AKASH AGARWAL CLASSES

CMA INTER (G2 PAPER-12)

FINANCIAL MANAGEMENT VOLUME 1

HIGHLIGHTS OF THIS BOOK:

- EXHAUSTIVE COVERAGE OF MODULE
- COMPLETE COVERAGE OF NEW SYLLABUS
- BOTH THEORY AND PRACTICAL ARE INCLUDED
- MORE THAN 130 PRACTICAL PROBLEMS
- SIMPLE AND CONCISE LANGUAGE
- STEPWISE PRESENTATION AND SUPPORTING CALCULATIONS IN THE FORM OF WORKING NOTES
- LOGICAL ARRANGEMENT OF

APPLICABLE FOR JUNE 25 AND ONWARDS EXAMINATION

AS PER NEW SYLLABUS 2022

CA SHRUTI AGARWAL

PAPER -11 FINANCIAL MANAGEMENT

INDEX

VOLUME-1

Sr. no.	Chapter name	Page no.
(1)	Introduction to Financial Management	
a.	Introduction	1-12
b.	Risk and Returns	13-22
(2)	Institution and instruments in F.M.	
a.	Financial Institution	23-58
b.	Capital market	59-92
c.	Money market	93-109
(3)	Leverage and EBIT analysis	110-126
(4)	Cost of capital	127-163
(5)	Capital structure	164-193
(6)	Dividend decisions	194-216

"Financial Management is at the heart of any business. It is one area that can help drive it forward"

CHAPTER 1 - FUNDAMENTALS OF FINANCIAL MANAGEMENT

PART A: Introduction to Financial Management

- **Fundamentals**

Finance is called "The science of money". It studies the principles and the methods of obtaining control of money from those who have saved it, and of administering it by those into whose control it passes. Finance is a branch of economics till 1890. Economics is defined as study of the efficient use of scarce resources.

The decisions made by business firm in production, marketing, finance and personnel matters form the subject matters of economics. Finance is the process of conversion of accumulated funds to productive use. It is so intermingled with other economic forces that there is difficulty in appreciating the role of it plays.

Howard and Upton in their book Introduction to Business Finance define Finance "as that administrative area or set of administrative functions in an organisation which relate with the arrangement of cash and credit so that the organisation may have the means to carry out its objectives as satisfactorily as possible".

In the words of Parhter and Wert, "Business finance deals primarily with raising, administering and disbursing funds by privately owned business units operating in nonfinancial fields of industry".

Corporate finance is concerned with budgeting, financial forecasting, cash management, credit administration, investment analysis and fund procurement of the business concern and the business concern needs to adopt modern technology and application suitable to the global environment.

Financial Management is managerial activity which is concerned with the planning and controlling of the firm's financial resources.

Howard and Upton define Financial Management "as an application of general managerial principles to the area of financial decision-making".

Weston and Brigham define Financial Management "as an area of financial decision making, harmonizing individual motives and enterprise goal".

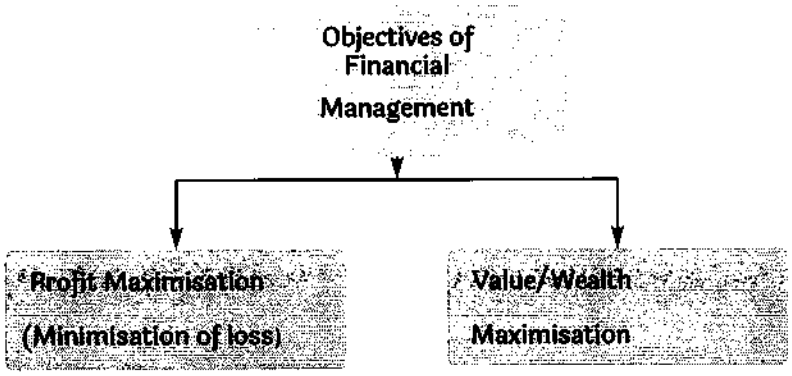
According to Van Horne, "Financial management is concerned with the acquisition, financing and management of assets with some overall goal in mind."

From the above definitions, two aspects of financial management are quite apparent - (i) procurement of funds and (ii) effective utilisation of funds. Procurement of funds indicates determining the sources of funds, deciding on the methods of raising funds etc. Effective utilisation of funds implies the investment decisions, capital budgeting decisions, working capital management decisions etc.

• Objectives of Financial Management

Financial management as the name suggests is management of finance. It deals with planning and mobilization of funds required by the firm. There is only one thing which matters for everyone right from the owners to the promoters and that is money. Managing of finance is nothing but managing of money.

The main objectives of financial management may be classified into: (i) Profit maximization (minimization of loss) and (ii) Value/Wealth maximization.



Main objectives of Financial Management

(i)Profit Maximization: In the economic theory, the behaviour of a firm is analysed in terms of profit maximization. It implies that a firm either produces maximum output for a given amount of input or uses minimum input for producing a given output. So, profit is considered to be the main driving force in business. A firm should manage all aspects of the business in such a way that revenues are maximised and costs are minimised to obtain maximum profit. Arguments in favour and against of profit maximisation are discussed in subsequent section of this chapter.

(ii)Value/ Wealth Maximization: The earlier objective of profit maximization is now replaced by value/ wealth maximization. Since profit maximization is a limited one it cannot be the sole objective of a firm. Value creation is the driving force behind financial management. Creating wealth for shareholders by increasing the value for their investment is the key goal of financial management today. Maximising the market value of the firm can be calculated by using the formula.

$$MV = MV_E + MV_D$$

Where,

MV= Market value of the firm MV_E= Market value of equity shares MV_D= Market value of debt; if any

When the book values and market values of debts are the same, value or wealth maximization essentially reflects maximisation of market value per equity share.

Arguments in favour and against of profit maximisation are discussed in subsequent section of this chapter.

Another objective of financial management is to trade-off between risk and return. For this, the firm has to make efficient use of economic resources mainly capital.

• Scope and Functions of Financial Management

A. Scope of Financial Management

Financial management is concerned with managing financial resources in the most optimal manner. Modern financial management focuses three important decisions of a firm. These three decisions are discussed below:

(i)Investment Decision: Investment decision of a firm includes two main aspects- where to invest and how much to invest or the amount of investment. This maximizes the wealth of a firm. There are two basic issues involved in investment decisions:

(a)Evaluation of alternative investment avenues so as to select the best option.

(b)Monitoring and implementation of the selected investment option.

Firms need to focus on optimum utilisation of funds with limited resources. The project with a higher return should be selected for investment. Capital Budgeting decisions helps in selecting the project with higher profitability and feasibility. For short-term investment decisions or the working capital management decisions the firm should ensure that there is neither excessive nor inadequate working capital.

(ii)Financing Decision: The objective of a financing decision of a firm should be to find out the optimum combination of debt – equity, where cost of capital will be minimum and return will be maximum. Financing decision involves decision regarding the financing pattern of the firm. There are mainly two sources of raising funds- internal source and external source. Internal source includes the owned fund of the firm i.e the share capital. Whereas the external source includes the borrowed funds i.e loans from banks and other financial institutions, issuing debentures etc. Risk

involved in borrowed funds is higher than the risk involved in owned funds. This is because borrowed funds entail a fixed payment commitment like interest, but the owned funds (equity capital) do not include any such fixed commitment except preference shares. So, reasonable care should be exercised while deciding upon the capital structure.

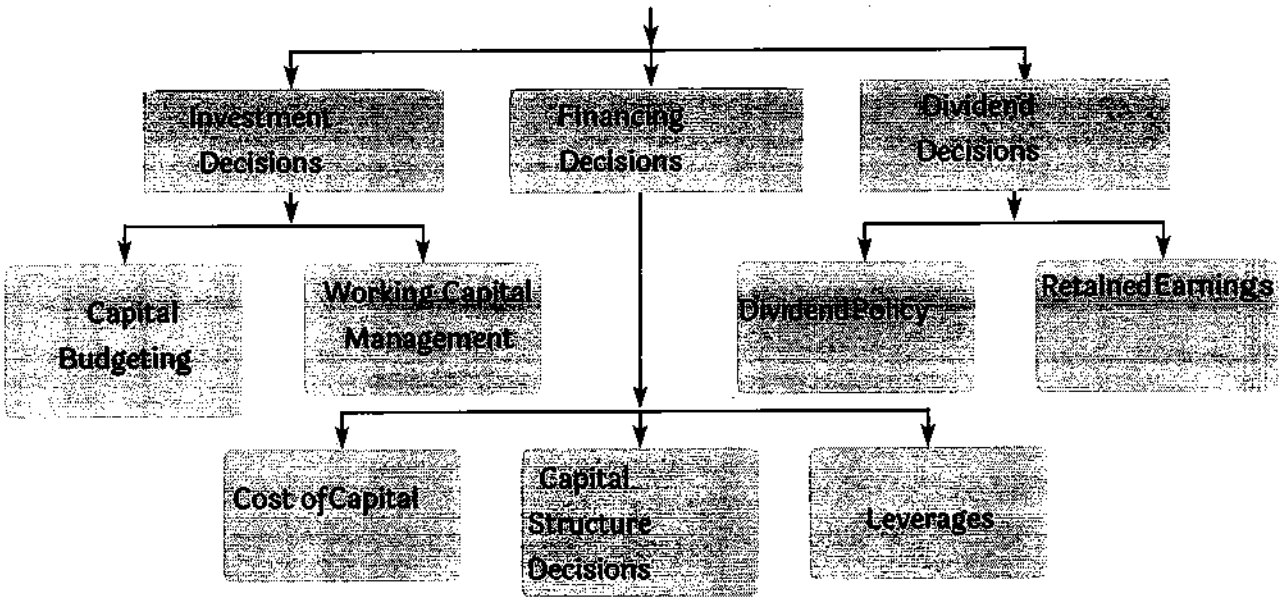
(iii) Dividend Decision: Dividend decision of a firm includes determining how much to distribute as dividend and how much to retain for future expansion programme. The objective of dividend policy is to maximise the market value of the equity shares. If the shareholders' expectations are not fulfilled, ultimately it will have a negative impact on the market value of shares. On the other hand, if a firm fails to grasp or rather predict the reinvestment opportunities then it will have an impact on the future growth of the firm. So, for deciding on the dividend policy, a firm should strike a proper balance between the shareholders' (equity) expectation and reinvestment opportunities.

So, the scope of financial management is striking a proper balance between all the three decisions of investment, financing and dividend to ensure achieving objective of the firm.

B. Functions of Financial Management

The functions of financial management involve acquiring funds for meeting short term and long-term requirements of the firm, deployment of funds, control over the use of funds and to trade-off between risk and return.

