltd. The company has been asked to compute the annual cash flows.

	Machine A Birrs	Machine B Birrs
Cost of machine	15, 000	24, 000
Estimated life in years	5 years	6 years
Estimated income	1, 000	1, 500
Estimated material cost	800	900
Estimated supervision cost	1, 200	1, 600
Estimated maintenance cost	500	1, 000
Estimated savings in wages	9, 000	12, 000

Additional Information

1. Depreciation may be charged on straight line method
2. The tax rate may be assumed 50% and
3. Calculate Annual cash flows.

	Machine A Birrs	Machine B Birrs
Income:	1, 000	1, 500
Savings in wages	9, 000	12, 000
Total income / sales	10, 000	13, 000
Cost: material costs	800	900
Maintenance	500	1, 000
Supervision	1, 200	1, 600
	2, 500	3, 500
Profit before Depreciation & Tax	7, 500	10, 000
Depreciation	3, 000	4, 000
Profit Before tax	4, 500	6, 000
Tax @ 50%	2, 250	3, 000
Profit after tax (Net profit)	2, 250	3, 000
Add back depreciation	3, 000	4, 000
Annual cash flows	5, 250	7, 000

5.1.5. Project appraisal methods

There are two important methods of evaluating the investment proposals

- Traditional methods
  1. Payback period
  2. Accounting rate of return
- Discounted cash flow method
  3. Net present value

4. Internal Rate of Return
5. Profitability Index

1. Pay Back Period:

This is one of the widely used methods for evaluating the investment proposals. Under this method the focus is on the recovery of original investment at the earliest possible period. It determines the number of years to get back the original cash out flow, disregarding the salvage value and interest. This method does not take into account the cash inflows that are received after the payback period.

Decision rule: accept the project if its payback period is shorter than the target (planed period) set by the management.

There are two methods in use to calculate the payback period

a) Where annual cash flows are not consistent (vary from year to year)

b) Where the annual cash flows are uniform

a) Unequal cash flows

$$\mathbf{P = E + } \frac{B}{C}$$

Where, P = payback period.

E = number of years immediately preceding the year of final recovery.

B = the balance amount still to be recovered.

C= cash flow during the year of final recovery.

Ex: The following is the information related to a company

	Project A	Project B
Year	Cash flow $	Cash flow $
0	-700	-700
1	100	400
2	200	300
3	300	200
4	400	100
5	500	0

Calculate payback period of two projects?

Project A		Cumulative	Project B		Cumulative
Year	Cash flow	cash flow	Year	Cash flow	Cash flow
0	-700	-700	0	-700	-700

1	100	-600		1	400	-300
2	200	-400		2	300	0
3	300	-100		3	200	200
4	400	300		4	100	300
5	500	800		5	0	-

Solutions;

$$P = E + \frac{B}{C}$$

$$= 3 + \frac{100}{400}$$

$$= 3.25 \text{ year}$$

$$P = E + \frac{B}{C}$$

$$= 2 + 0$$

$$= 2 \text{ years}$$

b) Uniform cash flows:

Where the annual cash flows are uniform

$$PBp = \frac{Original\ Investment}{Annual\ cash\ flows}$$

EX: A project requires an investment of $ 100, 000, it will generate annual cash flow of $25,000 per year. Calculate the payback period.

$$PB = \frac{Original\ Investment}{Annual\ cash\ flows}$$

$$= \frac{100,000}{25,000} = 4 \text{ years}$$

2. Accounting Rate of Return

This method is based on the financial accounting practices of the company working out the annual profits. Here, instead of taking the annual cash flows, we take the annual profits into account. The net annual profits are calculated after deducting depreciation and taxes. The average of annual profits thus derived is worked out on the basis of the period

$$ARR = \frac{Average\ annual\ profits\ after\ taxes}{Average\ investment\ over\ the\ life\ of\ project} \times 100$$

Average investment = Net working capital + Salvage value + $\frac{1}{2}$(Initial cost of plant – Salv.value)

Net working capital = current assets – current liabilities

Average profits = $\frac{Total\ of\ annual\ profits}{Number\ of\ years}$

Ex: Initial investments of plant $ 10, 000

Installation costs $ 1, 000

Salvage value $ 1, 000

Working capital $ 1, 000

Life of plant 5 years

Annual profit per year $ 2, 500

Calculate ARR?

