

## UNIT- V

### **CAPITAL AND CAPITAL BUDGETING**

Introduction:

said to be the lifeblood of the business. No growth and expansion of business can take place without sufficient finance. It shows that no business activity is possible without finance. This is why; every business has to make plans regarding acquisition and utilization of funds.

However efficient a firm may be in terms of production as well as marketing if it ignores the proper management of flow of funds it certainly lands in financial crunch and the very survival of the firm would be at a stake.

### 1. Explain the different sources of raising finance for corporate sector?

In case of proprietorship business, the individual proprietor generally invests his own savings to start with, and may borrow money on his personal security or the security of his assets from others. Similarly, the capital of a partnership firm consists partly of funds contributed by the partners and partly of borrowed funds. But the company form of organization enables the promoters to raise necessary funds from the public who may contribute capital and become members (shareholders) of the company. In course of its business, the company can raise loans directly from banks and financial institutions or by issue of securities (debentures) to the public. Besides, profits earned may also be reinvested instead of being distributed as dividend to the shareholders.

### Source of Company Finance

Based upon the time, the financial resources may be classified into

1. Sources of long term
2. Sources of short – term finance.
3. Some of these sources also serve the purpose of medium – term finance.

#### I. The Source of Long – Term Finance Are:

1. Issue of shares
2. Issue of debentures
3. Loan from financial institutions
4. Retained profits
5. Public deposits

#### II. Sources of Short-term Finance are:

1. Trade credit
2. Bank loans and advances
3. Short-term loans from finance companies.

### 2. What is working capital? Explain the factors governing working capital requirements.

Illustrate: Finance is required for two purposes viz. for its establishment and to carry out the day-to-day operations of a business. Funds are required to purchase the fixed assets such as plant, machinery, land, building, furniture, etc., on long-term basis. Investments in these assets represent that part of firm's capital, which is blocked on a permanent or fixed basis and is called fixed capital. Funds are also needed for short-term purposes such as the purchase of raw materials, payment of wages and other day-to-day expenses, etc. and these funds are known as working capital.

### Factors Determining the Working Capital Requirements:

There are a large number of factors such as the nature and size of business, the character of their operations, the length of production cycle, the rate of stock turnover and the state of economic situation etc. that decode requirement of working capital. These factors have different importance and influence on firm differently. In general, following factors generally influence the working capital requirements.

- Nature or character of business
- Size of business or scale of operations
- Production policy
- Manufacturing process/Length of production cycle
- Seasonal variations
- Working capital cycle
- Credit policy
- Business cycles
- Rate of growth of business



**Working capital cycle**= inventory days+ Receivable days –payable days

There are two components of working capital:

- a) **Gross working capital**- gross working capital refers to the capital invested in total current assets of the enterprise. in the broader sense, the term working capital refers to the gross working capital. The notion of the gross working capital refers to the capital invested in total current assets of the enterprise. Current assets are those assets, which in the ordinary course of business, can be converted into cash within a short period, normally one accounting year.

Examples of current assets:

1. Cash in hand and bank balance
2. Bills receivables or Accounts Receivables<sup>44</sup>
3. Sundry Debtors (less provision for bad debts)
4. Short-term loans and advances.



5. Inventories of stocks, such as:

- a. Raw materials
- b. Work – in process
- c. Stores and spares
- d. Finished goods

6. Temporary Investments of surplus funds.

7. Prepaid Expenses

8. Accrued Income etc.

- b) **Net Working Capital**- Networking capital represents the excess of current assets over current liabilities. In a narrow sense, the term working capital refers to the net working capital. Networking capital represents the excess of current assets over current liabilities.

Current liabilities are those liabilities, which are intended to be paid in the ordinary course of business within a short period, normally one accounting year out of the current assets or the income of the business. Net working capital may be positive or negative. When the current assets exceed the current liabilities, net working capital is positive and the negative net working capital results when the liabilities are more than the current assets.

#### Examples of current liabilities:

- 1. Bills payable
- 2. Sundry Creditors or Accounts Payable.
- 3. Accrued or Outstanding Expenses.
- 4. Short term loans, advances and deposits.
- 5. Dividends payable
- 6. Bank overdraft
- 7. Provision for taxation etc.,

#### Importance of Working Capital:

Working capital is referred to be the lifeblood and nerve center of a business. Working capital is as essential to maintain the smooth functioning of a business as blood circulation in a human body. No business can run successfully without an adequate amount of working capital.