The modern approach to the financial management is concerned with the solution of major problems like investment financing and dividend decisions of the financial operations of a business enterprise. Thus, the functions of financial management can broadly be classified into three major decisions, namely: (a) Investment decisions. (b) Financing decisions. (c) Dividend decisions.



Based on the above decisions, functions of financial management are discussed below:

(i) Determining Financial Needs

One of the most important functions of the financial management is to ensure availability of adequate financing. Financial needs have to be assessed for different purposes. Money may be required for initial pro- motional expenses, fixed capital and working capital needs. Promotional expenditure includes expenditure incurred in the process of company formation. Fixed assets need depend upon the nature of the business enterprise – whether it is a manufacturing, non-manufacturing or merchandising enterprise. Current asset needs depend upon the size of the working capital required by an enterprise.

(ii) Determining Sources of Fund

The finance manager has to choose sources of funds. He may issue different types of securities and debentures. He may borrow from a number of financial institutions and the public. When a firm is new and small and little known in financial circles, the finance manager faces a great challenge in raising funds. Even when he has a choice in selecting sources of funds, that choice should be exercised with great care and caution.

(iii) Financial Analysis

The Finance Manager has to interpret different statements. He has to use a large number of ratios to analyse the financial status and activities of his firm. He is required to measure its liquidity, determine its profitability, and assets overall performance in financial terms. The finance manager

should be crystal clear in his mind about the purposes for which liquidity, profitability and performance are to be measured.

(iv)Optimal Capital Structure

The finance manager has to establish an optimum capital structure and ensure the maximum rate of return on investment. The ratio between equity and other liabilities carrying fixed charges has to be defined. In the process, he has to consider the operating and financial leverages of his firm. The operating activities leverage exists because of operating expenses, while financial leverage exists because of the amount of debt involved in a firm's capital structure.

(v)Cost-Volume-Profit Analysis

The finance manager has to ensure that the income of the firm should cover its variable costs. Moreover, a firm will have to generate an adequate income to cover its fixed costs as well. The Finance Manager has to find out the break-even-point-that is, the point at which total costs are matched by total sales or total revenue. He has to try to shift the activity of the firm as far as possible from the break-even point to ensure company's survival against seasonal fluctuations.

(vi)Profit Planning and Control

Profit planning ensures attainment of stability and growth. Profit planning and control is a dual function which enables management to determine costs it has incurred, and revenues it has earned, during a particular period, and provides shareholders and potential investors with information about the earning strength of the corporation. Profit planning and control are important be, in actual practice, they are directly related to taxation. Profit planning and control are an inescapable responsibility of the management.

(vii) Fixed Assets Management

Fixed assets are financed by long term funds. Finance manager has to ensure that these assets should yield the reasonable returns proportionate to the investment. Moreover, in view of the fact that fixed assets are maintained over a long period of time, the assets exposed to changes in their value, and these changes may adversely affect the position of a firm.

(viii) Capital Budgeting

Capital budgeting forecasts returns on proposed long-term investments and compares profitability of different investments and their cost of capital. It results in capital expenditure investment. The various proposal assets ranked on the basis of such criteria as urgency, liquidity, profitability and risk sensitivity. The financial analyser should be thoroughly familiar with such financial techniques as pay back, internal rate of return, discounted cash flow and net present value among others because risk increases when investment is stretched over a long period of time. The financial analyst should be able to blend risk with returns so as to get current evaluation of potential investments.

(ix)Corporate Taxation

Corporate taxation is an important function of the financial management, for the former has a serious impact on the financial planning of a firm. Since the company is a separate legal entity, it is subject to an income-tax structure which is distinct from that which is applied to personal income.

(x)Working Capital Management

Working capital is the excess of current assets over current liabilities. This is an important area in the financial management because it is compared to the nervous system of the human body. Current assets consist of cash, inventory, receivables. Current liabilities consist of payables and bank overdraft. A prudent finance manager has to formulate a policy in such a way that there is a balance between profitability and liquidity.

(xi)Dividend Policies

A firm may try to improve its internal financing so that it may avail itself of benefits of future expansion. However, the interests of a firm and its stockholders are complementary, for the financial management is interested in maximizing the value of the firm, and the real interest of stockholders always lies in the maximization of this value of the firm; and this is the ultimate goal of financial management. The dividend policy of a firm depends on a number of financial considerations, the most critical among them being profitability. Thus, there are different dividend policy patterns which a firm may choose to adopt, depending upon their suitability for the firm and its stockholders.

(xii)Mergers and Acquisitions

Firms may expand externally through co-operative arrangements, by acquiring other concerns or by entering into mergers. Acquisitions consist of either the purchase or lease of a smaller firm by a bigger organisation. mergers may be accomplished with a minimum cash outlay, though these involve major problems of valuation and control. The process of valuing a firm and its securities is difficult, complex and prone to errors. The finance manager should, therefore, go through a valuation process very carefully. The most difficult interest to value in a corporation is that of the equity stockholder because he is the residual owner.

• Profit Optimization and Value Maximization Principle

Profit maximization or optimization and value/wealth maximization principles of the financial management are basically concerned with procurement and use of funds. Over the time, objectives of the firm have been changed from the profit maximization to value/wealth maximisation. In this section, arguments in favour and against of these two objectives of the firm are discussed.

A. Profit Maximization:

Profit maximization is one of the leading goals for all firms as it is reflected in the income statement. If the net operating profits tend to increase consecutively, the firm portrays efficient performance and if the net operating profits tend to decrease consecutively, the firm shows poor financial performance.

Profit maximization or optimisation is the main objectives of business because:
(i)Profit acts as a measure of efficiency and
(ii)It serves as a protection against risk.

Arguments in favour of profit maximization:
(i)When profit earning is the main aim of business the ultimate objective should be profit maximization.
(ii)Future is uncertain. A firm should earn more and more profit to meet the future contingencies.
(iii)The main source of finance for growth of a business is profit. Hence, profit maximization is required.
(iv)Profit maximization is justified on the grounds of rationality as profits act as a measure of efficiency and economic prosperity.

Arguments against profit maximization:
(i)It leads to exploitation of workers and consumers.
(ii)It ignores the risk factors associated with profit.
(iii)Profit in itself is a vague concept and means differently to different people.
(iv)It is narrow a concept at the cost of social and moral obligations. Thus, profit maximization as an objective of Financial Management has been considered inadequate.
As it is a short-run concept, so, profit maximization objective many a time fails to exercise any pressure on the management for increasing the future growth rate of the firm.

B. Value/Wealth Maximization:

> Increasing shareholder value over time is the bottom line of every move we make. —
> ROBERTO GOIZUETA Former CEO, The Coca-Cola Company

Value/Wealth Maximization is considered as the appropriate objective of an enterprise. When the firms maximize the shareholder's value/wealth, the individual shareholder can use this wealth to maximize his individual utility. Value/Wealth Maximization is the single substitute for a shareholder's utility.
A shareholder's wealth or value is shown by:

Shareholder's value/wealth = No. of shares owned × Current market price per equity share

Higher the share price per share, the greater will be the shareholder's wealth. Arguments in favour of Value/Wealth Maximization:

(i) Due to wealth maximization, the short-term money lenders get their payments in time.

(ii) The long-time lenders too get a fixed rate of interest on their investments.

(iii) The employees share in the wealth gets increased.

(iv) The various resources are put to economical and efficient use.

Argument against Value/Wealth Maximization:

(i) It is socially undesirable.

(ii) It is not a descriptive idea.

(iii) Only stock holders' wealth maximization does not lead to firm's wealth maximization.

(iv) The objective of wealth maximization is endangered when ownership and management are separated. In spite of the arguments against wealth maximization, it is the most appropriative objective of a firm.

From the above discussion, wealth maximization is a long-term sustainable objective of a firm. Wealth maximization objective of the firm is a better and broader objective compared to the profit maximization objective. Wealth maximization objective considers the following which, profit maximization doesn't.

There is a conflict goal between the two.

Why value/wealth maximization objective considers superior than profit maximization, we may put forward some arguments.

These are:

(i) Wealth maximization considers the cash inflows and not the profit figure.

(ii) This objective is the long-term objective of a firm.

(iii) Wealth maximization considers the risk factor, which profit maximization doesn't.

(iv) Wealth maximization objective considers the time value of money, so the cash inflows at different points of time are discounted to arrive at present value of cash inflows.

(v) This objective takes into account both the qualitative and quantitative aspects i.e cash inflows represent the quantitative aspect and the net present value represents the qualitative aspect, whereas profit maximization objective considers only the quantitative aspect.

(vi) A firm with wealth maximization pays regular dividend to shareholders whereas those having profit maximization may not pay regular dividend.

(vii) Wealth maximization objective is preferred by shareholders.

(viii) This objective takes into account all the factors influencing the market value of shares, which profit maximization doesn't.

• Dynamic Role of a CFO in Emerging Business Environment

The Finance Manager or the Chief Financial Officer (CFO) plays a dynamic role in a modern company's development. Until around the first half of the 1900s financial managers primarily raised funds and managed their firms' cash positions – and that was pretty much it. In the 1950s, the increasing acceptance of present value concepts encouraged financial managers to expand their responsibilities and to become concerned with the selection of capital investment projects.

The head of finance i.e., CFO is considered to be importantly of the CEO in most organisations and performs a strategic role. The responsibilities of CFO include:

(i) Estimating the total requirements of funds for a given period;

(ii) Raising funds through various sources, both national and international, keeping in mind the cost effectiveness;

(iii) Investing the funds in both long term as well as short term capital needs;

(iv) Funding day-to-day working capital requirements of business;

(v) Collecting on time from debtors and paying to creditors on time;

(vi) Managing funds and treasury operations;

(vii) Ensuring a satisfactory return to all the stakeholders;

(viii) Paying interest on borrowings;

(ix) Repaying lenders on due dates;

(x) Maximizing the wealth of the shareholders over the long term;

(xi) Interfacing with the capital markets;

(xii) Awareness to all the latest developments in the financial markets;

(xiii) Increasing the firm's competitive financial strength in the market and

(xiv) Adhering to the requirements of corporate governance.

Today, external factors have an increasing impact on the finance manager or CFO. These are:

- Heightened corporate competition
- Technological change
- Volatility in inflation and interest rates
- Worldwide economic uncertainty
- Fluctuating exchange
- Tax law changes Environmental issues, and Ethical issues

As a result, finance is required to play an ever more vital strategic role within the company. The finance man- ager has emerged as a team player in the overall effort of a company to create value.

The finance manager or CFO is, therefore, concerned with all financial activities of planning, raising, allocating and controlling the funds in an efficient manner. In addition, profit planning is another important function of the finance manager.

