

# CHRISTIAN EMINENT COLLEGE, INDORE

(Academy of Management, Professional Education and  
Research)

*An Autonomous Institution Accredited with 'A' Grade by NAAC*



## **E-Content**

On

## **“Financial Management”**

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## **SYLLABUS**

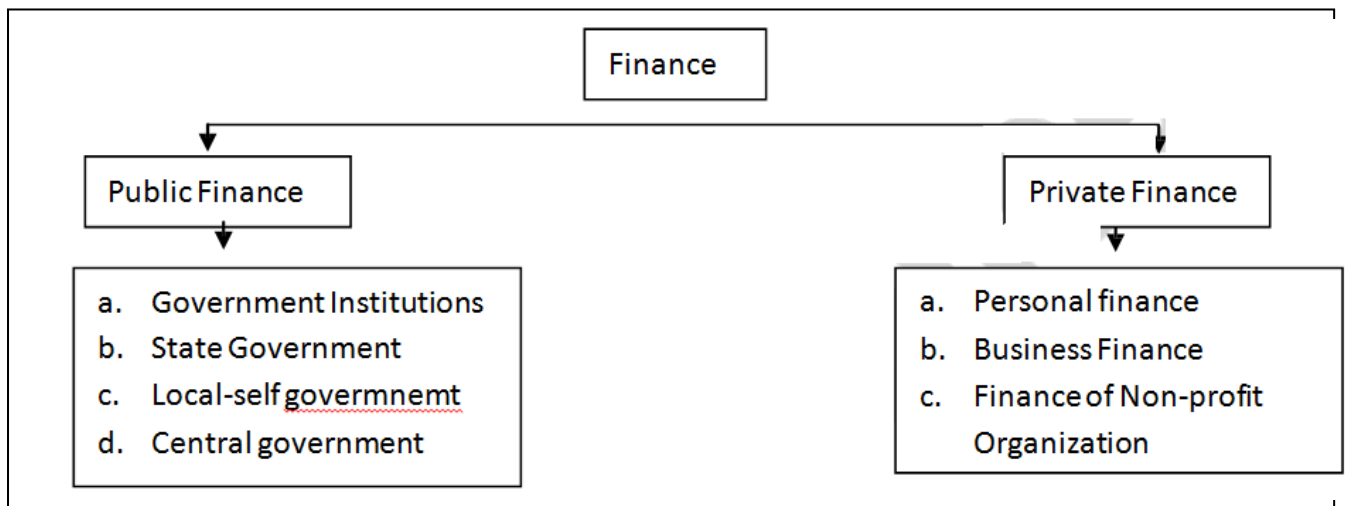
### **Class – B.Com III Year Subject – Financial Management**

UNIT – I	Financial Management: Finance goals, profit vs. wealth maximization; Financial functions – Investment, financing and dividend decision, Financial Planning
UNIT – II	Capital Structure: Meaning and determinants. Operating and financial leverage: Their measure; effects on profit, analyzing alternate financial plans, combines financial and operating leverage
UNIT- III	Capital Budgeting: Nature of investment decisions, investment evaluation criteria, payback period, accounting rate of return, net present value, internal rate of return profitability index: NPV and IRR comparion.
UNIT – IV	Cost of capital: Significance of cost of capital; Calculating cost of debt, Preference shares, equity capital, and retained earnings, Weighted Average cost of capital. Dividend Policies: forms of dividends and stability in dividends, determinants, issues in dividend policies, Waltor's mode, Gordon's Model, M.M. Hypothesis.
UNIT – V	Management of working capital: Nature types and importance of working capital, operating cycle and factors determining working capital requirement, Management of working capital – Cash, receivables and inventories (Concept and Control Techniques Only)

## Unit – I

**Introduction**

In our present day economy, Finance is defined as the provision of money at the time when it is required. Every enterprise, whether big medium or small, needs finance to carry on its operations and to achieve its targets, in fact finance is so indispensable today that it is rightly said to be the lifeblood of an enterprise without finance no enterprise can possibly accomplish its objectives.



However, there are three main approaches to finance

1. The first approach views finance as to providing funds needed by a business on most suitable terms, this approach confines finance to the raising of funds and to the study of financial institutions and instruments from where funds come to be procured.
2. The second approach relates finance to cash.
3. The third approach views finance as being concerned with raising of funds and their effective utilization.

**Definition of Financial Management –**

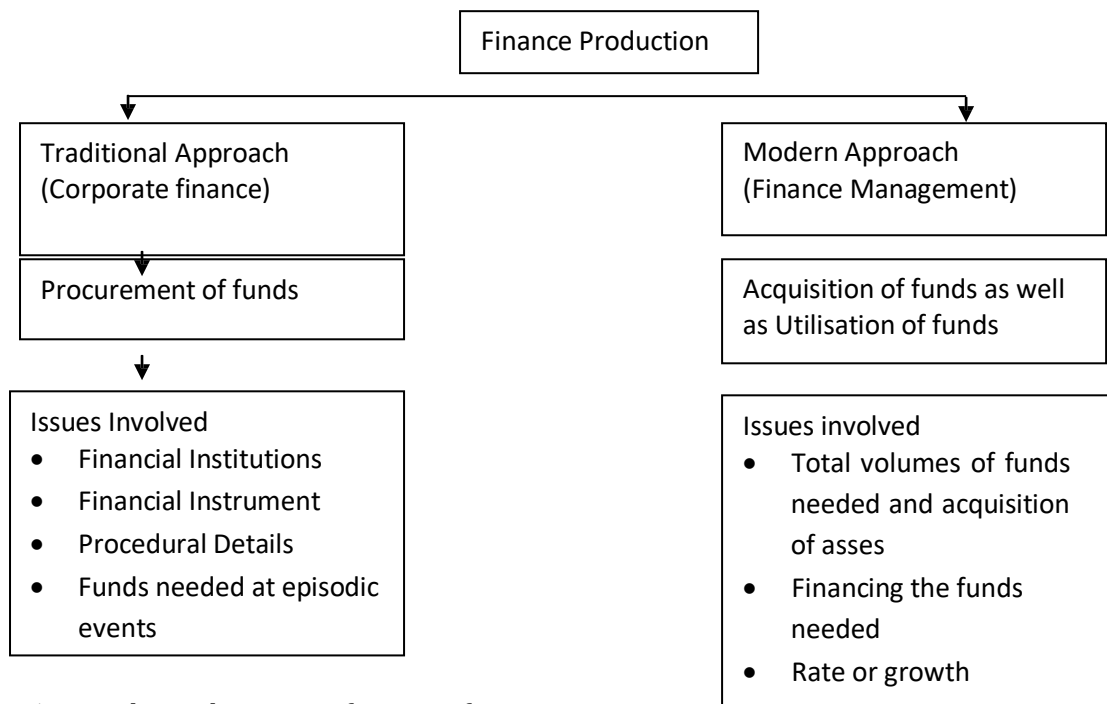
“Financial Management is the operational activity of a business that is responsible for obtaining and effectively utilizing the funds necessary for efficient operations.” – Prof. J.L. Marsie

“Financial Management is an area of financial decision making, harmonizing individual motives and enterprise goals.” – Weston and Brigham

**Finance Functions**

Experts differ significantly as to what are finance functions. Such difference in approach may be put under categories:

1. Traditional concept of Finance function
2. Modern Concept of Finance functions



#### 1. Traditional concept of Finance function

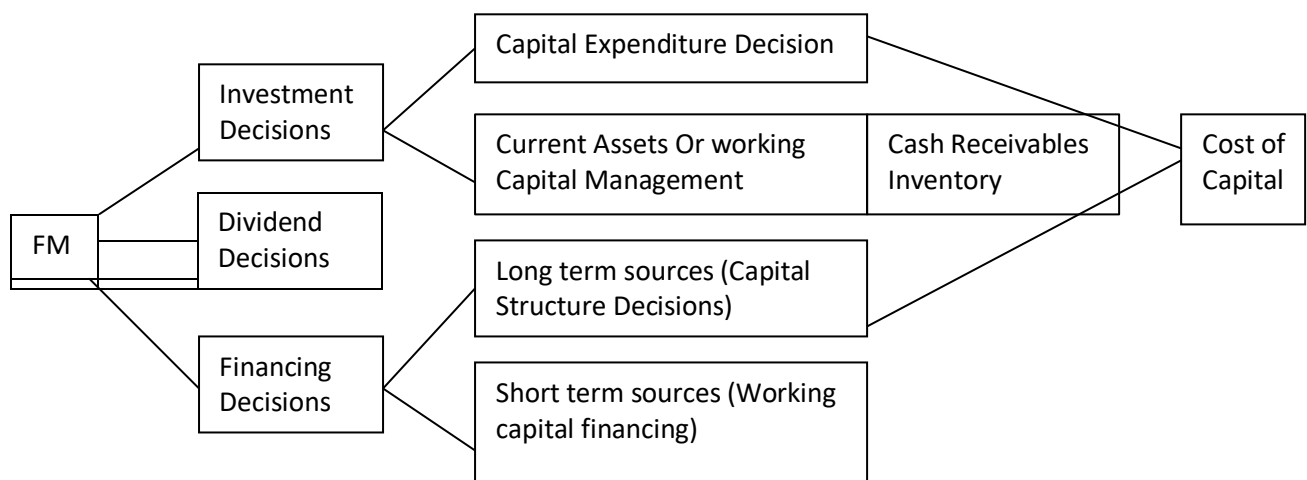
According to traditional concept of finance function is related only to the arrangement of funds for the business. In other word, procuring necessary capital for the business is the function of financial executive. Financial executive has to take decisions as to what are the sources of capital and how much funds should be raised, what is the proper time of acquiring such funds, on what conditions such funds should be raised etc.