Average profit = $\frac{12,500}{5}$ = 2, 500, 2, 500 x 5 =12,500

Average investment = Wc + Sal.V. + $\frac{1}{2}$(Cost + Inst. Cost – Salv. Val)

= 2, 000 + 1, 000 + $\frac{1}{2}$(10, 000 + 1, 000 – 1, 000)

= 3, 000 + $\frac{1}{2}$(10, 000) = 3, 000 + 5, 000

= 8, 000

ARR = $\frac{2,500}{8,000}$ x 100

= 31.25%

The ARR is compared to the predetermined rate. The project will be accepted if the actual ARR is higher than the desired ARR. Otherwise it will be rejected.

- **Discounted cash flow techniques:**

This concept is based on the time value of money. The flow of income is spread over a few years. The real value of Birr in your hand today is better than value of birr you earn after a year. The future income, therefore, has to be discounted in

order to be associated with the current out flow of funds in the investment. Two methods of appraisal of investment project are based on this concept. These are net present value and internal rate of return method.

3. Net Present Value

The net present value (NPV) method is an investment project proposals evaluating and ranking method using the net present value, which is the difference between the present values of future cash inflows and the present value of cash outflows, discounted at the given cost of capital, or opportunity cost of capital.

In order to use this method properly, the following procedures are followed.

1. Find the present value of each cash flow, including both inflows and out flows using the cost of capital of the project for discounting.
2. Sum the discounted cash outflows and the discounted cash outflows separately.
3. Obtain the difference between the sum of the cash inflows and the sum of the cash flows.

If all the cash outflows for the project occur at time zero, i.e. at the beginning of year 1, the present value of the cash out flows is the same as to the net investment amount.

Decision Rule; The decision rule here is to accept a project if the NPV is positive and reject if it is negative

I) NPV > Zero accept
II) NPV = Zero indifference
III) NPV < Zero reject

If the projects are independent, the projects with positive net present values are the ones whose implementation maximizes the wealth of shareholders. Hence, such projects should be accepted for implementation. If the projects, on the other hand, are mutually exclusive, the one with the higher positive NPV should be accepted leading to the rejection of the projects with lower positive NPV. Projects with negative NPV should not be considered for acceptance in the first place.

The rationale for the NPV method is that an NPV of zero signifies that the cash flows of the project are just sufficient to repay the invested capital and to provide the required rate of return, no more, no less.

$$\text{NPV} = \frac{CF1}{(1+R)1} + \frac{CF2}{(1+R)2} + \frac{CFt}{(1+R)t} \text{ - Io}$$

$$\text{NPV} = \sum^{n} \frac{CFt}{(1+K)^{t}} - Io$$

Where; NPV = Net present value
CFt = Cash inflows at different periods
Io = Cash outflow in the beginning (initial investment)
K = Cost of capital
t = time period

To illustrate the NPV as a method of project proposals ranking assume that a given project is expect to have an initial investment and project life of 40,000Birr and 5 years respectively. The annual after-tax cash flow is estimated at 12,000Birr for each one of the five years. Using the required rate of return of 10 percent, what is the net present value (NPV) of the project? How do you judge the acceptability of this project?

In order answer these question, it is wise to identify the cash inflows and outflows. In the case of this project, there are annuity cash inflows of 12,000 every year for five years and single cash out flow of 40,000 at time zero.