The main advantages of maintaining adequate amount of working capital are as follows:

- **Solvency of the business:** Adequate working capital helps in maintaining solvency of the business by providing uninterrupted flow of production.
- **Good will:** Sufficient working capital enables a business concern to make prompt payment and hence helps in creating and maintaining goodwill.
- **Easy loans:** A concern having adequate working capital, high solvency and good credit standing can arrange loans from banks and others on easy and favorable terms.
- **Cash Discounts:** Adequate working capital also enables a concern to avail cash discounts on the purchases and hence it reduces costs.
- **Regular supply of raw materials:** Sufficient working capital ensures regular

supply of raw materials and continuous production.

- **Regular payments of salaries wages and other day to day commitments:** A company which has ample working capital can make regular payment of salaries, wages and other day to day commitments which raises the morale of its employees, increases their efficiency, reduces wastage and cost and enhances production and profits.
- **Exploitation of favorable market conditions:** The concerns with adequate working capital only can exploit favorable market conditions such as purchasing its requirements in bulk when the prices are lower.
- **Ability to face crisis:** Adequate working capital enables a concern to face business crisis in emergencies.
- **Quick and regular return on Investments:** Every investor wants a quick and regular return on his investment. Sufficiency of working capital enables a concern to pay quick and regular dividends to its investors, as there may not be much pressure to plough back profits. This gains the confidence of its investors and creates a favorable market to raise additional funds in the future.
- **High morale:** Adequacy of working capital creates an environment of security, confidence, and high morale and creates overall efficiency in a business. Every business concern should have adequate working capital to run its business operations.

### The Need or Objectives of Working Capital:

The need for working capital arises mainly due to the time gap between production and realization of cash. The process of production and sale cannot be done instantaneously and hence the firm needs to hold the current assets to fill-up the time gaps. There are time gaps in purchase of raw materials and production; production and sales; and sales and realization of cash. The working capital is needed mainly for the following purposes:

- a) For the purchase of raw materials.
- b) To pay wages, salaries and other day-to-day expenses and overhead cost such as fuel, power and office expenses, etc.
- c) To meet the selling expenses such as packing, advertising, etc.
- d) To provide credit facilities to the customers and
- e) To maintain the inventories of raw materials, work-in-progress, stores and spares and finishes stock etc.

### Factors determining the working capital requirements:

There are a large number of factors such as the nature and size of business, the character of their operations, the length of production cycle, the rate of stock turnover and the state of economic situation etc. that decide requirement of working capital. These factors have different importance and influence on firm differently. In general, the following factors generally influence the working capital requirements. . . .

- a. **Nature or character of business:** The working capital requirements of a firm



basically depend upon the nature of its business. Public utility undertakings like electricity, water supply and railways need very limited working capital as their sales are on cash and are engaged in provision of services only. On the other hand, trading firms require more investment in inventories, receivables and cash and such they need large amount of working capital. The manufacturing undertakings also require sizable working capital.

- b. **Size of business or scale of operations:** The working capital requirements of a concern are directly influenced by the size of its business, which may be measured in terms of scale of operations. Greater the size of a business unit, generally, larger will be the requirements of working capital. However, in some cases, even a smaller concern may need more working capital due to high overhead charges, inefficient use of available resources and other economic disadvantages of small size.
- c. **Production policy:** If the demand for a given product is subject to wide fluctuations due to seasonal variations, the requirements of working capital, in such cases, depend upon the production policy. The production could be kept either steady by accumulating inventories during slack periods with a view to meet high demand during the peak season or the production could be curtailed during the slack season and increased during the peak season. If the policy is to keep the production steady by accumulating inventories it will require higher working capital.
- d. **Manufacturing process/Length of production cycle:** In manufacturing business, the requirements of working capital will be in direct proportion to the length of manufacturing process. Longer the process period of manufacture, larger is the amount of working capital required, as the raw materials and other supplies have to be carried for a longer period.
- e. **Seasonal variations:** If the raw material availability is seasonal, they have to be bought in bulk during the season to ensure an uninterrupted material for the production. A huge amount is, thus, blocked in the form of material, inventories during such season, which give rise to more working capital requirements. Generally, during the busy season, a firm requires larger working capital than in the slack season.
- f. **Working capital cycle:** In a manufacturing concern, the working capital cycle starts with the purchase of raw material and ends with the realization of cash from the sale of finished products. This cycle involves purchase of raw materials and stores, its conversion into stocks of finished goods through work-in progress with progressive increment of labour and service costs, conversion of finished stock into sales, debtors and receivables and ultimately realization of cash. This cycle continues again from cash to purchase of raw materials and so on. In general, the longer the operating cycle, the larger the requirement of working capital.
- g. **Credit policy:** The credit policy of a concern in its dealings with debtors and creditors influences considerably the requirements of working capital. A