According to Soloman Ezro, The traditional approach thus focused more on sources of funds and was too often largely concerned with specific procedural details.

#### 2. Modern Approach of Finance function.

This approach attempts to answer the question like –

- What is the total volume of funds and enterprise should arrange?
- What specific assets should an enterprise acquire?
- How should the funds required be raised?
- What should be the composition of liabilities?
- How should profit be allocated?



#### Investment Decisions

Investment decisions are concerned with selecting the right type of assets in which funds will be invested by the firm. The assets which can e acquired fall into two groups: (i) Long-term assets (fixed assets), which would yield a return over a period of time to future, and (ii) short-term assets (also

known as current assets), which are in normal course of business operations convertible into cash usually within a year. As such, investment decisions of the firm are of two types – long term investment decisions popularly known in the financial literature as ‘Capital budgeting’ and short term investment decisions i.e., financial decisions making with reference to current assets popularly designed as ‘current Assets Management’.

### **Financing Decisions**

Financial manager has to make a decision regarding raising of finances (funds) i.e. he has to decide the source-mix or capital structure or leverage. The two important sources of financing are debt and equity. Debt is fixed interest source of financing and equity is variable dividend source of financing.

A proper balance between debt and equity of ensure a tradeoff between risk and return is necessary. Financing decision involves capital structure decision along with its theory.

### **Dividend Decisions**

The third major decision of financial management is the decision relating to declaration and payment of dividend. Financial manager has to advise the top management (Board of directors) as what portion of profits should be distributed as dividend to the shareholders and what portion should be retained in the business as well as part of investment decision.

All these three financial decisions as finance function are inter-related because these have the same objective, i.e. maximization of wealth. As such, these should be jointly taken, so that financial decisions-making is optimal with reference to objectives of financial management.

### **Nature and Characteristics of financial Management**

1. More analytical than descriptive
2. A continuous & Dynamic process;
3. An integral part of General Management
4. strikes coordination in all functions
5. centralized functions
6. Scientific art.

### **LIMITATIONS OF TRADITIONAL APPROACH**

1. One-sided approach
2. Ignores the internal decision-making
3. Applicable to company form of organization
4. More emphasis on episodic events.
5. Focus on the long term financing only
6. Ignores the central issue of financial management.

### **Modern Approach**

The central issues of Financial Management are ignored by the traditional approach.

Experts like Walker, Hawrd and Lipton, soloman Ezra etc. have explained the finance function as a financial decision-making.

According to these experts, the meaning of finance function is confined not only to acquisition of funds but also to making effective use of such funds.

Modern approach gives analytical frame work for financial problems. Under this Approach, three types of decisions have to be taken- investment decisions, financing decisions and dividend-decisions.

According to Soloman Ezra, "The newer broader approach aims at formulating rational policies, for optimum use; procurement and allocation of funds."

### **NATURE OF FINANCIAL MANAGEMENT**

1. More Analytical the descriptive
2. A continuous & dynamic process.
3. An integral part of General Management
4. Strikes Coordination in all functions
5. Centralized function.
6. Scientific Art.

## SCOPE

1. Estimating Financial Requirements- The first task is to estimate short term and long requirements of his business. For this prepare a financial plan for present as well as future
2. Deciding Capital Structure- The mixture of debt and 'equity maintaining by the firm.
3. Selecting a source of finance- Various sources from which finance may be raised include: debentures, financial institutions, qpiri4Orcial banks, public deposits etc.
4. Selecting a pattern of investments- It means the uses of funds.
5. Proper Cash Management- Management of assets and liabilities. Cash Flow statement and Liquidity must be maintained in it.

## FUNCTIONS OF FINANCIAL MANAGEMENT

There are two types, of functions:

A. Executive Functions

B. Routine functions

A. **Executive functions-** Making reasonable forecast of Financial requirements and arranging the sources for the supply of funds, making effective and maximum use of funds provided by the investors etc are the objectives of financial management for which the following functions are carried out:

1. Financial Forecasting- It is the Primary function of financial management because it is the foundation of financial planning. Forecasting about- new enterprises are made by promoters or investors while going concern financial requirements are being forecast by financial executives. Such forecasting needs the applications of various statistical mathematical and accounting techniques.
2. Financial planning- It is done under three distinct sub-activities-
  - a. Formulation of financial objectives
  - b. Framing the financial Policies College of Commerce & Management
  - c. Developing financial procedures.Both short term & long term plans are prepared with respect to each of above sub activities.
3. Financial Decisions- It involves determination of financial sources, comparative study of their cost of capital, examining the impact on share holder's equity etc.
4. Financial Negotiations: It means contact all the possible suppliers of funds and to finalize the contract through negotiations / talks. In this process statutory provision, rules and assumptions are to be executed.
5. Investment Decisions- Decisions about the investments' of funds Volume of fund/investments in fixed assets (long term investment) and volume of investments in current assets (short-term investments)
6. Management of income- Correct distribution of income in correct proportion and following the appropriate dividend policy.
7. Management of cash flows- Proper flow of cash is essential for every business Therefore adopt a fair policy regarding the cash flow (both in flows & out flows) and also mange cash surplus! Deficiencies.
8. Appraisal of Financial performing- It is necessary to evaluate & analyse the financial Performance of the business concern in a definite interval and to communicate the results to top management.
9. To make efforts for increasing the productivity of the capital- By the new opportunities of investments.
10. To Advise the top Management- Whenever top management has to advise the best solution by diagnosis the problem, alternative solution to the problem. Selection of the best solutions.

B. **Routine Functions-** These functions are being performed by lower-level employee on daily basis. All the top authorities take financial decisions with the help of these functions.

1. Record keeping
2. Preparation of various financial statements
3. Arranging the cash balance as per requirements

4. Managing the credit
5. Safety of significant financial documents.

### **OBJECTIVE OF FINANCIAL MANAGEMENT**

It can be explained from two points of view- Macro level & Micro Level

Macro-level theory says the whole society is benefited. On the contrary, according to micro-level theory, the financial objective is determined as per the individual view point of a company, firm or enterprise.

There are two mutually opposite thought regarding objective of financial management at Micro -level.

- A. Profit Maximization (P.M.O.) objectives
- B. Wealth Maximization (W.M.O) objectives

### **PROFIT MAXIMIZATION OBJECTIVES**

The objective of financial management of an enterprise is to maximize the profit. Financial Manager should select that alternative which may maximize the profit. In other words, all such actions which increase the profit should be undertaken and those which reduce the profit should be avoided.

For maximizing the profit either production is to be maximized from limited resources or cost should be minimized for a particular level of production volume.

### **JUSTIFICATION OF PMO**

1. Rationality
2. Maximization of Social benefits
3. Efficient Allocation and uses of resources
4. Measurement Of success of decisions
5. Source of incentives.

### **LIMITATION OF PMO**

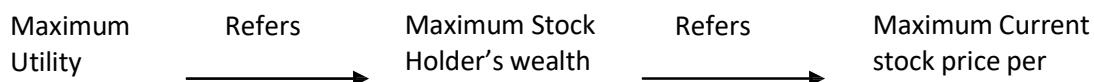
Profit maximization objective (PMO) is considered to be a very limited (narrow) objective, because it has a no. of drawbacks.

1. Ambiguity/ Loose Expression of the Term profit
2. Profit Maximization objective ignores timings of benefit
3. Fails to recognise the quality of benefits.

### **Wealth Maximization Objectives (W.M.O)**

Wealth Maximization is the appropriate objective of an Enterprise Financial theory asserts that wealth Maximization is the single substitute for a stockholder's utility.