This can be done by decision making in respect of the following areas:

(i) Investment decisions for obtaining maximum profitability after taking the time value of the money into account.
(ii) Financing decisions through a balanced capital structure of Debt-Equity Ratio, sources of finance, EBIT/ EPS computations and Interest Coverage Ratio etc.
(iii) Dividend decisions, issue of bonus shares and retention of profits with objective of maximization of market value of the equity share.
(iv) Best utilization of fixed assets.
(v) Efficient working capital management (inventory, debtors, cash marketable securities and current liabilities).
(vi) Taking the cost of capital, risk, return and control aspects into account.
(vii) Tax administration and tax planning.
(viii)Pricing, volume of output, product-mix and cost-volume-profit analysis (CVP Analysis).
(ix) Cost control.
(x) Analyse the trends in the stock market and their impact on the price of company's share and share buy-back.

Besides, the CFO should comply the regulatory requirements in formulation of financial strategies. The principal elements of this regulatory framework are: -

(i) Different provisions of the Companies Act, 2013.
(ii) Provisions, guidelines, rules of the Securities and Exchange Board of India Act 1992.
(iii) Provisions of Foreign Exchange Management Act, 1999.

If you become a finance manager, your ability to adapt to change, raise funds, invest in assets, and manage wisely will affect the success of your firm and, ultimately, the overall economy as well. In an economy, efficient allocation of resources is vital to optimal growth in that economy; it is also vital to ensuring that individuals obtain satisfaction of their highest levels of personal wants. Thus, through efficiently acquiring, financing, and managing assets, the financial manager contributes to the firm and to the vitality and growth of the economy as a whole.

Today's finance manager must have the flexibility to adapt to the changing external environment if his or her firm is to survive. The successful finance manager of tomorrow will need to supplement

the traditional metrics of performance with new methods that encourage a greater role for uncertainty and multiple assumptions. These new methods will seek to value the flexibility inherent in initiatives – that is, the way in which taking one step offers you the option to stop or continue down one or more paths. In short, a correct decision may involve doing something today that in itself has small value, but gives you the option to do something of greater value in the future.

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FIRST TIME IN HISTORY OF CMA.....

.....NEXT CAN BE YOU.

PART B: Risk and Return

Return and risk are the two critical factors in investment decisions. They are closely linked. If high risk is involved, the required return on the project should also be high. So, the level of risk is measured first and then the level of return

• Various Connotations of Return

Return is the motivating force and the principal reward in the investment process and it is the key method available to investors in comparing alternative investments. Returns may have different meanings depending upon the investors' perceptions.

Return on a typical investment consists of two components. The basic component is the periodic cash receipts and (or income) on the investment, either in the form of interest or dividends. The second component is the change in the price of the – commonly known as capital gain or loss.

Realised return is after the fact return -return that was earned or could have been earned. Realised return is called historical return.

Expected return is the return from an asset that investors anticipate they will earn over future period. It may or may not occur.

The term **yield** is often used in connection this component of return. Yield refers to the income component in relation to some price for a security.
Some investors may measure return by using financial ratios- **Return on Investment** (ROI), **Return on Equity** (ROE) etc. Further, investors may assign more values to cash flows rather than to distant returns such as **Internal Rate of Return** (IRR).

• Ex-ante and Ex-post Return

Ex-ante Return:
Ex-ante refers to future events. Ex-ante return is the prediction of returns that investor can get from a security or a portfolio.
(i)It helps investor to predict future return and to take right decision from investment.
(ii)Ex-ante predictions help companies to attract investors and raise capital.
(iii)It helps company to effectively plan inflation, deflation, or serious situations like a recession.
Ex-post Return:

Ex-post means after the event. Ex-post returns are the returns that investor has already got from investment, i.e., historical return.

(i) It is useful for prediction of future trend, price.

(ii) It helps in predicting returns from a security based on actual returns from it over years.

(iii) Companies can use historical data to predict future earnings

(iv) Government and other agencies can use actual results from the past data.

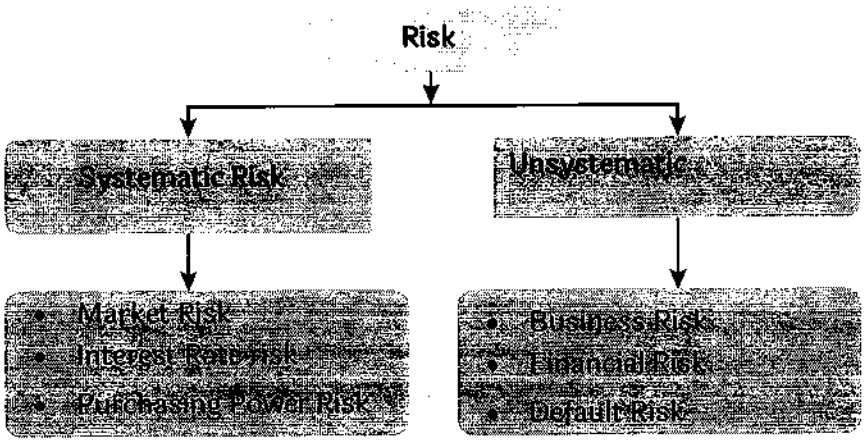
• Types of Risk

According Horne and Wachowicz, risk is the variability of returns from those that are expected. The greater the variability, the riskier the security is said to be.

Risk in an investment asset may be divided into: (i) Systematic Risk and (ii) Unsystematic Risk.

• **Systematic Risk:** It represents that portion of Total Risk which is attributable to factors that affect the market as a whole. Economic, political and sociological changes are sources of systematic risk. Beta is a measure of Systematic Risk.

• **Unsystematic Risk:** It is the position of total risk that is unique to a firm or industry.



A. Systematic Risk:

It represents that portion of total risk which is attributable to factors that affect the market as a whole. It arises out of external and uncontrollable factors, which are not specific to a security or industry to which such security belongs. It is that part of risk caused by factors that affect the price of all the securities. Beta is a measure of Systematic Risk. It cannot be eliminated by diversification. Systematic risks are discussed below:

(i) **Market Risk:** These are risks that are triggered due to social, political and economic events. For example, when CBDT issued a draft circular on how to treat income from trading in shares, whether as Capital Receipts or Business Receipts, the stock prices fell down sharply, across all sectors. These

risks arise due to changes in demand and supply, expectations of the investors, information flow, investor's risk perception, etc. consequent to the social, political or economic events.

(ii) **Interest Rate Risk:** Uncertainty of future market values and extent of income in the future, due to fluctuations in the general level of interest, is known as Interest Rate Risk. These are risks arising due to fluctuating rates of interest and cost of corporate debt. The cost of corporate debt depends on the interest rates prevailing, maturity periods, credit worthiness of the borrowers, monetary and credit policy of RBI, etc.

(iii) **Purchasing Power Risk:** Purchasing Power Risk is the erosion in the value of money due to the effects of inflation.

B. Unsystematic Risk

These are risks that emanate from known and controllable factors, which are unique and / or related to a particular security or industry. These risks can be eliminated by diversification of portfolio.

(i) Business Risk: It is the volatility in revenues and profits of particular Company due to its market conditions, product mix, competition, etc. It may arise due to external reasons or (Government policies specific to that kind of industry) internal reasons (labour efficiency, management, etc.)

(ii) Financial Risk: These are risks that are associated with the Capital Structure of a Company. A Company with no Debt Financing, has no financial risk. Higher the Financial Leverage, higher the Financial Risk. These may also arise due to short term liquidity problems, shortage in working capital due to funds tied in working capital and receivables, etc.

(iii) Default Risk: These arise due to default in meeting the financial obligations on time. Non-payment of financial dues on time increases the insolvency and bankruptcy costs.

- **Calculation of Return and Risk**

Determination of the acceptability of the investment proposals of a firm involves a trade-off between risks and returns. So, risk -return analysis is used for capital budgeting decisions, purchase of shares, bonds and any readily identifiable capital or financial investments.

Calculation or Measurement of Return:

Returns across time or from different securities can be measured and compared using the total return concept. The total return of a security for a given holding period relates all the cash flows received by an investor during any designated time period to the amount of money invested.

(i)Total Return

Total return is calculated as:

$$\text{Total Return} = \frac{\text{Cash payments received} + \text{Price change over the period}}{\text{Purchase price of the asset}}$$

The total return is used to measure of return for a specified period of time. Further, this return can be split in two components: dividend and capital gains. The percentage (%) of return can be expressed in mathematical terms.

Assume, P0 is the initial price, D1 is the dividend in the period 1, and P1 is the price at the end of period 1, and the total return for one period as follows:

Total Return (%) = $\frac{\text{Dividend + Capital Gain}}{\text{Initial Investment}}$

$$= \frac{D_1 + (P_1 - P_0)}{P_0}$$

$$= \frac{D_1}{P_0} + \frac{(P_1 - P_0)}{P_0}$$

However, investing in a particular stock for ten years or a different stock in each ten years could result in 10 total returns which must be calculated separately by using statistical tools

QUESTION 1
The current market price of a share is ₹ 600. An investor buys 100 shares. After one year he sells these shares at a price of ₹ 720 and also receives the dividend of ₹ 30 per share. Find the total return (%) of the investor.

(ii) Average Annual Return

There are two commonly methods used in calculating average annual returns:

(a) Arithmetic Mean and (b) Geometric Mean.

When an investor wants to know the central tendency of a series of returns, the arithmetic mean is the appropriate measure. It represents the typical performance for a single period.

If you want to calculate the average compound rate of growth that has actually occurred over multiple periods, the arithmetic mean is not appropriate. Then geometric mean is used.

(iii) Expected Rate of Return

The expected return is simply a weighted average of the possible returns, with the weights being the probabilities of occurrence. The expected rate of return can be calculated by using the formula given below:

$E(R) = R_1 \times P_1 + R_2 \times P_2 + R_3 \times P_3 + R_4 \times P_4 + \text{------} + R_n \times P_n$

R is the rate of returns and

P is the probability

The following table shows how to calculate expected rate of return:

Expected Rate of Return

Economic Conditions (1)	Rate of Return (%) (2)	Probability (3)	Expected Rate of Return (4) = (2) × (3)
Growth	18.0	0.25	4.5
Expansion	11.0	0.25	2.75
Stagnation	1.0	0.25	0.25
Decline	-5.0	0.25	-1.25
Expected Rate of Return			6.25

(iv) Expected Return on Portfolio

The expected return on a portfolio is the weighted average of the expected returns on the assets comprising the portfolio. When a portfolio consists of two securities, its expected return would be:

$E(R_P) = w_A E(R_A) + (1-w_B) E(R_B)$

where,

$E(R_P)$ = Expected Return of the Portfolio

W_A = Weight or Proportion of a portfolio invested in Security A

$E(R_A)$ = Expected Return on Security A

$1-W_B$ = Proportion of a portfolio invested in Security B

$E(R_B)$ = Expected Return on Security B

When a portfolio consists of n number of securities, the expected return of portfolio would be: $E(R_P) = \sum w_n E(R_n)$

where,

$E(R_P)$ = Expected Return of the Portfolio

W_n = Weights of proportion of portfolio invested in Security n

$E(R_n)$ = Expected Return on Security n

Calculation or Measurement of Risk:

Risk may be defined as the variability of returns from an investment. Since it indicates variation in expected return, therefore statistical techniques may be used to measure risks.