The present value of the annuity cash outflows is:

Present value of annuity = (12,000*Annuity factor)

The annuity factor given the period of 5 years and discount rate of 10 percent is 3.791 substituting the factor I the equation above

PVA = (12,000) (3.791) = 45,492Birr

= [12000/ (1.1)] + [12000/ $(1.1)^2$] + ---+ [12000/ $(1.1)^5$] = 45,492Birr

Present Value of Cash out flows = 40,000Birr

Hence,

The Net Present value (NPV) = Present Value of inflows less present value of outflows

= 45,492 - 40,000 = 5,492Birr

Since the project makes the net present value (NPV) of positive 5,492Birr, it should be accepted. Consequently, the wealth of the shareholders would increase by 5,492Birr in total as the result of accepting and running this project. Thus, the project can be judged as an acceptable one.

To further illustrate the NPV method, consider the following mutually exclusive project alternatives, together with their cash flows.

Alternative	**Year 0**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**
A	(80,000)	20,000	25,000	25,000	30,000	20,000
B	(100,000)	25,000	20,000	30,000	35,000	40,000

The required rate of return on both projects is 12 percent. Then, evaluate these projects using the net present value method.

The evaluation of these two projects requires the computation of the net preset values for both projects. As you can see the cash flows from both projects are not in annuity forms. The cash flows are irregular for both projects. Hence, we need to discount each of the cash flows individually. Then the individual discounted cash flows are added. The cash out flows at time zero will be deducted from the sum of the discounted cash inflows in order to get the net present value of the project. The net present value (NPV) for project A is:

Year	**Cash flows**	**Discount (12%)**	**Factor**	**Present Values**
1	20,000	0.893		17,860
2	25,000	0.797		19,925
3	25,000	0.712		17,800
4	30,000	0.636		19,080
5	20,000	0.567		11,340
Present values of cash inflows (sum)				86,005
Present values of cash outflows				80,000

Net Present Value (NPV)	6,005 Birr

The net present value (NPV) for project B is:

Year	Cash flows	Discount (12%)	Factor	Present Values
1	25,000	0.893		22,325
2	20,000	0.797		15,940
3	30,000	0.712		21,360
4	35,000	0.636		22,260
5	40,000	0.567		22,680
Present values of cash inflows (sum)				104,565
Present values of cash outflows				100,000
Net Present Value (NPV)				4,565 Birr

Since the two projects are mutually exclusive, the one with the higher NPV has to be accepted. Thus, project A is selected as its NPV is higher than that of project B. Had the two project been independent of one another, both of them would be accepted because both projects have positive net present values (NPVs)

4. Internal Rate of Return (IRR)

The internal rate of return is the discount rate which equates the present value of the expected cash flows with the initial investment outlays. In other words, IRR is a method of ranking investment project proposals using the rate of return on an asset (investment). At IRR, the sum of the present values of all cash inflows is equal to the sum of the present values of all cash outflows. That is:

PV (cash inflows) = PV (cash outflows). Hence, the net present value of any project at a discount rate that is equal to the IRR is zero.

Io = $\sum CFt/(1+IRR)t$

The decision rule for the IRR technique is;

If the IRR ≥ r (the cost of capital) = Accept project

IRR < r (the cost of capital) = Reject the project

Example;

Year	0	1	2	3	4	5
After tax cash flow	-$10,000	2,000	4,000	3,000	3,000	1,000

Required; Calculate IRR and decide whether to accept or reject the project, since the firm has a cost of capital of 8%?

Solution; in order to solve for IRR, we need to solve the following equation;

$$10{,}000 = \frac{2000}{(1+IRR)} + \frac{4000}{(1+IRR)2} + \frac{3000}{(1+IRR)3} + \frac{3000}{(1+IRR)4} + \frac{1000}{(1+IRR)5}$$