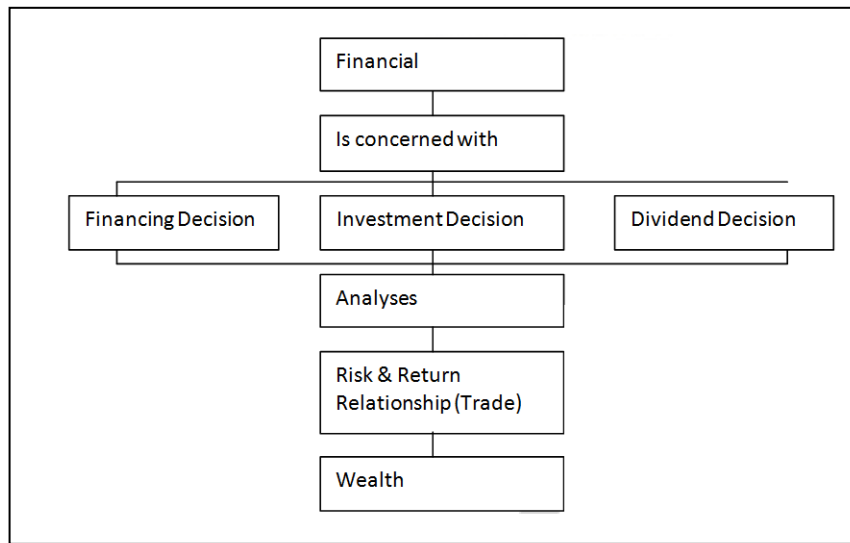
When the firm maximizes the stock holder's wealth, the individual stock holder can use wealth to maximize his individual utility.



Stock Holder's  $\text{older's current} = \text{Number of s\text{are owned} \times \text{current stock price per s\text{are}}$

### **Merits of WMO**

1. Precise and unambiguous
2. Considers the timing of benefits
3. Takes case of quality of benefits



## BASIC FINANCIAL DECISIONS

1. Investment Decisions- Investment decisions are concerned with selecting the right type of assets in which funds will be invested by the firm. There are two types of assets.

- a. Long term assets (Fixed assets)
- b. Short-term assets (Current assets)

Long, term assets which would yield a return over a period of time in future. Long term investment decisions popularly known in financial literature as "Capital Budgeting".

Capital Budgeting- The process of planning and managing a firm's long term investment.

It is the planning process used to determine whether a firm's long term investments such as new machinery, replacements machinery, new plants, new products and research development projects are worth pursuing. It is budget for major capital, or investment expenditure.

Short term Assets which are in normal course of business operations convertible into cash usually within a year.

Short term investment decisions known as 'Current Assets Management' or 'Working capital Management'

Working Capital Management- A management firms short terms assets and liabilities

These are decisions involving managing the relationship between a firms' short term-assets and its short-term liabilities.

The goal of working capital management is to ensure that the firm is able to continue its operations and that it has sufficient cash flow to satisfy both maturing short-term debt and upcoming operational expenses. It means the short term investment decision is the trade off between profitability and liquidity (risk)

Financing; Decisions- Financing Decisions are concerned with the proper mix of debt & equity. Therefore, financing decisions are involves "capital structure decision."

Capital structure: - The mix of debt and equity maintained by the firm. The two important sources of financing are debt and equity.

Debt is fixed interest source: of financing is variable dividend source of financing. Decide the appropriate mix of debt and equity in such a way as to maximize the share holder% Wealth. A proper balance between debt and equity to ensure a tradeoff between risk & return is necessary.

2. Dividend Decisions- The third major decision of financial Management is the decision relating to declaration and Payment of dividend.

Financial manager has to advice the top management (Board of directors) as what portion of profits should be distribute as dividend to the share holders and what portion should be retained in the business for further investment.

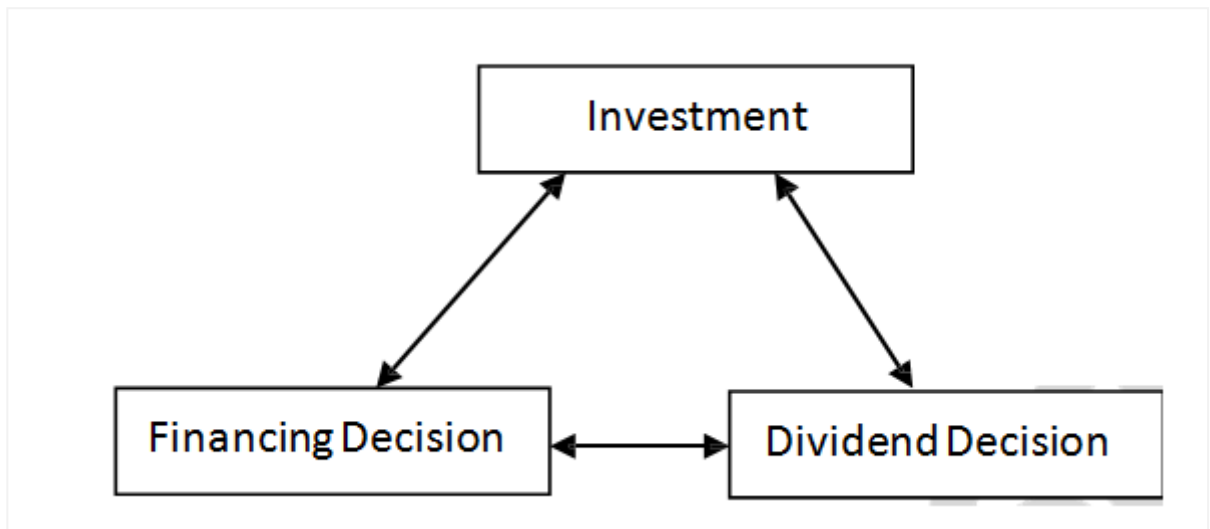


If adequate profitable within the enterprise; profits are to be retained because return to shareholders would be maximum and price of share would- also rise.

If the enterprise does not have investment opportunities the profit should be distributed as dividends to shareholders.

All these three financial decision as finance function are inter-related because these have the same objective, i.e., maximization of Wealth. (Share holder's wealth)

#### Inter-Relation of Financial Decision



## UNIT - II

### Leverage

In finance, leverage (also known as gearing or leveraging) refers to the use of debit to supplement investment. Companies usually leverage to increase returns to stock, as this practice can maximize gains (and losses). Leverage is the degree to which an investor or business is utilizing borrowed money.

### Types of leverage –

1. **Opening leverage** – The operating leverage is a measure of how revenue growth translates into growth in operating income. It is a measure of leverage and how risky (volatile) a company's operating income is. Operating leverage can also be measured in terms of change in operating income for a given change in sales (revenue). Operating leverage reflects the extent to which fixed assets and associated fixed costs are utilized in the business. Degree of operating leverage (DOL) may be defined as the percentage to leveraging. DOL the Degree of operating leverage (DOL) can be computed in a number of equivalent ways; one way it is defined as the ratio of the percentage change in Operating Income for a given percentage change in Sales.
2. **Financial leverage** –
  - Financial leverage is the ability of the firm to use fixed financial charges to magnify the effects of changes in EBIT on the firm's earnings per share.
  - In other words, financial leverage may be defined as the payments of fixed rate of interest for the use of fixed interest bearing securities to magnify the rate of return as equity shares.
  - The use of the fixed-charges sources of funds, such as debt and preference capital along with the owner's equity in the capital structure, is described as financial leverage or gearing or trading on equity.

Degree of financial leverage – Degree of financial leverage (DFL) may be defined as the percentage change in earnings (earnings per share) that occurs as a result of a percentage in earnings before interest and taxes.

3. **Combined leverage** – If both operating and financial leverage allow us to magnify our returns, and then we will get maximum leverage through their combined use in the form of combined leverage. Degree of combined leverage (DTL) uses the entire income statement and shows the impact of a change in sales or volume on bottom-line earnings per share.