Generally, the following methods are used to measure risk of an investment.

(i) Subjective Estimates: Risk analysis is 'generic' and may be applied to any situation and any form of decision-making, from determining policy and strategy, through all levels of planning to tactical decision- making. In different situations, risk may be expressed as low, moderate and high. When variations of returns will not be wide, it may be called low level of risk; when forecast returns are likely

to vary widely, it may state as high-risk level and variability of returns is likely to moderate in nature then it may represent as moderate level of risk. This method of risk assessment has its own limitations.

(ii) Standard Deviation and Variance: The standard deviation is a measure of how each possible outcome deviates from the expected value. It measures the risk in absolute terms. The higher the value of dispersion, the higher is the risk associated with the Portfolio and vice-versa. Generally, Standard Deviation of a specified security or portfolio is considered to be the Total Risk associated with that security or portfolio.

Standard Deviation is generally considered as the total risk of a particular security. It can be measured as follows:

$$\sigma \sqrt{\text{Variance}} = \sqrt{\sum^{n} (X - \bar{x})^2 P}$$

Where,

x = Expected rate of return = E(R)

x_i = i^{th} rate of return from an investment proposal

p_i = Probability of occurrence of the i^{th} rate of return

n = Number of outcomes

QUESTION 2

X Ltd. has forecasted returns on its share with the following probability distribution:

Return (%)	Probability
-20	0.05
-10	0.05
-5	0.10
5	0.10
10	0.15
18	0.25
20	0.25
30	0.05

Find out the following: (a) Expected Rate of Return (b) Variance (c) Standard Deviation

QUESTION 3

Consider, two securities, A and B, whose normal probability distributions of one-year returns have the following characteristics:

	Security A	Security B
Expected return, [E(R)]	0.08	0.24
Standard deviation, (σ)	0.06	0.08
Coefficient of variation, (CV)	0.75	0.33

Comment on the above information.

(ii) Beta: The sensitivity of a security to market movements is called beta (β). When an investor wants to invest his money in a portfolio of securities, beta is the proper measure of risk. Beta measures systematic risk i.e., that which affects the market as a whole and hence cannot be eliminated through diversification.

Beta depends on the following factor:

(i) Standard Deviation (Risk) of the Security or Portfolio.

(ii) Standard Deviation (Risk) of the Market.

(iii) Correlation between the Security and Market. According to the Capital Asset Pricing Model, the required rate of return is equivalent to the risk-free return plus risk premium.

$E(R_P) = R_F + \{\beta_P \times (R_M - R_E))\}$

Where,

$E(R_P)$ = Expected Return on Portfolio

R_F = Risk Free Rate of Interest/ Return

β_P = Portfolio Beta or Risk Factor

R_M = Expected Return on Market Portfolio

Beta is measured as follows:

$$B = \frac{Cov\ (A.M.)}{\sigma_M^2}$$

$Cov_{(A,M)}$= Covariance of returns on an individual company's security (A) with returns for market as a whole (M)

σ_M^2 = Variance of market returns

We know,

$Cov_{(A,M)} = r_{(A,M)} \times \sigma_A \times \sigma_M$

σ_A = Standard deviation of returns of security A

σ_M = Standard deviation of market rate of returns

$$\beta = \frac{\bar{n}_{(AM)} \times \sigma_A \times \sigma_M}{\sigma_M^2} = \frac{\text{(AM)} \times}{\sigma_M^2}$$

If the value of changes in different ranges, accordingly, risk of the security would be changes. Inferences are shown below:

Inferences

Beta Value is	Security is
Less than 1	Less risky than the market portfolio.
Equal to 1	As risky as the market portfolio. Normal Beta security. When security beta = 1 then if market move up by 10% security will move up by 10%. If market fell by 10% security also tend to fall by 10%
More than 1	More risk than the market portfolio. Termed as Aggressive Security/High beta Security. A Security beta 2 will tend to move twice as much as the market. If market went up by 10% security tends to rise by 20%. If market fall by 10% Security tends to fall by 20%.
Less than 0	Negative Beta. It indicates negative (inverse) relationship between security return and market return. If market goes up security will fall and vice versa. Normally gold is supposed to have negative beta.
Equal to 0	Means there is no systematic risk and share price has no relationship with market. Risk free security is assumed to be zero.

QUESTION 4

From the following data, compute the beta of Security X.

σ_x = 12%; σ_m= 9%; $r_{(x,m)}$= + 0.72

QUESTION 5

The stock price and dividend history of X Ltd. are given below:

Year	Closing Share Price (₹)	Dividend per Share (₹)
2015	312	5.50
2016	389	6.75
2017	234	4.60
2018	345	5.90
2019	367	3.78
2020	389	4.10
2021	412	5.98

Using the above data, compute the following:

(i) Annual rates of return

(ii) Expected average rate of return

(iii) Variance

(iv) Standard deviation

• Capital Asset Pricing Model

William F. Sharpe and John Linter developed the Capital Asset Pricing Model (CAPM). The model is based on the portfolio theory developed by Harry Markowitz. The model emphasises the risk factor in portfolio theory which is a combination of two risks, systematic risk and unsystematic risk. The model suggests that a security's return is directly related to its systematic risk which cannot be neutralized through diversification.

CAPM explains the behaviour of security prices and provides a mechanism whereby investors could assess the impact of a proposed securities are determined in such a way that the risk premium or excess return are proportion- al to systematic risk, which is indicated by the beta coefficient.

A. Features of CAPM:

(i) CAPM explains the relationship between the Expected Return, Non-Diversifiable Risk (Systematic Risk)
and the valuation of securities.

(ii) CAPM is based on the premise that the diversifiable risk of a security is eliminated when more and more securities are added to the Portfolio.

(iii) All securities do not have same level of systematic risk and therefore, the required rate of return goes with the level of systematic risk. It considers the required rate of return of a security on the basis of its (Systematic Risk) contribution to the total risk.

(iv) Systematic Risk can be measured by Beta, which is a function of the following:

(a) Total Risk Associated with the Market Return,

(b) Total Risk Associated with the Individual Securities Return,

(c) Correlation between the two.

B. Assumptions:

(i) With reference to Investors:

(a) Investment goals of investors are rational. They desire higher return for any acceptable level of risk

and lower risk for any desired level of return.

(b) Their objective is to maximize the utility of terminal wealth.

(c) Their choice is based on the risk and return of a security.

(d) They have homogenous expectations of risk and return over an identical time horizon.

(ii) With reference to Market:

(a) Information is freely and simultaneously available to all investors.

(b) Capital Market is not dominated by any individual investors.

(c) Investors can borrow and lend unlimited amount at the risk-free rate.

(d) No taxes, transaction costs, restrictions on short-term rates or other market imperfections.

(e) Total asset quantity is fixed, and all assets are marketable and divisible.

We can use CAPM to understand the basic risk-return trade-offs involved in various types of investment decisions. Using Beta as the measure of non-diversifiable risk, the CAPM is used to define the required rate of return on a security

$$E(RS) = RF + \{\beta_s \times (R_M - R_F)\}$$

WHERE

$E(R_S)$ = Expected Return on the Security or Investment

R_F = Risk Free Rate of Interest/ Return

β_S = Security Beta or Risk Premium

R_M = Expected Return on all securities or Market Return

QUESTION 6

The following information is given:

Security Beta: 1.2

Risk-free rate: 4%

Expected market return: 12%

Calculate expected rate of return on the security.

CHAPTER 2 - INSTITUTIONS AND INSTRUMENTS IN FINANCIAL MARKETS

PART A: FINANCIAL INSTITUTIONS

The financial system plays the key role in the economy by stimulating economic growth, influencing economic performance of the actors, affecting economic welfare. This is achieved by financial infrastructure, in which entities with funds allocate those funds to those who have potentially more productive ways to invest those funds. A financial system makes it possible a more efficient transfer of funds. As one party of the transaction may possess superior information than the other party, it can lead to the information asymmetry problem and inefficient allocation of financial resources. By overcoming asymmetry problem, the financial system facilitates balance between those with funds to invest and those needing funds.

According to the structural approach, the financial system of an economy consists of three main components:

(a) Financial markets;

(b) Financial intermediaries (institutions);

(c) Financial regulators.

Each of the components plays a specific role in the economy.

According to the **functional approach, financial markets** facilitate the flow of funds in order to finance investments by corporations, governments and individuals. **Financial institutions** are the key players in the financial markets as they perform the function of intermediation and thus determine the flow of funds. The **financial regulators** perform the role of monitoring and regulating the participants in the financial system.

• Financial Institutions

Financial Institutions are the business organisations that act as mobilisers of savings, and as purveyors of credit or finance. They also provide various financial services to the community. These financial business organisations deal in financial assets such as deposits, loans, securities and so on. These assets can be seen on the asset side of the balance sheet of banks or any other financial institutions. The non-financial institutions are those business organisations, which deal in real assets such as machinery, equipment, stock of goods, real assets, etc. These assets can be seen on the asset side of the balance sheet of the manufacturing companies. The financial institutions are classified into banking institutions and non-banking institutions.

(i) Banking Financial Institutions

Banking institutions are those institutions, which participate in the economy's payment system, i.e., they provide transaction services. Their deposit liabilities constitute a major part of the national money supply and they can, as a whole, create deposits or credit, which is money.

(ii) Non-Banking Financial Institutions

Non-banking financial institutions are those institutions which act as mere purveyors of credit and they will not create credit, e.g., LIC, UTI, IDBI.

According to Sayers, banking institutions are 'creators' of credit and NBFIs are mere "purveyors" of credit.

The financial institutions are also classified into financial intermediaries and non-financial intermediaries.

(a) Financial Intermediaries Financial intermediaries are those institutions which are intermediate between savers and investors; they lend money as well as mobilize savings, their liabilities are towards the ultimate savers, while their assets are from the investors or borrowers.

(b) Non-financial Intermediaries Non-financial intermediaries are those institutions which do the loan business but their resources are not directly obtained from the savers. Many non-banking institutions also act as intermediaries and when they do so they are known as non-banking financial intermediaries, e.g. LIC, GIC, IDBI, IFCI, NABARD.