Assume IRR = 10%; first trial and error

$$10{,}000 = \frac{2000}{(1+10\%)} + \frac{4000}{(1+10\%)2} + \frac{3000}{(1+10\%)3} + \frac{3000}{(1+10\%)4} + \frac{1000}{(1+10\%)5}$$

$$10{,}000 = \frac{2000}{(1.1)} + \frac{4000}{(1.1)2} + \frac{3000}{(1.1)3} + \frac{3000}{(1.1)4} + \frac{1000}{(1.1)5}$$

$$= 1{,}818.18+3{,}305.79+2{,}253.94+2{,}049.04+620.92$$

$$= 10{,}047.87$$

IRR = 11%; second trial and error

$$10{,}000 = \frac{2000}{(1.11)} + \frac{4000}{(1.11)2} + \frac{3000}{(1.11)3} + \frac{3000}{(1.11)4} + \frac{1000}{(1.11)5}$$

$$= 1{,}801.80 + 3{,}246.49 + 2{,}193.57 + 1{,}976.19 + 593.45$$

$$= 9{,}811.5$$

To find out the exact IRR, we can use interpolation system

$$IRR = I_1 + (I_2 - I_1) \left| \frac{NPV\,I1 - Io}{NPV\,I1 - NPV\,I2} \right|$$

$$= 10\,\% + (11\% - 10\%) \left| \frac{10{,}047.87 - 10000}{10{,}047.87 - 9{,}811.5} \right|$$

$$= 10\,\% + (1\% * 0.2025)$$

$$= 10\% + 0.002025$$

$$= 0.10205$$

$$= \underline{\mathbf{10.205\%}}$$

If the cash flow in annuity form;

In this case, the present value table of an annuity can be used to calculate the IRR since the cash inflows are in annuity form. The following steps can be followed to calculate IRR for constant cash inflows.

Step 1: Find the critical value of discount factor

$$\text{Discount factor} = \frac{\text{Initial investment}}{\text{Annual Cash inflow}}$$

Step 2: Find the IRR by looking along the appropriate line (year) of the present value of annuity table until the column which contains the critical discount factor (i.e. the discount factor computed under step 1) is located.

To illustrate the calculation of IRR when the cash flows are in an annuity form, assume that a project has a net investment of 26,030 Birr and annual net cash inflows of 5000Birr for seven years. What is the IRR of this project? In order to answer this question, we need to follow the two steps discussed above.

Step 1 Compute the critical discount factor. That is

$$\text{Discount factor} = \frac{26{,}030}{5{,}000} = 5.206$$

Step 2 After determining the critical discount factor, we look for the value that is equal to this factor in the present value of annuity table across the line corresponding to 7 years (i.e. n=). The discount factor of 5.206 appears in the 8 percent column on the line/row of 7 years. Therefore, the IRR = 8 %.

5. Profitability Index (PI):

Profitability index is the ratio of the present value of the expected net cash flow of the project and its initial investment outlay.

$$PI = \sum \frac{CFt}{(1+r)t} / Io$$

Where; PV = Present value of expected net flows

IO = Initial investment outlay

PI = Profitability Index

Profitability index provides or measure of profitability in a more readily understandable terms. It simply converts the NPV criterion into a relative measure.

Consider the following two mutually exclusive projects.

	Present Value Of cash Flow	Initial Investment	Profitability Index
Project A	200	100	2.0
Project B	3000	2000	1.50

From the above example project A is accepted using profitability index because its PI is greater than that of project B.

5.2. Capital budgeting

5.2.1. Introduction

The word Capital refers to be the total investment of a company of firm in money, tangible and intangible assets. Whereas budgeting defined by the “Rowland and William” it may be said to be the art of building budgets. Budgets are a blue print of a plan and action expressed in quantities and manners.

The examples of capital expenditure:

1. Purchase of fixed assets such as land and building, plant and machinery, good will, etc.
2. The expenditure relating to addition, expansion, improvement and alteration to the fixed assets.
3. The replacement of fixed assets.
4. Research and development project.

Definitions

According to the definition of Charles T. Hrongreen, “Capital budgeting is a long-term planning for making and financing proposed capital out lays.

According to the definition of G.C. Philippatos, “capital budgeting is concerned with the allocation of the firms’ source financial resources among the available opportunities.

The consideration of investment opportunities involves the comparison of the expected future streams of earnings from a project with the immediate and subsequent streams of earning from a project, with the immediate and subsequent streams of expenditure”.

According to the definition of Richard and Green law, “capital budgeting is acquiring inputs with long-term return”.