### FORMAT OF LEVERAGE

Particular	Amount
Sales (In Rs.)	*
(-) Variable Cost	*
= Contribution	*
(-) Fixed Cost	*
= EBIT	*
(-) Interest	*
= EBT	*
(-) Tax	*
= EAT	*
(-) Preference Dividend	*
= Earning after Preference dividend	*
(-) Equity Dividend	*
= Net Profit (Retained Earning)	*

EBIT = Earnings before Income & Tax – EBT = Earnings Before Tax – EAT = Earnings after Tax

### Formulae

1. **Operating Leverage** =  $\frac{\text{Contribution}}{\text{EBIT}}$  or  $\frac{\text{Percentage change in EBIT}}{\text{Percentage change in sales}}$
2. **Financial leverage** =  $\frac{\text{EBIT}}{\text{EBT}}$  or  $\frac{\text{Percentage change in EBIT}}{\text{Percentage change in EPS}}$
3. **Combined leverage** =  $\frac{\text{Contribution}}{\text{EBT}}$  or  $\frac{\text{Percentage change in EBIT}}{\text{Percentage change in sales}}$  or OL x FL

#### Other Formulae

1. Earnings per share (EPS) =  $\frac{\text{Net Profit or Retained Earnings}}{\text{No. of Equity shares}}$
2. Break even Analysis =  $\frac{\text{fixed Cost} \times \text{Sales}}{\text{Contribution}}$
3. P/V ratio =  $\frac{\text{Contribution}}{\text{sales}} \times 100$
4. ROI =  $\frac{\text{EBIT}}{\text{Capital Employed}} \times 100$
5. Assets turnover =  $\frac{\text{Net Sales}}{\text{Total Sales}}$

#### Some major points taken into consideration

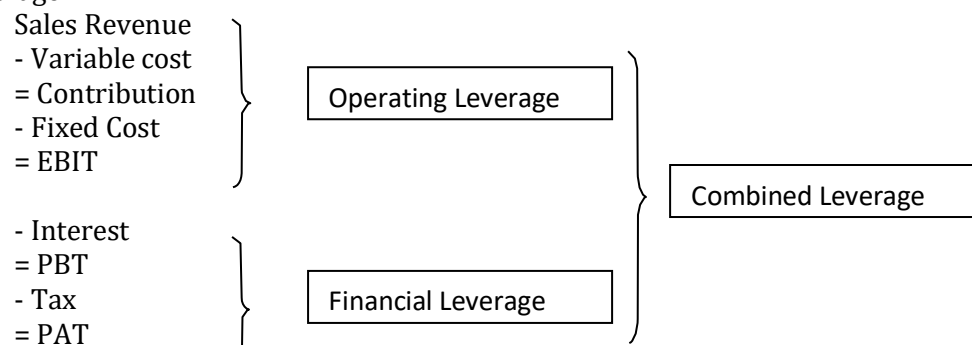
1. Interest is chargeable on debts only
2. Total assets = Debts Assets + Equity Capital

#### Operating and Financial Leverage

Leverage refers to relationship between two interrelated variables. In financial analysis, leverage reflects the response of one financial variable over some other financial variable.

Leverage are of three types

- a. Operating leverage
- b. Financial leverage
- c. Combined leverage



Operating leverage is the tendency of the operating profits to vary disproportionately with sales.

$$\text{Operating leverage} = \frac{C}{\text{EBIT}} \text{ OR } \frac{\% \nabla \text{ in EBIT}}{\% \nabla \text{ in sales / contr}}$$

Financial leverage is related to the changes in operating profit available to equity shareholders on account of changes in EBIT

$$FL = \frac{EBIT}{EBT} \text{ OR } \frac{\% \text{ change in EBIT}}{\% \text{ change in EBT}} \text{ OR } \frac{EBIT}{PBT - PD / (1-t)}$$

Combined leverage – clarifies the combined effect of OL & FL

$$CL = OL \times FL = \frac{C}{EBIT} \text{ OR } \frac{\% \text{ change in EBIT} / EPS}{\% \text{ change in sales / contr}}$$

OL explains the business risk while FL deals with the financial risk. The more is leverage the higher is the risk associated.

### Other formulae –

$$\text{Assets turnover ratio} = \frac{\text{sales}}{\text{Total Assets}} \times 100$$

$$\text{Debt assets ratio} = \frac{\text{Total Assets}}{\text{Debt}} \times 100$$

$$\text{Debt Equity Ratio} = \frac{\text{Total Equity}}{\text{Debt}}$$

### Financial Leverage

Financial leverage is synonym of trading in equity

Of course, Financial leverage may be called as refund form of trading in equity financial leverage is related to the change in EBIT. A business concern may increase the profit to equally share holders by increasing the EBIT.

In other words we can say “When the rate of return available to equally share holders is caused to rise by the use of best and performance share capital, it is termed as FL

$$\text{Financial Leverage (FL)} = \frac{EBIT}{EBT} \text{ OR } \frac{\% \text{ change in EBIT}}{\% \text{ change in EBT}}$$

EBT – It is equal to the amount left after deducting interest on.

$$DFL = \frac{\% \text{ change in EBIT}}{\% \text{ change in EBT}}$$

Combined leverage – “Who have observed that operating leverage affects the business risk and it is measured in terms of changes in EBIT due to changes in sales. Similarly financial leverage affects financial risk and is measured in terms of percentage change in EBT or EPS relative to percentage change in EBIT. Since both the leverage are closely reputed in ascertaining the ability of the firms to cover fixed charges. The mixture of the two would give combined or total leverage.

Formula –

$$CL = OL \times FL \text{ OR } \frac{C}{EBIT} \times \frac{EBT}{EBT}$$

### Degree of combined leverage

$$DCL = \frac{EBIT}{EBT} \times DFL \text{ OR } \frac{EBT}{EBT} \times DFL$$

$$DCL = \frac{\% \text{ change in EBIT}}{\% \text{ change in EBT}} \times \frac{\% \text{ change in EBT}}{\% \text{ change in EBIT}}$$

$$DCL = \frac{\% \text{ change in sales}}{\% \text{ change in EBT or EPS}}$$

$$\% \text{ change in sales}$$

## Meaning of Capital Budgeting

## UNIT- III

Capital budgeting means planning for capital assets. It is to be decided whether money should be invested in long-term projects like setting up a new factory or installing machinery, etc.

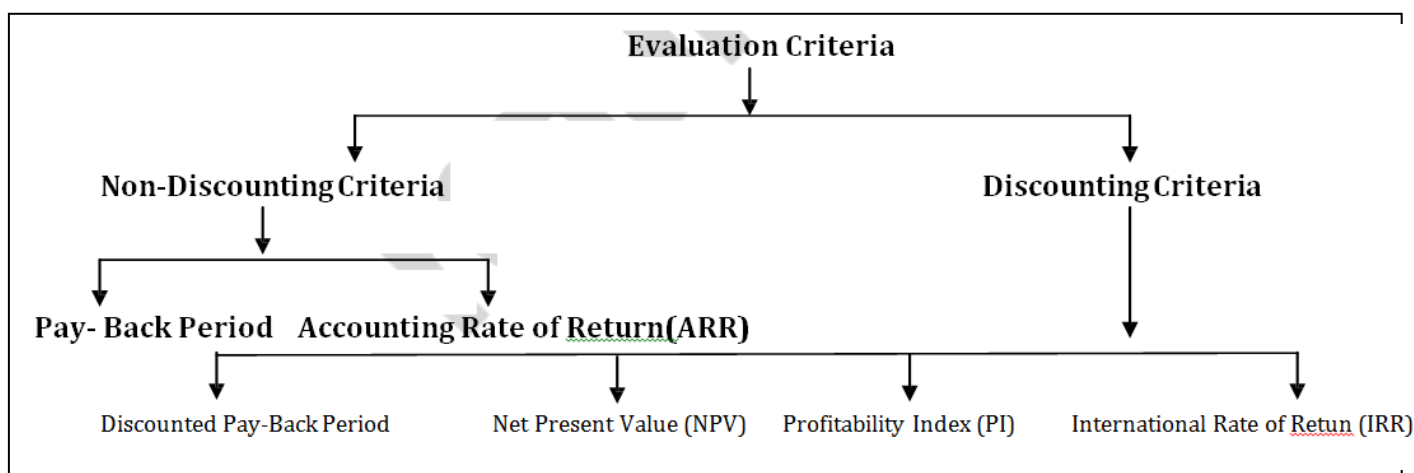
## Features of Capital Budgeting

Following are the basic features of capital budgeting:

- (i) Investment of funds in long-term assets.
- (ii) Potentially large anticipated benefits.
- (iii) Relatively high degree of risk.
- (iv) Relatively long time period between the initial outlay and the anticipated returns.

## Importance of Capital Budgeting Decisions

- 1. Growth
- 2. Large Amount
- 3. Irreversibility
- 4. Complexity
- 5. Risk
- 6. Long-term Implications



## NON DISCOUNTING CRITERIA

### Pay-Back Period Method

The Pay-Back (PB) is one of the most popular and widely recognized traditional methods of evaluating investment proposals. It is defined as the number of years required to recover the original cost outlay invested in a project. If the project generates constant annual cash inflows, the pay-back period can be computed by dividing cash outlay by the annual cash flow, i.e.,

$$\text{Pay-back Period} = \frac{\text{Initial Investment}}{\text{Annual Cash Inflow}}$$

### **Average Rate of Return (ARR) OR Accounting Rate of Return OR Unadjusted Rate of Return**

Average rate of return or Accounting rate of return means the average annual earning on the project. Under this method, Profit after tax and depreciation as percentage of total investment is considered. In other words, the annual returns of a project are expressed as a percentage of the net investment in the project.