- **Reserve Bank of India**

The Reserve Bank of India (RBI) is the nation's central bank. Since 1935, RBI began operations, and stood at the centre of India's financial system, with a fundamental commitment to maintaining the nation's monetary and financial stability. From ensuring stability of interest and exchange rates to providing liquidity and an adequate supply of currency and credit for the real sector; from ensuring bank penetration and safety of depositors' funds to promoting and developing financial institutions and markets, and maintaining the stability of the financial system through continued macro-financial surveillance, the Reserve Bank plays a crucial role in the economy. Decisions adopted by RBI touch the daily life of all Indians and help chart the country's current and future economic and financial course.

The origin of the Reserve Bank can be traced to 1926, when the Royal Commission on Indian Currency and Finance—also known as the Hilton-Young Commission— recommended the creation of a central bank to separate the control of currency and credit from the government and to augment banking facilities throughout the country. The Reserve Bank of

India Act of 1934 established the Reserve Bank as the banker to the central government and set in motion a series of actions culminating in the start of operations in 1935. Since then, the Reserve Bank's role and functions have undergone numerous changes—as the nature of the Indian economy has changed. Today's RBI bears some resemblance to the original institution, but the mission has expanded along with the deepened, broadened and increasingly globalised economy. Over the years, RBI's specific roles and functions have evolved. However, there have been certain constraints, such as the integrity and professionalism with which the Reserve Bank discharges its mandate.

RBI at a Glance

RBI at a Glance

- Managed by Central Board of Directors
- India's monetary authority to supervise financial system and issuer of currency
- Manager of foreign exchange reserves
- Banker and debt manager to government
- Supervisor of payment system
- Banker to banks
- Maintaining financial stability
- Developmental functions
- Research, data and knowledge sharing

A. Structure, Organisation and Governance of RBI

The Reserve Bank is wholly owned by the Government of India. The Central Board of Directors oversees the Reserve Bank's business. The Central Board has primary authority for the oversight of the Reserve Bank. It delegates specific functions through its committees and sub-committees Central Board includes the Governor, Deputy
Governors and a few Directors (of relevant local boards). The Central Board of Directors includes:

Official Directors

- 1 Governor
- 4 Deputy Governors at a maximum

Non-official Directors

- 4 Directors – nominated by the Central Government to represent each local board
- 10 Directors nominated by the Central Government with expertise in various segments of the economy
- 2 representatives of the Central Government

Holding of Meetings of the Board

- 6 meetings – at a minimum – each year
- 1 meeting – at a minimum – each quarter

Committee of Central Board: Oversees the current business of the central bank and typically meets every week, on Wednesdays. The agenda focuses on current operations, including approval of the weekly statement of accounts related to the issue of Banking Departments.

Board of Financial Supervision: Regulates and supervises commercial banks, Non-Banking Finance Companies (NBFCs), development finance institutions, urban co-operative banks and primary dealers. Board of Payment and Settlement Systems: Regulates and supervises the payment and settlement systems.

Sub-Committees of the Central Board: Includes those on Inspection and Audit; Staff; and Building. Focus of each sub-committee is on specific areas of operations.

Local Boards: In Chennai, Kolkata, Mumbai and New Delhi, representing the country's four regions. Local Board members, appointed by the Central Government for four-year terms, represent regional and economic interests and the interests of co-operative and indigenous banks.

B. Management and Structure

The Governor is the Reserve Bank's Chief Executive. The Governor supervises and directs the affairs and business of the Reserve Bank. The management team also includes Deputy Governors and Executive Directors.

The RBI has the following Departments and sub-departments:

Sl. No	Departments	Sub-Departments
1	Markets	• Internal Debt Management Department • Department of External Investments and Operations • Monetary Policy Department • Financial Markets Department
2	Research	• Department of Economic and Policy Research • Department of Statistics and Information Management
3	Regulation, Supervision and Financial Stability	• Department of Banking Supervision • Department of Banking Operations and Development • Department of Non-Banking Supervision • Urban Banks Department

		• Rural Planning and Credit Department • Foreign Exchange Department • Financial Stability Unit
4	Services	• Department of Government and Bank Accounts • Department of Currency Management • Department of Payment and Settlement System • Customer Service Department
5	Support	• Human Resource Management Department • Department of Communication • Department of Expenditure and Budgetary Control • Department of Information Technology • Premises Department • Secretary's Department • Rajbhasha Department • Legal Department • Inspection Department

Main Activities/Functions of RBI

The Reserve Bank is the umbrella network for numerous activities, all related to the nation's financial sector, encompassing and extending beyond the functions of a typical central bank. Main activities or functions of Reserve Bank are:

i. Monetary Authority
ii. Issuer of Currency
iii. Banker and Debt Manager to Government
iv. Banker to Banks
v. Regulator of the Banking System
vi. Foreign Exchange Management
vii. Regulator and Supervisor of the Payment and Settlement Systems
viii. Maintaining Financial Stability
ix. Financial Inclusion and Developmental Role

(i) Monetary Authority

The Reserve Bank of India controls the credit and formulates monetary policy. Monetary policy refers to the use of instruments under the control of the central bank to regulate the availability, cost and use of money and credit.

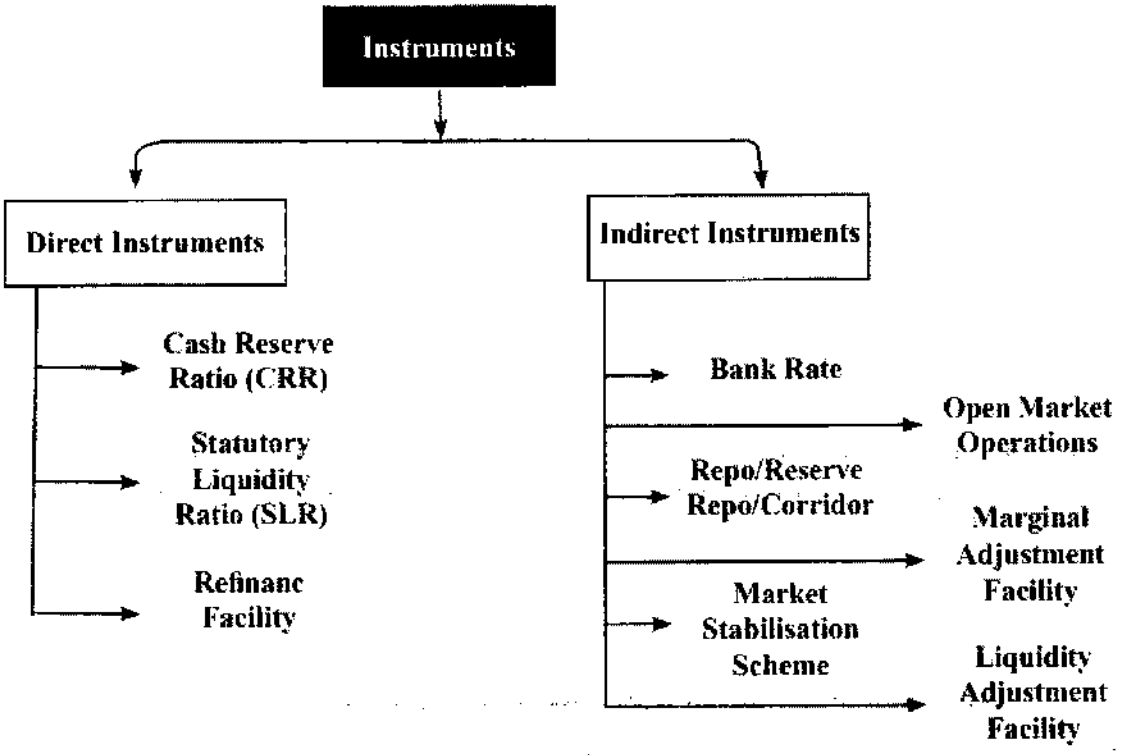
The main objectives of monetary policy in India are:

- Maintaining price stability

- Ensuring adequate flow of credit to the productive sectors of the economy to support economic growth
- Financial stability

The relative emphasis among the objectives varies from time to time, depending on evolving macroeconomic developments.

The Reserve Bank's Monetary Policy Department (MPD) formulates monetary policy. The Financial Markets Department (FMD) handles day-to-day liquidity management operations. There are several direct and
indirect instruments that are used in the formulation and implementation of monetary policy



The instruments are discussed in detail here under:

(I) Direct Instruments

(a) Cash Reserve Ratio (CRR): The average daily balance that a bank is required to maintain with the Reserve Bank as a share of such per cent of its Net Demand and Time Liabilities (NDTL) that the Reserve Bank may notify from time to time in the Gazette of India. The share of net demand and time liabilities (NDTL) that banks must maintain as cash balance with the Reserve Bank. The Reserve Bank requires banks to maintain a certain amount of cash in reserve as percentage of their deposits to ensure that banks have sufficient cash to cover customer withdrawals. The adjustment of this ratio, is done as an instrument of monetary policy, depending on prevailing conditions. Our centralized and computerized system allows

for efficient and accurate monitoring of the balances maintained by banks with the Reserve Bank of India.

(b) Statutory Liquidity Ratio (SLR): The share of net demand and time liabilities that banks must maintain in safe and liquid assets, such as government securities, cash and gold.

(c) Refinance Facilities: Sector-specific refinance facilities (e.g., against lending to export sector) provided to banks exchange or other commercial papers. It also signals the medium-term stance of monetary policy.

(II) Indirect Instruments

(a) Liquidity Adjustment Facility (LAF): Consists of daily infusion or absorption of liquidity on a (repurchase basis, through repo (liquidity injection) and reverse repo (liquidity absorption) auction operations, using government securities as collateral.

(b) Repo Rate: The (fixed) interest rate at which the Reserve Bank provides overnight liquidity to banks against the collateral of government and other approved securities under the liquidity adjustment facility (LAF).

(c) Reverse Repo Rate: The (fixed) interest rate at which the Reserve Bank absorbs liquidity, on an overnight basis, from banks against the collateral of eligible government securities under the LAF. These rates under the Liquidity Adjustment Facility (LAF) determine the corridor for short-term money market interest rates. In turn, this is expected to trigger movement in other segments of the financial market and the real economy.

(d) Corridor: The MSF rate and reverse repo rate determine the corridor for the daily movement in the weighted average call money rate.

(e) Open Market Operations (OMO): Outright sales/purchases of government securities, in addition to LAF, as a tool to determine the level of liquidity over the medium term.

(f) Marginal Standing Facility (MSF): was instituted under which scheduled commercial banks can borrow over night at their discretion up to one per cent of their respective NDTL at 100 basis points above the repo rate to provide a safety value against unanticipated liquidity shocks.