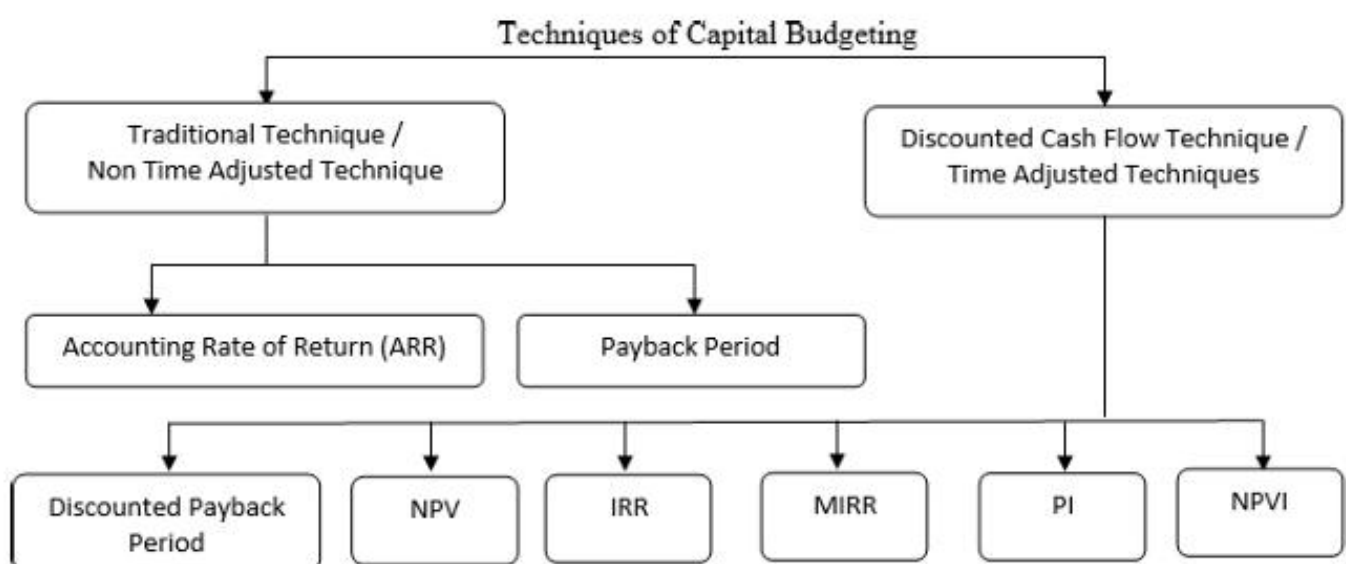
concern that purchases its requirements on credit requires lesser amount of working capital compared to the firm, which buys on cash. On the other hand, a concern allowing credit to its customers shall need larger amount of working capital compared to a firm selling only on cash.

- h. **Business cycles:** Business cycle refers to alternate expansion and contraction in general business activity. In a period of boom, i.e., when the business is prosperous, there is a need for larger amount of working capital due to increase in sales. On the contrary, in the times of depression, i.e., when there is a down swing of the cycle, the business contracts, sales decline, difficulties are faced in collection from debtors and firms may have to hold large amount of working capital.
- i. **Rate of growth of business:** The working capital requirements of a concern increase with the growth and expansion of its business activities. The retained profits may provide for a part of working capital but the fast-growing concerns need larger amount of working capital than the number of undistributed profits.

### Capital Budgeting Techniques:

The capital budgeting appraisal methods are techniques of evaluation of investment proposal will help the company to decide upon the desirability of an investment proposal depending upon their; relative income generating capacity and rank them in order of their desirability. These methods provide the company a set of norms on the basis of which either it has to accept or reject the investment proposal. The most widely accepted techniques used in estimating the cost-returns of investment projects can be grouped under two categories.

- a. Traditional methods
- b. Discounted Cash flow methods



### I. TRADITIONAL METHODS:

These methods are based on the principles to determine the desirability of an investment project on the basis of its useful life and expected returns. These methods depend upon the accounting information available from the books of accounts of the company. These will not take into account the concept of 'time value of money', which is a significant factor to determine the desirability of a project in



terms of present value.

#### A. Payback period method:

It is the most popular and widely recognized traditional method of evaluating the investment proposals. It can be defined, as 'the number of years required to recover the original cash outlay invested in a project'.

**According to Weston & Brigham**, "The payback period is the number of years it takes the firm to recover its original investment by net returns before depreciation, but after taxes".

**According to James. C. Vanhorne**, "The payback period is the number of years required to recover initial cash investment.