#### **Calculation of ARR**

The average rate of return can be calculated in the following two ways:

$$\text{i. ARR on Initial Investment} = \frac{\text{Average Profit After Tax}}{\text{Initial Investment}} \times 100$$

In this case, the original cost of investment and the installation expenses, if any, is taken as the amount invested in the project. To calculate average profit after tax, total profit after tax is divided by the number of years of the project.

Theoretically, this approach seems to be good but taking the initial investment as the base of calculating average rate of return is not correct on logical ground.

$$\text{ii. ARR on Initial Investment} = \frac{\text{Average Profit After Tax}}{\text{Average Investment}} \times 100$$

#### **Method to find out the Average Investment**

##### **a. When there is no scrap value and working capital:**

$$\text{Average Investment} = \frac{\text{Initial Investment} + \text{Installation Charges}}{2}$$

##### **b. When there is scrap value:**

$$\text{Average Investment} = \frac{\text{Initial Investment} + \text{Installation Charges} - \text{Scrap Value}}{2}$$

##### **c. When there is scrap value and working capital**

$$\text{Average Investment} = \frac{\text{Initial Investment} + \text{Installation Charges} - \text{Scrap Value} + \text{Scrap Value} + \text{Working Capital}}{2}$$

### **Net Present Value (NPV) Method**

NPV = PV of CI - Out flow

PVCI = CFAT X PVF

Present Value of Cash In flow = Cash flow after tax X Present Value

### **PROFITABILITY INDEX (PI)**

$$\text{Profitability Index (Gross)} = \frac{\text{P/V of Cash Inflows}}{\text{Initial Cash Outflows}}$$

$$\text{Net Profitability Index} = \frac{\text{NPV}}{\text{Initial Cash Outlay}}$$

$$\text{IRR} = L + \frac{A}{(A-B)} (H-L)$$

## UNIT – IV

### COST OF CAPITAL

The concept of Cost of Capital (and its fair estimation) is very important from several points of view:

- a. **Capital Expenditure Decisions:** - Cost of capital is basic input information in capital expenditure decisions. In the case of Discounted Cash Flows methods (N.P.V. & T.V.D.P.B.P. etc.), the cost of capital is used to discount the future cash inflows. In the case of I.R.R., the ascertained I.R.R. is compared with the cost of capital. Even in the case of traditional method like Accounting Rate of Return, the Cost of Capital is used for comparing A.R.R. and deciding the profitability of the project. The decision in respect of a capital expenditure would be irrational and wrong, if the cost of capital is not correctly determined.
- b. **Capital Structure Decisions:** - The cost of capital also plays an important role in designing the balanced and appropriate capital structure. Each source of capital involves different cost and different risk. The objective should be to raise the capital from different sources in such a way that it optimizes the risk and cost factors. For this purpose, the cost of each source of capital should carefully be considered and compared with the involved in it. This importance of cost of capital can also be viewed in the context of country's economy as well.

#### Assumptions of the Cost of capital

The cost of capital and its determination as discussed in this chapter are based on certain assumptions, which are:

1. **Business Risk is Unaffected.** It has been assumed that business risk complexion of the concern would remain the same by accepting a new investment proposal. The term 'business risk' refers to the variability in annual earnings due to change in sales.
2. **Financial risk is also unaffected.** It is also our assumption that financial risk complexion would also remain unchanged. Financial risk refers to the risk on account of pattern of capital structure.

The Cost of Capital discussed here does not consider the business risk and financial risk. It is something like rate of return with zero-risk level.

#### TYPES OF COST OF CAPITAL

- A. **Explicit Cost and Implicit Cost** It can easily be ascertained that raising of capital from any source would involve a series of cash flows-starting with cash inflows (proceeds from the issue of securities) and followed by annual cash outflows in form of interest payments, repayment of principal, dividends, etc. the explicit cost of capital is the internal rate of return, which a company pays for procuring the finances. It can easily be seen that explicit cost of capital will be only in the case of interest bearing loan. If the loan is interest-free, its explicit cost will be zero percent, as no cash outflows of interest are involved, of course, the principal will be returned but its discounting rate will be zero.

The concept of opportunity cost gives rise to 'implicit cost'. The implicit cost of capital arises, when a company considers alternative uses of capital. The rate of return, which can be earned by investing the capital in alternative investment (popularly known as opportunity cost) by the company or shareholders is known as implicit cost.

- B. **Historical Cost and Future Cost.** Historical cost refers to the cost which has already been incurred for financing a project. It is, thus, calculated on the basis of past data. Future cost refers to the expected cost funds to be raised for financing a project. Historical cost is significant to the extent that it helps in projecting the future cost and providing an appraisal of the past performance, when compared with standard cost or predetermined costs.

- C. **Average Cost and Marginal Cost.** Average cost of capital is the weighted average cost calculated on the basis of cost of each source of capital structure. (Detailed procedure has been discussed later on). Marginal cost of capital is also weighted average but it is weighted average cost of new capital raised by the company. Marginal cost of capital is considered as more important for capital budgeting purposes and financing decisions.
- D. **Specific Cost and Composite Cost.** Capital can be raised from various sources and each source may have different cost. The cost of each source (i.e., specific source) is known as specific cost.

### **CONTROVERSIAL VIEWS REGARDING THE COST OF CAPITAL**

The concept of cost of capital is very useful and has considerable practical utility in the theory of finance. But it is also subjected to a lot of dispute. One point of dispute is related to the fact whether method and level of financing affect the cost of capital or not. There are two important approaches in this regard:

- a. **Traditional Approach.** According to this approach, a company's cost of capital depends upon the method and level of financing or its capital structure. It means that a company can change its overall cost of capital by changing its capital structure, i.e. increasing or decreasing debt-equity ratio. Since the cost of debt is cheaper due to lower coupon rate and also tax saving (interest on debenture is allowed as expenses) as compared to equity shares, the traditional theorists argue that the overall cost of capital (i.e., weighted average cost) will decrease with every increase in debt component in the total capital structure. However, debt component in the total capital employed should be maintained at proper level because cost of debt is a fixed burden on profit of the company. If the company has low profit, the increase in debt component might have adverse impact upon the company's risk. The shareholders may raise their expected rate of return due to increased risk in the business.
- b. **Modigliani and Miller Approach (M.M. Approach).** According to this approach, a change in capital structure i.e., debt-equity ratio) does not affect the cost of capital. In other words, the method and level of financing will not affect the cost of capital; this will remain constant. The 'Cost of Capital, Corporation Finance and Theory of Investment' published in American Economic Review, 48 June 1958, Modigliani and Miller have observed:
  - 1. The total market value of the firm and its cost of capital are independent of its capital structure.
  - 2. The cut-off rate for investment purposes is completely independent of the way in which investment is financed.

### **MEASUREMENT OF COST OF CAPITAL**

- 1. **Determination of Specific Costs.** The first stage in the measurement of cost of capital is the computation of the cost of individual source of capital. These sources are:
  - a. Debt (borrowed) Capital
  - b. Preference Share capital
  - c. Equity share capital
  - d. Retained earnings.
- a. **Cost of Debt Capital.** Such capital is generally obtained through the issue of debentures. These flotation costs and modes of issue have important bearing upon the cost of debt capital.

The cost of debt capital is very simple to calculate. The usual formula will be:

$$K_d = \frac{I}{SV} \times 100 \text{ (without tax factor)}$$

SV

Here,  $K_d$  = Cost of debt capital

I = Interest payable.

SV = Capital received (proceeds from issue)

According to nature, debentures (debt) may be (i) perpetual, and (ii) redeemable.