According to the definition of Lyrich, “capital budgeting consists in planning development of available capital for the purpose of maximizing the long-term profitability of the concern”.

It is clearly explained in the above definitions that a firm’s scarce financial resources are utilizing the available opportunities. The overall objective of the company is to maximize the profits and minimize the expenditure of cost.

5.2.2. Need and Importance of Capital Budgeting

1. **Huge investments:** Capital budgeting requires huge investments of funds, but the available funds are limited, therefore the firm before investing projects, plan are control its capital expenditure.
2. **Long-term:** Capital expenditure is long-term in nature or permanent in nature. Therefore financial risks involved in the investment decision are more. If higher risks are involved, it needs careful planning of capital budgeting.

3. **Irreversible:** The capital investment decisions are irreversible, are not changed back. Once the decision is taken for purchasing a permanent asset, it is very difficult to dispose off those assets without involving huge losses.

4. **Long-term effect:** Capital budgeting not only reduces the cost but also increases the revenue in long-term and will bring significant changes in the profit of the company by avoiding over or more investment or under investment. Over investments leads to be unable to utilize assets or over utilization of fixed assets. Therefore before making the investment, it is required carefully planning and analysis of the project thoroughly.

5.2.3. Capital Budgeting Process

Capital budgeting is a difficult process to the investment of available funds. The benefit will attain only in the near future but, the future is uncertain. However, the following steps followed for capital budgeting, then the process may be easier are.

1. ***Identification of various investments proposals:*** The capital budgeting may have various investment proposals. The proposal for the investment opportunities may be defined from the top management or may be even from the lower rank. The heads of various departments analyses the various investment decisions, and will select proposals submitted to the planning committee of competent authority.
2. ***Screening or matching the proposals:*** The planning committee will analyse the various proposals and screenings. The selected proposals are considered with the available resources of the concern. Here resources referred as the financial part of the proposal. This reduces the gap between the resources and the investment cost.
3. ***Evaluation***: After screening, the proposals are evaluated with the help of various methods, such as payback period proposal, net discovered present value method, accounting rate of return and risk analysis. Each method of evaluation used in detail in the later part of this chapter. The proposals are evaluated by.
    - Independent proposals
    - Contingent of dependent proposals

- Partially exclusive proposals.

Independent proposals are not compared with another proposal and the same may be accepted or rejected. Whereas higher proposals acceptance depends upon the other one or more proposals. For example, the expansion of plant machinery leads to constructing of new building, additional manpower etc. Mutually exclusive projects are those which competed with other proposals and to implement the proposals after considering the risk and return, market demand etc.

4. ***Fixing property:*** After the evolution, the planning committee will predict which proposals will give more profit or economic consideration. If the projects or proposals are not suitable for the concern's financial condition, the projects are rejected without considering other nature of the proposals.
5. ***Final approval*****:** The planning committee approves the final proposals, with the help of the following:
   (a) Profitability
   (b) Economic constituents
   (c) Financial violability
   (d) Market conditions.

The planning committee prepares the cost estimation and submits to the management.

6. ***Implementing:*** The competent authority spends the money and implements the proposals. While implementing the proposals, assign responsibilities to the proposals, assign responsibilities for completing it, within the time allotted and reduce the cost for this purpose. It helps the management for monitoring and containing the implementation of the proposals.
7. ***Performance review of feedback:*** The final stage of capital budgeting is actual results compared with the standard results. The adverse or unfavorable results identified and removing the various difficulties of the project. This is helpful for the future of the proposals.

5.2.4. Methods of Capital Budgeting of Evaluation

By matching the available resources and projects it can be invested. The funds available are always living funds. There are many considerations taken for investment decision process such as environment and economic conditions.

The methods of evaluations are classified as follows:

(A) Traditional methods (or Non-discount methods)

(i) Pay-back Period Methods
(ii) Post Pay-back Methods
(iii) Accounts Rate of Return

(B) Modern methods (or Discount methods)

(i) Net Present Value Method
(ii) Internal Rate of Return Method
(iii) Profitability Index Method