(g) Bank Rate: It is the rate at which the Reserve Bank is ready to buy or rediscount bills of exchange or other commercial papers. It also signals the medium-term stance of monetary policy. The Bank Rate is published under Section 49 of the Reserve Bank of India Act, 1934. This rate has been aligned to the MSF rate and, therefore, changes automatically as and when the MSF rate changes alongside policy repo rate changes.

(h) Market Stabilisation Scheme (MSS): This instrument for monetary management was introduced in 2004. Liquidity of a more enduring nature arising from large capital flows is absorbed through sale of short-dated government securities and treasury bills. The mobilized cash is held in a separate government account with the Reserve Bank. Market Stabilisation Scheme

(ii) Issuer of Currency

The Reserve Bank is the nation's sole note issuing authority. Along with the Government of India, RBI is responsible for the design and production and overall management of the nation's currency, with the goal of ensuring an adequate supply of clean and genuine notes. The Department of Currency Management at Central Office, Mumbai, in cooperation with the Issue Departments of the Reserve Bank's Regional Offices across India oversees currency management. The function includes supplying and distributing adequate quantity of currency throughout the country and ensuring the quality of banknotes in circulation by continuous supply of clean notes and timely withdrawal of soiled notes. Indirect Instrument.

Four printing presses actively print notes: Dewas in Madhya Pradesh, Nasik in Maharashtra, Mysore in Karnataka, and Salboni in West Bengal. The presses in Madhya Pradesh and Maharashtra are owned by the Security Printing and Minting Corporation of India (SPMCIL), a wholly owned company of the Government of India. The presses in Karnataka and West Bengal are set up by Bharatiya Reserve Bank Note Mudran Private Limited (BRBNMPL), a wholly owned subsidiary of the Reserve Bank. Coins are minted by the Government of India. RBI is the agent of the Government for distribution, issue and handling of coins. Four mints are in operation: Mumbai, Noida in Uttar Pradesh, Kolkata, and Hyderabad.

(iii) Banker and Debt Manager to Government

Managing the government's banking transactions is a key role of RBI. Like individuals, businesses and banks, governments need a banker to carry out their financial transactions in an efficient and effective manner, including the raising of resources from the public. As a banker to the central government, the Reserve Bank maintains its accounts, receives money into and makes payments out of these accounts and facilitates the transfer of government funds. RBI also act as the banker to those state governments that has entered into an agreement. The role as banker and debt manager to government includes several distinct functions:

(a) Undertaking banking transactions for the central and state governments to facilitate receipts and payments and maintaining their accounts.

(b) Managing the governments' domestic debt with the objective of raising the required amount of public debt in a cost-effective and timely manner.

(c) Developing the market for government securities to enable the government to raise debt at a reasonable cost, provide benchmarks for raising resources by other entities and facilitate transmission of monetary policy actions.

At the end of each day, RBI's electronic system automatically consolidates all of the government's transactions to determine the net final position. If the balance in the

government's account shows a negative position, RBI extends a short-term, interest-bearing advance, called a Ways and Means Advance-WMA-the limit or amount for which is set at the beginning of each financial year in April.

(iv) Banker to Banks Banks are required to maintain a portion of their demand and time liabilities as cash reserves with the Reserve Bank. For this purpose, they need to maintain current account with the Reserve Bank. The current account of the banks is opened by the Banking Departments of the Reserve Bank's Regional offices.

The current accounts of individual banks are being opened in e-Kuber (CBS of RBI) by Banking Departments of the Regional Offices. These current accounts are also maintained for participation in Centralised and Decentralised Payment Systems and are used for settling inter-bank obligations, such as clearing transactions or clearing money market transactions between two banks, buying and selling securities and foreign currencies. Thus, Reserve Bank acts as a common banker, known as 'Banker to Banks' function, the operational instructions for which are issued by concerned central office departments of the Reserve Bank.

As Banker to banks, the Reserve Bank provides short-term loans and advances to select banks, when necessary, to facilitate lending to specific sectors and for specific purposes.

As the banker to banks, RBI focus on:

(a) Enabling smooth, swift and seamless clearing and settlement of inter-bank obligations.

(b) Providing an efficient means of funds transfer for banks.

(c) Enabling banks to maintain their accounts with us for purpose of statutory reserve requirements and maintain transaction balances.

(d) Acting as lender of the last resort.

The Reserve Bank provides products and services for the nation's banks similar to what banks offer their own customers.

(v) Regulator of the Banking System

The RBI has a critical role to play in ensuring the safety and soundness of the banking system—and in maintaining financial stability and public confidence in this system. As the regulator and supervisor of the banking system, the Reserve Bank protects the interests of depositors, ensures a framework for orderly development and conduct of banking operations conducive to customer interests and maintains overall financial stability through preventive and corrective measures.

The Reserve Bank regulates and supervises the nation's financial system. Different departments of the Reserve Bank oversee the various entities that comprise India's financial infrastructure. RBI oversees:

(a) Commercial Banks and All-India Development Financial Institutions: Regulated by the Department of Banking Operations and Development, supervised by the Department of Banking Supervision.

(b) Urban Co-operative Banks: Regulated and supervised by the Urban Banks Department.

(c) Regional Rural Banks (RRB), District Central Cooperative Banks and State Co-operative Banks: Regulated by the Rural Planning and Credit Department and supervised by NABARD.

(d) Non-Banking Financial Companies (NBFC): Regulated and supervised by the Department of NonBanking Supervision.

The Reserve Bank makes use of several supervisory tools:

(a) On-site inspections

(b) Off-site surveillance, making use of required reporting by the regulated entities.

(c) Thematic inspections, scrutiny and periodic meetings

The Board for Financial Supervision oversees the Reserve Bank's regulatory and supervisory responsibilities. Consumer confidence and trust are fundamental to the proper functioning of the banking system. RBI's supervision and regulation help ensure that banks are stable and that the system functions smoothly.

As the nation's financial regulator, the Reserve Bank handles a range of activities, including:

(a) Licensing

(b) Prescribing capital requirements

(c) Monitoring governance

(d) Setting prudential regulations to ensure solvency and liquidity of the banks

(e) Prescribing lending to certain priority sectors of the economy

(f) Regulating interest rates in specific areas

(g) Setting appropriate regulatory norms related to income recognition, asset classification, provisioning, investment valuation, exposure limits and the like initiating new regulation.

(vi) Foreign Exchange Management

With the transition to a market-based system for determining the external value of the Indian rupee, the foreign exchange market in India gained importance in the early reform period. In recent years, with increasing integration of the Indian economy with the global economy arising from greater trade and capital flows, the foreign exchange market has evolved as a key segment of the Indian financial market.

The Reserve Bank plays a key role in the regulation and development of the foreign exchange market and assumes three broad roles relating to foreign exchange:

(a) Regulating transactions related to the external sector and facilitating the development of the foreign exchange market.

(b) Ensuring smooth conduct and orderly conditions in the domestic foreign exchange market.

(c) Managing the foreign currency assets and gold reserves of the country.

The Reserve Bank is responsible for administration of the Foreign Exchange Management Act, 1999 and regulates the market by issuing licences to banks and other select institutions to act as Authorised Dealers in foreign exchange. The Foreign Exchange Department (FED) is responsible for the regulation and development of the market.

On a given day, the foreign exchange rate reflects the demand for and supply of foreign exchange arising
from trade and capital transactions. The RBI's Financial Markets Department (FMD) participates in the foreign exchange market by undertaking sales / purchases of foreign currency to ease volatility in periods of excess demand for/supply of foreign currency.

The Department of External Investments and Operations (DEIO) invests the country's foreign exchange reserves built up by purchase of foreign currency from the market. In investing its foreign assets, the Reserve Bank is guided by three principles: safety, liquidity and return.

(vii) Regulator and Supervisor of Payment and Settlement Systems

Payment and settlement systems play an important role in improving overall economic efficiency. They consist of all the diverse arrangements that we use to systematically transfer money - currency, paper instruments such as cheques, and various electronic channels.

The Payment and Settlement Systems Act of 2007 (PSS Act) gives the Reserve Bank oversight authority, including regulation and supervision, for the payment and settlement systems in the country. In this role, RBI focus on the development and functioning of safe, secure and efficient payment and settlement mechanisms.

The Reserve Bank has a two-tiered structure. The first tier provides the basic framework for our payment systems. The second-tier focusses on supervision of this framework. As part of the basic framework, the Reserve Bank's network of secure systems handles various types of payment and settlement activities. Most operate on the security platform of the Indian Financial Network (INFINET), using digital signatures for further security of transactions. The various systems used are as follows:

(a) Retail payment systems: Facilitating cheque clearing, electronic funds transfer, through National Electronic Funds Transfer (NEFT), settlement of card payments and bulk payments, such as electronic
clearing services. Operated through local clearing houses throughout the country.
(b) Large Value Systems: Facilitating settlement of inter-bank transactions from financial markets.
These include:

(a) Real Time Gross Settlement System (RTGS): For funds transfers
(b) Securities Settlement System: For the government securities market.
(c) Foreign Exchange Clearing: For transactions involving foreign currency.
(d) Department of Payment and Settlement Systems: The Reserve Bank's payment and settlement systems regulatory arm.
(e) Department of Information Technology: Technology support for the payment systems and for the Reserve Bank's internal IT systems.

(viii) Maintaining Financial Stability

Pursuit of financial stability has emerged as a key critical policy objective for the central banks in the wake of the recent global financial crisis. Central banks have a critical role to play in achieving this objective. Though financial stability is not an explicit objective of the Reserve Bank in terms of the Reserve Bank of India Act,1935, it has been an explicit objective of the Reserve Bank since the early 2000s.

In 2009, the Reserve Bank set up a dedicated Financial Stability Unit mainly to, put in place a system of continuous monitoring of the macro financial system. The department's activities include:

(a) Conduct of macro-prudential surveillance of the financial system on an ongoing basis.
(b) Developing models for assessing financial stability in going forward.
(c) Preparation of half yearly financial stability reports.
(d) Development of a database of key variables which could impact financial stability, in co-ordination with the supervisory wings of the Reserve Bank.
(e) Development of a time series of a core set of financial indicators.
(f) Conduct of systemic stress tests to assess resilience.
Following the establishment of the Financial Stability Unit, the Reserve Bank started publishing periodic financial stability reports, with the first Financial Stability Report (FSR) being published in March 2010.

FSRs are now being published on a half yearly basis - in June and December every year. Internally, quarterly Systemic Risk Monitors and monthly Market Monitors are prepared to place before the Bank's Top Management a more frequent assessment of the risks to systemic stability of the economy.

(ix) Financial Inclusion and Development Role

This role includes ensuring credit availability to the productive sectors of the economy, establishing institutions designed to build the country's financial infrastructure, expanding access to affordable financial services and promoting financial education and literacy.