### **WEIGHTED AVERAGE COST OF CAPITAL**

As mentioned earlier, the second stage in the calculation of cost of capital is to find out the composite or combined cost on the basis of cost of individual sources and this is done using weighted average method. The various steps involved in the calculation of weighted average cost of Capital are:



- Cost of each specific source of capital is first calculated on the lines discussed earlier.
- Each specific cost is assigned weight. (It is done on the lines mentioned later on).
- Each specific cost is multiplied by the corresponding weight. (This is weighted cost of each source).
- Weighted cost of all sources of capital as arrived in Step (iii) are added together to get an overall weighted average cost of capital

### Assignment of weights

Assignment of weights actually involves the determination of share of each source of capital in the total capital structure of company. This is done in any of the following two ways:

- Historical Weights Method.** According to this method, the relative proportions of various source of capital to the existing capital structure are used to assign weights. In other words, the basis of assigning weights is the funds already employed by the company.  
In the case a historical weights method, one problem arises relating to the choice of book value or market value weights.
- Marginal weights Method:** According to this method specific costs are assigned weights in the proportion of funds to be raised from each source to the total funds to be raised. In other words, how much of proposed total capital will be raised through the issue of each and every type of securities would be the basis of weight under Marginal

### Cost of Capital

#### Measurement of Cost of Capital

Specific Cost	Combined Cost
---------------	---------------

#### A. Specified Cost

##### 1. Debt capital

##### a. Cost of Irredeemable Debt

$$kd = \frac{P}{C} \times 100$$

P = contractual Rate (Interest Rate) c

C = Capital Received

##### 1. Issued at par –

##### 2. Issued at Discount – $c = \text{Par value} - \text{Floatation charges}$

$$c = \text{par value} - \text{Discount} - \text{Floatation charges}$$

##### 3. When issued at premium

$$c = \text{par value} + \text{Premium} - \text{Floatation charges}$$

##### b. Cost of Redeemable debts

##### 1. Issued at Par –

$$\frac{\text{Floatation}}{2}$$

##### 2. Issued at Discount – $C = \text{par value} - \frac{\text{Floatation}}{2}$

–

##### 3. Issued at premium – $C = \text{par value} + \frac{\text{Floatation charges} + \text{Discount}}{2}$

–

$$C = \text{par value} + \frac{\text{Floatation charges}}{2} + \frac{\text{Premium}}{2}$$

Note- Irredeemable Debt is that capital which does not have specific date.

2. Preference share capital

$$kd = \frac{P}{c} \times 100$$

a. Issued at par –

$$c = \text{par value} - \text{Expenses of Issue}$$

b. Issued at Discount –

$$c = \text{par value} - \text{Discount} - \text{Expenses of}$$

c. Issued at Premium –

Issue

Tax Implications –

$$\text{Cost of capital before tax} = \frac{K_{pt}}{1-T}$$

$$c = \text{par value} + \text{Premium} - \text{Expenses of}$$

Issue

$K_{pt}$  = Cost of preference share capital after tax

T = Tax rate applicable to companies

3. Equity share capital

$$ke = \frac{D}{P} \times 100$$

$K_e$  = Cost of equity

P

D = Dividend per share

P = Market price per share

Rowing Dividend

$$D \times 100$$

$K_e$  = Cost of equity capital

D = Dividend per share

P = Market price per share

G = Growth Rate in Dividend

$$ke = \frac{D}{P} + G$$

4. Cost of Retained Earning

$$= \frac{AD}{AE}$$

$K_r$  = Cost of Retained earnings

$$kr = \frac{AE}{AD} \times 100$$

=

AD = Earning from alternative investment of retained earnings

AE = Retained earnings for such share holder

Tax Implications

A. When Brokerage and tax on dividend are taken into account

$$Kr = \frac{Ke (1-T) (1-B)}{(1-TD)AD} \times 100$$

=

$k_e$  = shareholders required rate of return

T = Share holders tax rate

B = Brokerage Cost

B. When Brokerage, dividend tax and capital gains tax are taken into account

$$kr = \frac{(1-TD)AD}{(1-Tc)RE} \times 100$$

Td = Tax on dividend in the hand of individual share holders

Tc = Capital gains tax rate applicable to individual share holders'

**Combined Cost**

Weighted Average Cost of capital

1. Source of Capital	2. Amount (Book Value or Market Value)	3. Weights	4. Cost of Capital	5. W.A. cost of Capital % (3x4 = 5)

## UNIT - V

### WORKING CAPITAL

#### MEANING

Every business needs funds for two purposes — for its establishment and to carry out its day to day operations. Long term funds are required to create production, facilities through purchase of fixed assets such as plant, machinery land, building, furniture etc. investment 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 for the purchase of raw materials, payment of wages and other day to day expenses etc these funds are working capital funds. Thus invested in current assets keep evolving- fat and are being constantly converted into cash and this cash flow again in exchange for other current assets. Hence it is also known as "revolving .or circulating capital or short term capital."

#### DEFINITION

"Working capital has ordinarily been defined as the excess of current assets over current liabilities"

#### IDEAL DEFINITION

"A firm's working capital consists of its investments in current assets which include short term assets such as cash and bank balance, inventories, receivables & marketable securities.

#### COMPONENTS OF WORKING-CAPITAL

There are two components, of working capital as under

1. Current Assets- Current Assets are those assets which in the ordinary -course of business can be converted into cash within a short period of normally one accounting year
2. Current liabilities- Current liabilities are those liabilities which are intended to be paid in the ordinary course of business within a short period of normally one accounting year.

#### CONSTITUENTS OF

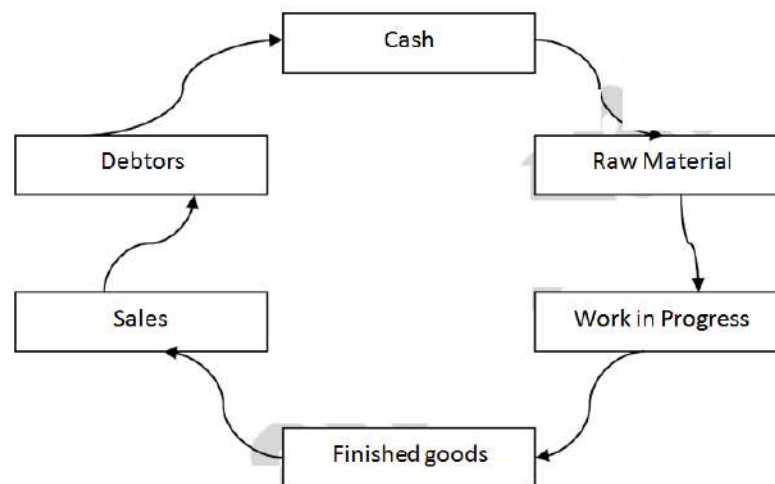
Current Assets	Current Liabilities
Cash in hand and bank balance	Bills payable
Bills Receivables	Sundry creditors or accounts payable
Sundry Debtors	Accrued but outstanding expense
Short term loans, advances	Short term, loans, advances & deposit
Inventories of Stock Raw materials Work-in-process Stores & spares Finished goods Temporary investment of surplus fund	Dividend payable
Temporary investments of surplus fund	Bank overdraft
Prepaid Expense	Provision for taxation
Accrued Incomes	

Concept - There are two concepts of working capital

- A. Balance Sheet Concept
  - B. Operating Cycle/Circular Flow Concept
- A. Balance Sheet Concept — There are two interpretations of working capital under the balance sheet concept:

1. **Gross Working capital** — In the broad sense, the term working capital refers to the gross working capital represents the amount of funds invested in current assets.
  2. **Net working capital** — In a narrow sense, the term working capital refers to the net working capital. Net working capital is the excess of current assets over current liabilities.  

$$\text{Networking capital} = \text{Current. Assets} - \text{Current Liabilities}$$
- B. Operating .Cycle/Circular Flow Concept. Funds thus invested in current Assets keep revolving fast and are being constantly converted into cash and this cash flow out again in exchange for other, current assets. Hence, it is also known as revolving or circulating capital  
The cycle starts with the purchase of raw material & other resources and ends with the realization of cash from the sale of finished goods.



#### Determinants of working capital

1. Nature or character of Business.
2. Size of Business/Scale of operations.
3. Production Policy.
4. Manufacturing Process/ Length of production cycle
5. Seasonal variation
6. Working capital cycle
7. Rate of stock Turnover.
8. Credit Policy .
9. Business Cycles.
10. Rate of Growth Business'
11. Earning capacity & dividend policy
12. Price level changes.
13. Other factors.

#### Needs of working capital

The need of working capital arises due to t€ time gap between production and Realization of cash from sales. Thus, working capital is needed for the following purposes-

1. For the purchase of raw materials, components 84 spares.
2. To pay wages & salaries.
3. To incur day to day expenses and overheads cost such as fuel, power & office expenses etc.
4. To meet the selling costs as packing advertising etc.
5. To provide credit facilities to the customer
6. To maintain the inventories of raw material, work-in-progress, stores & spares and finished stock.

## IMPORTANCE OF WORKING CAPITAL

Temporary or variable working capital importance or advantage of adequate working capital.