The payback period is also called payout or payoff period. This period is calculated by dividing the cost of the project by the annual earnings after tax but before depreciation under this method the projects are ranked on the basis of the length of the payback period. A project with the shortest payback period will be given the highest rank and taken as the best investment. The shorter the payback period, the less risky the investment is the formula for payback period is

$$\text{Pay-back period} = \frac{\text{Cash outlay (or) original cost of project}}{\text{Annual cash inflow}}$$

#### Merits:

- It is one of the earliest methods of evaluating the investment projects.
- It is simple to understand and to compute.
- It does not involve any cost for computation of the payback period
- It is one of the widely used methods in small scale industry sector
- It can be computed on the basis of accounting information available from the books.

#### Demerits:

- This method fails to take into account the cash flows received by the company after the payback period.
- It doesn't take into account the interest factor involved in an investment outlay.
- It doesn't take into account the interest factor involved in an investment outlay.
- It is not consistent with the objective of maximizing the market value of the company's share.
- It fails to consider the pattern of cash inflows i. e., the magnitude and timing of cash inflows.

**B. Accounting (or) Average Rate of Return Method (ARR):** It is an accounting method, which uses the accounting information repeated by the financial statements to measure the probability of an investment proposal. It can be determined by dividing the average income after taxes by the average investment i.e., the average book value after depreciation.

**According to 'Soloman'**, accounting rate of return on an investment can be calculated as the ratio of accounting net income to the initial investment, i.e.,

$$\text{Average net income after taxes}$$



$$\text{ARR} = \frac{\text{Total Income after Taxes}}{\text{Average Investment}} \times 100$$

Average Investment

$$\text{Average net income after taxes} = \frac{\text{Total Income after Taxes}}{\text{No. of Years}}$$

No. of Years

$$\text{Average investment} = \frac{\text{Total Investment}}{\text{No. of Years}}$$

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On the basis of this method, the company can select all those projects whose ARR is higher than the minimum rate established by the company. It can reject the projects with an ARR lower than the expected rate of return. This method can also help the management to rank the proposal on the basis of ARR. A highest rank will be given to a project with highest ARR, whereas a lowest rank to a project with lowest ARR.

#### Merits:

It is very simple to understand and calculate.

- It can be readily computed with the help of the available accounting data.
- It uses the entire stream of earnings to calculate the ARR.

#### Demerits:

- It is not based on cash flows generated by a project.
- This method does not consider the objective of wealth maximization.
- It ignores the length of the project's useful life.
- It does not take into account the fact that the profits can be reinvested.

## II: DISCOUNTED CASH FLOW METHODS:

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.

### A. Net present value method (NPV)

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.

**According to Ezra Solomon**, "It is a present value of future returns, discounted at the required rate of return minus the present value of the cost of the investment."

**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's the

project is selected whose NPV is the highest.

The formula for NPV is

NPV = Present value of cash inflows – investment.

$$\text{NPV} = \frac{C_1}{(1+K)} + \frac{C_2}{(1+K)^2} + \frac{C_3}{(1+K)^3} + \dots + \frac{C_n}{(1+K)^n}$$

Co- investment

C1, C2, C3... Cn = cash inflows in different years. K = Cost of the Capital (or)

Discounting rate D = Years.

#### Merits:

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

#### Demerits:

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

### B. Internal Rate of Return Method (IRR)

The IRR for an investment proposal is that discount rate which equates the present value of cash inflows with the present value of cash outflows of an investment. The IRR is also known as cutoff or hurdle rate. It is usually the concern's cost of capital.

**According to Weston and Brigham** "The internal rate is the interest rate that equates the present value of the expected future receipts to the cost of the investment outlay."

When compared the IRR with the required rate of return (RRR), if the IRR is more than RRR then the project is accepted else rejected. In case of more than one project with IRR more than RRR, the one, which gives the highest IRR, is selected.

The IRR is not a predetermined 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.



$$IRR = L + \frac{P1 - Q}{P1 - P2} \times D$$

Where:

L- Lower discount rate

P1 - Present value of cash inflows at lower rate.

P2 - Present value of cash inflows at higher rate.

Q- Actual investment

D- Difference in Discount rates.

Merits:

- It considers the time value of money
- It takes into account the cash flows over the entire useful life of the asset.
- It has a psychological appeal to the user because when the highest rate of return project is selected, it satisfies the investors in terms of the rate of return on capital
- It always suggests accepting to projects with maximum rate of return.
- It is in conformity with the firm's objective of maximum owner's welfare.

Demerits:

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

### C. Probability Index Method (PI)

The method is also called benefit cost ratio. This method is obtained with a slight modification of the NPV method. In case of NPV the present value of cash outflows are profitability index (PI), the present value of cash inflows is divided by the present value of cash outflows, while NPV is an absolute measure, the PI is a relative measure.

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 in case of projects with different cash outlays and hence is superior to the NPV method.