Over the years, the Reserve Bank has added new institutions as the economy has evolved. Some of the institutions established by the RBI include:

(a) Deposit Insurance and Credit Guarantee Corporation (1962), to provide protection to bank depositors and guarantee cover to credit facilities extended to certain categories of small borrowers.

(b) Unit Trust of India (1964), the first mutual fund of the country.

Industrial Development Bank of India (1964), a development finance institution for industry.

(c) National Bank for Agriculture and Rural Development (1982), for promoting rural and agricultural credit.

(d) Discount and Finance House of India (1988), a money market intermediary and a primary dealer in government securities.

(e) National Housing Bank (1989), an apex financial institution for promoting and regulating housing finance.

(f) Securities and Trading Corporation of India (1994), a primary dealer.

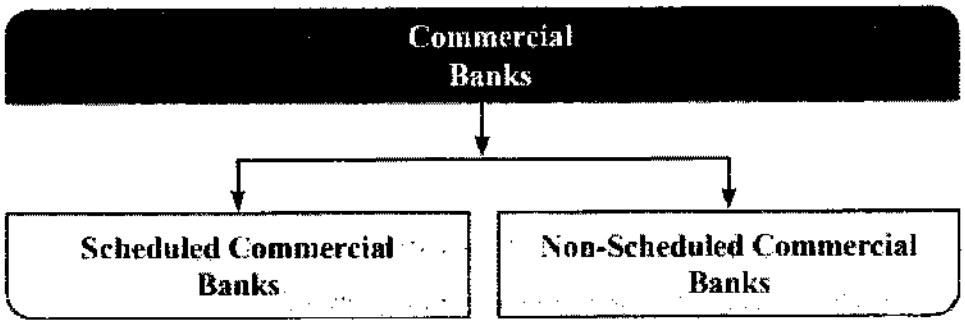
The Reserve Bank continues its developmental role, while specifically focusing on financial inclusion. Key tools in this on-going effort include:

- **Directed Credit for lending to Priority Sector and Weaker Sections:** The goal here is to facilitate/enhance credit flow to employment intensive sectors such as agriculture, micro and small enterprises (MSE), as well as for affordable housing and education loans.
- **Lead Bank Scheme:** A commercial bank is designated as a lead bank in each district in the country and this bank is responsible for ensuring banking development in the district through coordinated efforts between banks and government officials. The Reserve Bank has assigned a Lead District Manager for each district who acts as a catalytic force for promoting financial inclusion and smooth working between government and banks.
- **Sector Specific Refinance:** The Reserve Bank makes available refinance to banks against their credit to the export sector. In exceptional circumstances, it can provide refinance against lending to other sectors.
- **Strengthening and Supporting Small Local Banks:** This includes regional rural banks and cooperative banks.
- **Financial Inclusion:** Expanding access to finance and promoting financial literacy are a part of our outreach efforts.

- RBI's work to promote financial literacy focuses on educating people about responsible financial management. Efforts here include:
- **Information and Knowledge-sharing:** User-friendly website includes easy-to-understand tips and guidance in multiple languages, brochures, advertisements and other marketing materials educate the public about banking services.
- **Credit Counseling:** The Reserve Bank encourages commercial banks to set up financial literacy and credit counseling centres, to help people develop better financial planning skills.

• Commercial Banks

Commercial banks are a part of an organized money market in India. Commercial banks are joint stock companies dealing in money and credit that accept demand deposits from public which are withdraw able by cheques and use these deposits for lending to others. Deposits are accepted from large group of people in forms of money and deposits are withdrawable on demand. Commercial banks mobilize savings in urban and rural areas and make them available to large and small industrial units and trading units mainly for working capital requirements. Commercial banks provide various types of financial services to customers in return of fees.



Types of Commercial Banks

Commercial banks are classified into:

(A) Scheduled Commercial Banks

A scheduled bank is so called because it has been included in the Schedule-II of the Reserve Bank of India Act,1934. To be eligible for this inclusion, a bank must satisfy the following three conditions: -

(i) It must have a paid-up capital and reserves of an aggregate value of at least ₹ 5.00 lakh.

(ii) It must satisfy the RBI that its affairs are not conducted in a manner damaging to the interests of its depositors;

and

(iii) It must be a corporation and not a partnership or a single-owner firm.

Scheduled banks enjoy certain advantages: - (i) Free / concessional remittance facilities through the offices of the RBI and its agents. (ii) Borrowings facilities from the RBI by depositing necessary documents. In return, the

scheduled banks are under obligation to: -

(i) maintain an average daily balance of cash reserves with the RBI at rates stipulated by it; and

(ii) submit periodical returns to the RBI under various provisions of the Reserve Bank of India Act, 1934 and the Banking Regulation Act, 1949 (as amended from time to time).

All commercial banks such as Indian, foreign, regional rural banks and state co-operative banks are scheduled banks.

It comprises of Public Sector Banks, Regional Rural Banks, Private Sector Banks, Small Finance Banks (SFBs),

Scheduled Payments Banks and Foreign Banks

As on 31st March 2019 (Source: RBI)

Type of Bank	No. of Banks with branches	No. of Branches
Public Sector Banks	20	87,860
Private Sector Banks	22	32,375
Regional Rural Banks	43	22042
Foreign Banks	46	300

Presently, 12 Small Finance Banks (SFBs) and 4 Scheduled Payments Banks are operating in India.

(B) Non-scheduled Banks

Non-scheduled banks are also subject to the statutory cash reserve requirement. But they are not required to keep them with the RBI; they may keep these balances with themselves. They are not entitled to borrow from the RBI for normal banking purposes, though they may approach the RBI for accommodation under abnormal circumstances.

Commercial banks may be classified as (a) Indian and (b) foreign banks.

(a) Indian banks are those banks which are incorporated in India and whose head offices are in India.

(b) Foreign banks are those banks which are incorporated outside of India and whose head offices are in outside of India.

Both types of banks will have to maintain cash reserves with the RBI at rates stipulated by it. Besides, RBI can supervise over working of foreign banks operating in India.

Commercial banks may also be classified as (a) Private and (b) Public sector bank.

(a) Private sector banks are those banks whose at least 51% shares are holding by private sectors.

(b) Public sector banks are those banks which are not private sectors.

Functions of Commercial Banks

Functions of commercial banks can be divided in two groups–banking functions (primary functions) and non-banking functions (secondary functions).

A. Banking Functions (primary functions): Most of banking functions are: –

(a) Acceptance of Deposits from Public: - Bank accepts following deposits from publics: -

(i) Demand deposits can be in the form of current account or savings account. These deposits are withdrawable any time by depositors by cheques. Current deposits have no interest or nominal interest. Such accounts are maintained by commercial firms and business man. Interest rate of saving deposits varies with time period. Savings accounts are maintained for encouraging savings of households.

(ii) Fixed deposits are those deposits which are withdrawable only after a specific period. It earns a higher rate of interest.

(iii) In recurring deposits, people deposit a fixed sum every month for a fixed period of time.

(b) Advancing Loans: It extends loans and advances out of money deposited by public to various business units and to consumers against some approved. Usually, banks grant short-term or medium-term loans to meet requirements of working capital of industrial units and trading units. Banks discourage loans for consumption purposes. Loans may be secured or unsecured. Banks do not give loan in form of cash. They make the customer open account and transfer loan amount in the customer's account.

Banks grant loan in following ways: –

(i) Overdraft: - Banks grant overdraft facilities to current account holder to draw amount in excess of balance held.

(ii) Cash Credit: - Banks grant credit in cash to current account holder against hypothecation of goods.

(iii) Discounting Trade Bills: - The banks facilitate trade and commerce by discounting bills of exchange.

(iv) Term Loan: - Banks grant term loan to traders and to agriculturists against some collateral securities.

(v) Consumer Credit: - Banks grant credit to households in a limited amount to buy durable goods.

(vi) Money at Call or Short-term Advances: - Banks grant loan for a very short period not exceeding 7 days to dealers / brokers in stock exchange against collateral securities.

(c) Credit Creation:- Credit creation is another banking function of commercial bank. i.e., it manufactures money.

(d) Use of Cheque System: - Banks have introduced the cheque system for withdrawal of deposits.

There are two types of cheques – bearer & cross cheque. A bearer cheque is encashable immediately at the bank by its possessor. A crossed cheque is not encashable immediately. It has to be deposited only in the payee's account. It is not negotiable.

(e) Remittance of Funds: - Banks provides facilities to remit funds from one place to another for their cutomers by issuing bank drafts, mail transfer etc.

B. Non-Banking functions (secondary functions): Non-banking functions are (a) Agency services (b) General utility services

(a) Agency Services: - Banks perform following functions on behalf of their customers: -

(i) It makes periodic payments of subscription, rent, insurance premium etc as per standing orders from customers.

(ii) It collects bill, cheques, demand drafts, etc on behalf of their customers.

(iii) It acts as a trustee for property of its customers.

(iv) It acts as attorney. It can help in clearing and forwarding goods of its customers.

(v) It acts as correspondents, agents of their clients.

(b) General Utility Services: - General utility services of commercial banks are as follows: -

(i) Lockers are provided by bank to its customers at nominal rate.

(ii) Shares, wills, other valuables documents are kept in safe custody. Banks return them when
demanded by its customers.

(iii) It provides travellers cheque and ATM facilities.

(iv) Banks maintain foreign exchange department and deal in foreign exchange.

(v) Banks underwrites issue of shares and debentures of concerns.

(vi) It compiles statistics and business information relating to trade and commerce.

(vii) It accepts public provident fund deposits.

• Non-Banking Financial Companies (NBFCs)

Definition of Non-Banking Financial Companies (NBFCs)

A non-banking financial company has been defined vide clause (b) of Section 45–I of Chapter IIIB of the Reserve Bank of India Act, 1934, as (i) a financial institution, which is a company; (ii) a non-banking institution, which is a company and which has as its principal business the receiving of deposits under any scheme or arrangement or in any other manner or lending in

any manner; (iii) such other non-banking institutions or class of such institutions, as the bank may with the previous approval of the central government and by notification in the official gazette, specify

NBFC has been defined under Clause (xi) of Paragraph 2(1) of Non-Banking Financial Companies Acceptance of Public Deposits (Reserve Bank) Directions, 1998, as: 'non-banking financial company' means only the non-banking institution which is a loan company or an investment company or a hire purchase finance company or an equipment leasing company or a mutual benefit finance company.

A Non-Banking Financial Company (NBFC) is a company registered under the Companies Act, 1956 engaged in the business of loans and advances, acquisition of shares/stocks/ bonds / debentures/ securities issued by Government or local authority or other marketable securities of a like nature, leasing, hire-purchase, insurance business, chit business but does not include any institution whose principal business is that of agriculture activity, industrial activity, purchase or sale of any goods (other than securities) or providing any services and sale/purchase/construction of immovable property.