1. Solvency of business — Adequate working capital helps in maintaining solvency of the business by providing uninterrupted flow of production.
2. Good will- Sufficient working capital enables a business concern to make prompt payments and hence helps creating and 'maintaining goodwill.
3. Easy loans- A concern having adequate working capital, high solvency and 't standing can arrange loans from banks other on easy and favourable terms
4. Cash discount- Adequate working capita' also -enables -a concern to avail cash discounts on the purchase and hence it reduce costs.
5. Regular. Supply of Raw material- Sufficient working capital ensures regular supply of raw material and continuous production.
6. Regular payment of salaries, wages & day to day commitments- By regular payments increases efficiency, reduces wastages and costs and enhances production and profits.

## METHODS OR TECHNIQUES OF 'FORECASTING OR ESTIMATING WORKING CAPITAL

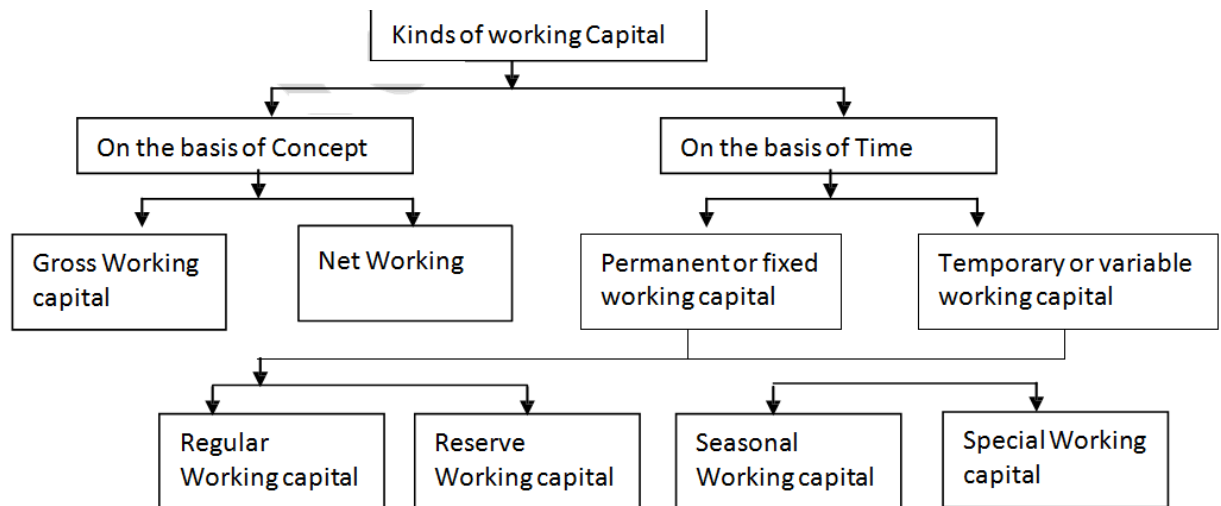
Following are the methods of corecasting or estimating working capital

1. Operating cycle method
2. Forecasting Of current Assets & current liabilities method
3. Cash forecasting method
4. Projected balance sheet method
5. Profit a loss adjustment method

## Kinds of working capital

Working capital may be classified in two ways

- a. On the basis of concept
- b. On the basis of lime.



1. Permanent or Fixed Working Capital- There is always a minimum level of current assets which Assets is called permanent or fixed working capital. is continuously required by the enterprise to carry out its normal Business like a minimum level of raw materials, work-in-progress finished goods and cash balance. This minimum level of current assets is called permanent of fixed working capital
  - a. Regular working capital - The permanent working capital can further be classified as regular working capital to ensure circulation of current assets from casu to inventories, from inventories to receivables and from receivables to cash and soon.

- b. Reserve working capital- It is the excess amount over the requirement for regular working capital which may be provided for counting excise that may arise at unstated periods such as strikes, rise in price depression etc.
2. Temporary or variable working capital - It is the amount of working capital which is required to meet the seasonal demands and some special exigencies. Most of the enterprises have to provide
  - additional working capital meet the seasonal and special needs
  - a. Seasonal Working capital - The capital required to meet the seasonal needs of the enterprises is called seasonal working capital.
  - b. Special working capital- Special working capital is that part of working capital which is required to meet special exigencies such as – launching of extensive marketing campaigns for conducting research etc.

### **Excess or inadequate working capital**

Every business concern should have adequate working capital to run business operations.

It should have neither excess nor shortage of working capital. Both positions are bad for any business.

### **Disadvantages of Extensive working capital**

1. Excessive working capital means idle funds which earn no profit for business and hence the business cannot earn a proper rate of return on investment.
2. Excessive Working capital implies excessive debtors and defective credit policy which may cause higher incidence of bad debts.
3. Due to low rate of return on investments, the value of shares may also fall.

### **Disadvantages of Inadequate working capital**

1. The firm cannot pay day to day expenses of its operations and it creates inefficiencies, increases cost and reduces the profit of business.
2. It can buy its requirements in bulk and cannot avail of discounts etc.
3. It becomes difficult for the firm to exploit favourable market conditions and undertake profitable project due to lack of working capital.

### **CONCEPTS OF WORKING CAPITAL**

There are two concepts of working capital:

1. Balance Sheet Concept.
2. Operating Cycle of Circular Flow Concept

#### **A. Balance Sheet Concept**

There are two interpretations of working capital under the balance sheet concept:

- a. Gross Working Capital.
- b. Net Working Capital.

In the broad sense, the term working capital refers to the gross working capital and represents the amount of funds invested in current assets. Thus, the gross working capital is the capital invested in total current assets of the enterprise.

<b>CONSTITUENTS OF CURRENT ASSETS</b>	
	Cash in hand and bank balances
	Bills Receivables
	Sundry Debtors (less provision for bad debts)
	Short-term loans advances
	Inventories of stocks, as
	Raw, material
	Work-in-process
	Stores and spares
	Finished goods
	Temporary Investments of surplus funds
	Prepaid Expense's
	Accrued Incomes

Net working capital is the excess of current assets over current liabilities, or say:

Net Working Capital = Current Assets — Current Liabilities



CONSTITUENTS OF CURRENT LIABILITIES	
	Bills Payable
	Sundry Creditors or Accounts Payable
	Accrued or Outstanding Expenses
	Short-term, loans, advances and deposits
	Dividends payable
	Bank Overdraft
	Provision for taxation, if it does not amount to appreciation of profits

### B. Operating Cycle or Circular Flow Concept

The circular flow concept of working capital is based upon this operating or working capital cycle of a firm. The cycle starts with the purchase of raw material and other resources and end with the realization of cash from the sale of finished goods. The speed/time duration required to complete one cycle determines the requirements of working capital-longer the period of cycle, larger is the requirement of working capital.

The gross operating cycle of a firm is equal to the length of the inventories and receivables conversion.

$$\text{Gross operating cycle} = \text{RMCP} + \text{FGCP} + \text{RCP}$$

Where, RMCP = Raw Material Conversion Period

WIPCP = work-in-Process Conversion Period

FGCP = Finished Goods Conversion Period

RCP = Receivables Conversion Period

$$\text{Net operating cycle Period} = \text{Gross operating Cycle Period} - \text{Payable Deferral Period}$$

$$\text{Average Stock of Raw Material}$$

$$1. \text{ Raw material Conversion Period} = \frac{\text{Raw Material Consumption}}{\text{Per day}}$$

$$\text{Average Stock of work -inprocess}$$

$$2. \text{ Work in-Process Conversion Period} = \frac{\text{total cost of production}}{\text{Per day}}$$

$$\text{Average Stock of Finished goods}$$

$$3. \text{ Finished Goods conversion Period} = \frac{\text{Total cost of Sales}}{\text{Per day}}$$

$$\text{Average payables}$$

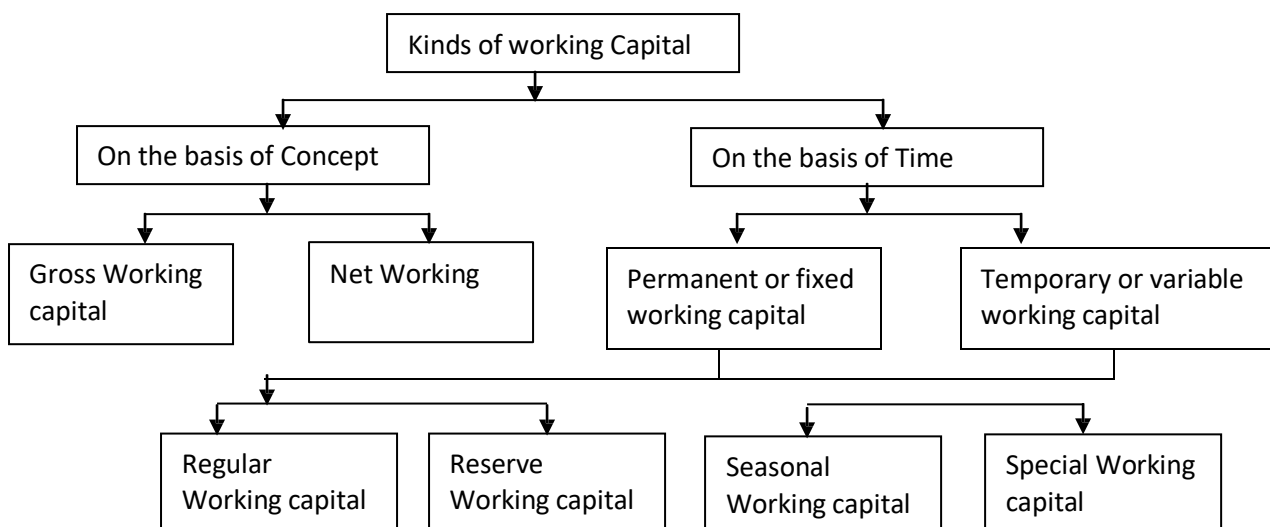
$$4. \text{ Payable Deferral Period} =$$

$$\frac{\text{Net credit Purchases}}{\text{Per day}}$$

### CLASSIFICATION OR KINDS OF WORKING CAPITAL

Working capital may be classified in two ways:

- On the basis of concept.
- On the basis of time.



Permanent or fixed working capital is the minimum amount which is required to ensure effective utilization of - fixed facilities and for maintaining the circulation of current assets. There is always a minimum level of current assets which is continuously required by the enterprise to carry out its normal business operations. For example, every firm has to maintain a minimum level of raw materials, work-in-process, finished goods and cash balance

This minimum level of current assets is called permanent or fixed working capital. The permanent working capital can further be classified as regular working capital and reserve working capital. Reserve working capital is the excess amount over the requirement for regular working capital which may be provided for contingencies that may arise at unstated periods such as strikes, rise in prices, depression, etc.

Temporary or variable working capital is the amount of working capital which is required to meet the seasonal demands and some special exigencies. The capital required to meet the seasonal needs of the enterprise is called seasonal working capital. Special working capital is that part of working capital which is required to meet special exigencies such as launching of extensive marketing Campaigns for conducting research, etc.

#### **ADVANTAGES OF ADEQUATE WORKING CAPITAL**

1. Solvency of the business.
2. Goodwill.
3. Easy loans.
4. Cash discounts.
5. Regular supply of raw materials.
6. Regular payment of salaries, wages and other day-to-day
7. Exploitation of favourable market conditions.
8. Ability to face crisis.
9. Quick and regular return on investments.
10. High morale

Both excess as well as short working capital positions are bad for any business.

#### **Disadvantages of Redundant or Excessive Working Capital**

1. Excessive Working Capital means idle funds which earn no profits business cannot earn a proper rate of return on its investments.
2. When there is a redundant working capital, it may lead to unnecessary inventories causing more chances of theft, waste and losses
3. Excessive working capital implies excessive debtors and defective higher incidence of bad debts.
4. It may result into overall inefficiency in the organization.
5. When there is excessive working capital, relations with banks and other financial institutions may not be
6. Due to low rate of return on investment in the organization
7. The redundant working capital gives rise to speculative transactions

#### **Disadvantages or Dangers of inadequate Working Capital**

1. A concern which has inadequate working capital cannot pay its short-term liabilities in time Thus; it will lose its reputation and shall not be able to get good credit facilities.
2. It cannot buy its requirements in bulk and cannot avail of discount, etc
3. It becomes difficult for the firm to exploit favourable market conditions and 'undertake profitable projects due to lack of working capital.
4. The firm cannot pay day-to-day expenses of its operations and it creates inefficiencies, increases costs and reduces the profits of the business.
5. It becomes impossible to utilise efficiently the fixed assets due to non-availability of liquid funds.
6. The rate of return on investments also falls with the shortage of working capital.

#### **THE NEED OR OBJECTS OF WORKING CAPITAL**

The need for working capital cannot be over emphasized. Every business needs some amount of working capital. The need for Working capital arises due to the time gap between production and realization of cash from sales. There is an operating cycle involved in the sales and realization of cash. Thus, working capital is needed for the following purposes:

1. For the purchase of raw materials, components and spares.
2. To pay wages and salaries
3. To incur day-to-day expenses and overheads costs such as fuel, power and office expenses, etc.
4. To meet the selling costs as packing, advertising, etc.
5. To provide credit facilities to the customers.
6. To maintain the inventories of raw material, work-in-progress, stores and spares and finished stock.

### **DETERMINANTS OF WORKING CAPITAL**

**General Nature of Business-** The working capital requirements of an enterprise are basically related to the conduct of business. Enterprises fall into some broad categories depending on the nature of their business. For instance, public utilities have certain features which have a bearing on their working capital needs. The two relevant features (i) the cash nature of business, that is cash sale, and (ii) sale, of services rather than commodities. In view of these features, they do not maintain big inventories and have, therefore, probably the least requirement of Working capital. At the other extreme are trading and financial enterprises.

**Production Cycles** Another factor which has bearing on the quantum of working capital is the production cycle. The term 'production or manufacturing cycle' refers to the time involved in the manufacture of goods. It covers the time-span between the procurement of raw materials and the completion of the manufacturing process leading to the production of finished goods. Funds have to be necessarily tied up during the process manufacture, necessitating enhanced working capital. In other words, there is some time gap before raw materials become finished goods. To sustain such activities the need for working capital is obvious. The longer the time-span (i.e. the production cycle), the larger will be the tied-up funds and, therefore, the larger is the working capital needed and Vice versa.

**Business Cycle** The working capital management are also determined by the nature of the business cycle. Business fluctuations lead to cyclical and seasonal changes which, in turn, cause a shift in the working capital position, particularly for temporary working capital requirement. The variations in business conditions may be in two directions: (i) upward phase when boom conditions prevail; and (ii) downswing phase when economic activity is marked by a decline. During the upswing of business activity the need for working capital is likely to grow to cover the lag between increased sales and receipt of cash as well as to finance purchases of additional material to cater to the expansion of the level of activity.

**Production Policy** The quantum of working capital is also determined by production policy. In the case of certain lines business the demand for products is seasonal, that is they are purchased during certain months of the year. What of production policy should be followed in such cases? There are two options open to such enterprise: either they confine their production only to periods when goods are purchased or they follow a steady production policy throughout the year and produce goods at a level to meet the peak demand. In the former case, there are serious production problems. During the slack season, the firms have to maintain their working force and physical facilities without adequate production and sale. When the peak period arrives the firms have to operate at full capacity to meet the demand.

**Credit Policy** The credit policy relating to sales and purchases also affects the working capital. The credit policy influences the requirement of working capital in two ways: (i) through credit terms granted by the firm to its customers/buyers of goods; (ii) credit terms available to the firm from its creditors.

The credit terms granted to customers have a bearing on the magnitude of working capital by determining the level of book debts. The credit sales result in higher book debts (receivables). Higher book debts mean more working capital. On the other hand, if liberal credit terms are available from the suppliers of goods (trade creditors), the need for working capital is less. The working capital requirements of a business are thus, affected by the terms of purchase and sale, and the role given to credit by a company in its dealings with creditors and debtors.

**Growth and Expansion** As a company grows, it is logical to expect that a larger amount of working capital is required. It is, of course, difficult to determine precisely the relationship between the growth in the volume of business of a company and the increase in its working capital. The composition of working capital in a growing company also shifts with economic circumstances and corporate practice. Other things being equal, growth industries require more working capital than those that are static.

**Vagaries in the Availability of Raw Material** The availability or otherwise of certain raw materials on a continuous basis without interruption would sometimes affect the requirement of working capital. There may be some materials which cannot be procured easily either because their sources are few or they are irregular. To sustain smooth production, therefore, the firm might be compelled to purchase and stock them far in excess of genuine production needs. This will result in an excessive inventory of such materials. The procurement of some essential raw materials is difficult because of their sporadic supply. This happens very often with raw materials which are in short supply and are controlled to ensure equitable distribution. The buyer has in such cases very limited options as to the quantum and timing of procurement.

#### **Price Level Changes**

Changes in the price level also affect the requirements of working capital. Rising prices necessitate the use of more funds for maintaining an existing level of activity. For the same level of current assets, higher cash outlays are required. The effect of rising prices is that a higher amount of working capital is needed. However, in the case of companies which can raise their prices proportionately, there is no serious problem regarding working capital.