Different Types/Categories of NBFCs registered with RBI

NBFCs are categorized a) in terms of the type of liabilities into Deposit and Non-Deposit accepting NBFCs, b) non deposit taking NBFCs by their size into systemically important and other non-deposit holding companies (NBFC-NDSI and NBFC-ND) and c) by the kind of activity they conduct.

Within this broad categorization the different types of NBFCs are as follows:

(i) Asset Finance Company (AFC): An AFC is a company which is a financial institution carrying on as its principal business the financing of physical assets supporting productive/economic activity, such as automobiles, tractors, lathe machines, generator sets, earth moving and material handling equipments, moving on own power and general purpose industrial machines. Principal business for this purpose is defined as aggregate of financing real/physical assets supporting economic activity and income arising therefrom is not less than 60% of its total assets and total income respectively.

(ii) Investment Company (IC): IC means any company which is a financial institution carrying on as its principal business the acquisition of securities,

(iii) Loan Company (LC): LC means any company which is a financial institution carrying on as its principal business the providing of finance whether by making loans or advances or otherwise for any activity other than its own but does not include an Asset Finance Company.

(iv) Infrastructure Finance Company (IFC): IFC is a non-banking finance company (a) which deploys at least 75 per cent of its total assets in infrastructure loans, (b) has a minimum Net Owned Funds of ₹ 300 crores, (c) has a minimum credit rating of 'A 'or equivalent (d) and a CRAR of 15%.

(v) Systemically Important Core Investment Company (CIC-ND-SI): CIC-ND-SI is an NBFC carrying on the business of acquisition of shares and securities which satisfies the following conditions:- (a) it holds not less than 90% of its Total Assets in the form of investment in equity shares, preference shares, debt or loans in group companies; (b) its investments in the equity shares (including instruments compulsorily convertible into equity shares within a period not exceeding 10 years from the date of issue) in group companies constitutes not less than 60% of its Total Assets; (c) it does not trade in its investments in shares, debt or loans in group companies except through block sale for the purpose of dilution or disinvestment; (d) it does not carry on any other financial activity referred to in Section 45I(c) and 45I(f) of the RBI act,1934 except investment in bank deposits, money market instruments, government securities, loans to and investments in debt issuances of group companies or guarantees issued on behalf of group companies. (e) Its asset size is ₹ 100 crores or above and (f) It accepts public funds (vi) Infrastructure Debt Fund: NonBanking Financial Company (IDF-NBFC): IDF-NBFC is a company registered as NBFC to facilitate the flow of long-term debt into infrastructure projects. IDF-NBFC raise resources through issue of Rupee or Dollar denominated bonds of minimum 5-year maturity. Only Infrastructure Finance Companies (IFC) can sponsor IDF-NBFCs.

(vi) Infrastructure Debt Fund: Non- Banking Financial Company (IDF-NBFC): IDF-NBFC is a company registered as NBFC to facilitate the flow of long-term debt into infrastructure projects. IDF-NBFC raise resources through issue of Rupee or Dollar denominated bonds of minimum 5-year maturity. Only Infrastructure Finance Companies (IFC) can sponsor IDF-NBFCs.

(vii) Non-Banking Financial Company - Micro Finance Institution (NBFC-MFI): NBFC-MFI is a non-deposit taking NBFC having not less than 85% of its assets in the nature of qualifying assets which satisfy the following criteria:

(a) Loan disbursed by an NBFC-MFI to a borrower with a rural household annual income not exceeding ₹ 1,00,000 or urban and semi-urban household income not exceeding ₹ 1,60,000;
(b) Loan amount does not exceed ₹ 50,000 in the first cycle and ₹ 1,00,000 in subsequent cycles;
(c) Total indebtedness of the borrower does not exceed ₹ 1,00,000;
(d) Tenure of the loan not to be less than 24 months for loan amount in excess of ₹ 15,000 with prepayment without penalty;

(e) Loan to be extended without collateral;
(f) Aggregate amount of loans, given for income generation, is not less than 50 per cent of the total loans given by the MFIs;
(g) Loan is repayable on weekly, fortnightly or monthly instalments at the choice of the borrower

(viii) Non-Banking Financial Company – Factors (NBFC-Factors): NBFC-Factor is a non-deposit taking NBFC engaged in the principal business of factoring. The financial assets in the factoring business should constitute at least 50 percent of its total assets and its income derived from factoring business should not be less than 50 percent of its gross income.

(ix) Mortgage Guarantee Companies (MGC): MGC are financial institutions for which at least 90% of the business turnover is mortgage guarantee business or at least 90% of the gross income is from mortgage guarantee business and net owned fund is ₹ 100 crore.

(x) NBFC- Non-Operative Financial Holding Company (NOFHC): It is the financial institution through which promoter / promoter groups will be permitted to set up a new bank. It's a wholly-owned Non-Operative Financial Holding Company (NOFHC) which will hold the bank as well as all other financial services companies regulated by RBI or other financial sector regulators, to the extent permissible under the applicable regulatory prescriptions.

Regulatory Objectives of NBFCs

The Reserve Bank of India is entrusted with the responsibility of regulating and supervising the Non-Banking Financial Companies by virtue of powers vested in Chapter III B of the Reserve Bank of India Act, 1934.
The regulatory and supervisory objective is to: (a) ensure healthy growth of the financial companies; (b) ensure that these companies function as a part of the financial system within the policy framework, in such a manner that their existence and functioning do not lead to systemic aberrations; and that (c) the quality of surveillance and supervision exercised by the Bank over the NBFCs is sustained by keeping pace with the developments that take place in this sector of the financial system. It has been felt necessary to explain the rational underlying the regulatory changes and provide clarification on certain operational matters for the benefit of the NBFCs, members of public, rating agencies, Chartered Accountants etc. To meet this need, the clarifications in the form of questions and answers, is being brought out by the Reserve Bank of India (Department of Non-Banking Supervision) with the hope that it will provide better understanding of the regulatory framework. The information given below is of general nature for the benefit of depositors/public and the clarifications given do not substitute the extant regulatory directions/instructions issued by the Bank to the NBFCs.

Differences between Banks & NBFCs

NBFCs lend and make investments and hence their activities are akin to that of banks; however, there are a few differences as given below:

(i) NBFC cannot accept demand deposits;

(ii) NBFCs do not form part of the payment and settlement system and cannot issue cheques drawn on itself;

(iii) Deposit insurance facility of Deposit Insurance and Credit Guarantee Corporation is not available to depositors of NBFCs, unlike in case of banks.

Registration requirement of NBFCs

In terms of Section 45-IA of the RBI Act, 1934, no Non-banking Financial Company can commence or carry-on business of a non-banking financial institution without a) obtaining a certificate of registration from the Bank and without having a Net Owned Funds of ₹25 lakhs (rupees two crores since April 1999). However, in terms of the powers given to the Bank. to obviate dual regulation, certain categories of NBFCs which are regulated by other regulators are exempted from the requirement of registration with RBI viz. Venture Capital Fund/Merchant Banking companies/Stock broking companies registered with SEBI, Insurance Company holding a valid Certificate of Registration issued by IRDA, Nidhi companies as notified under Section 620A of the Companies Act, 1956, Chit companies as defined in clause (b) of Section 2 of the Chit Funds Act, 1982, Housing Finance Companies regulated by National Housing Bank, Stock Exchange or a Mutual Benefit company.

NBFCs- Exempted from Registration

Housing Finance Companies, Merchant Banking Companies, Stock Exchanges, Companies engaged in the business of stock-broking/sub-broking, Venture Capital Fund Companies, Nidhi Companies, Insurance companies and Chit Fund Companies are NBFCs but they have been exempted from the requirement of registration under Section 45-IA of the RBI Act,1934 subject to certain conditions.

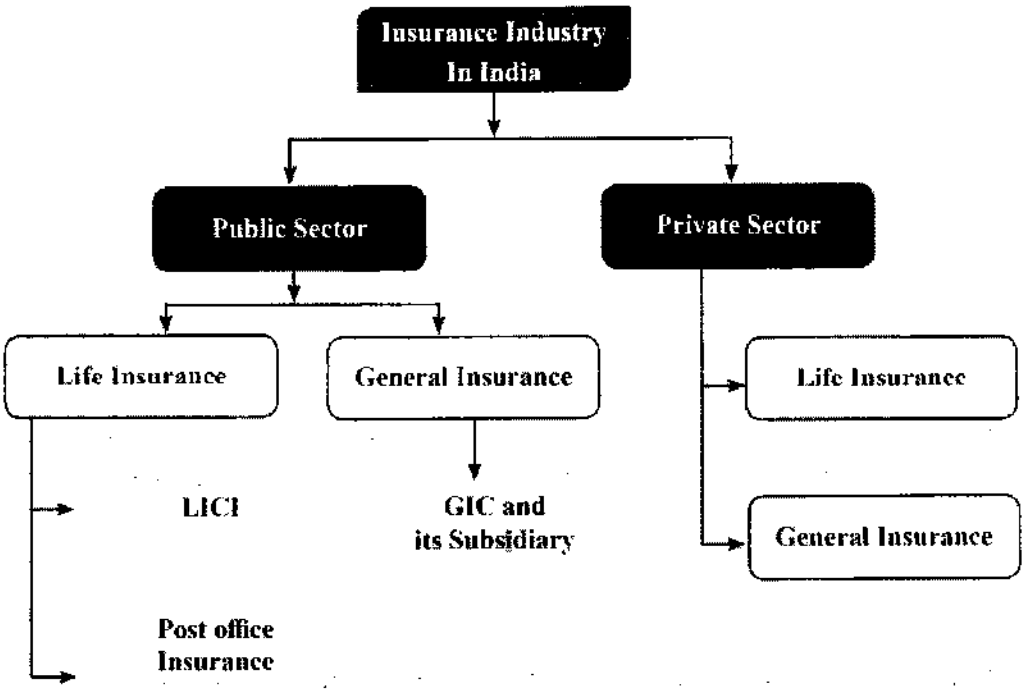
Housing Finance Companies are regulated by National Housing Bank, Merchant Banker/Venture Capital Fund Company/stock-exchanges/stock brokers/sub-brokers are regulated by Securities and Exchange Board of India, and Insurance companies are regulated by Insurance Regulatory and Development Authority. Similarly, Chit Fund Companies are regulated by the respective State Governments and Nidhi Companies are regulated by Ministry of Corporate Affairs, Government of India.

It may also be mentioned that Mortgage Guarantee Companies have been notified as Non-Banking Financial Companies under Section 45 I(f)(iii) of the RBI Act, 1934.

Residuary Non-Banking Company (RNBC)

Residuary Non-Banking Company is a class of NBFC which is a company and has as its principal business the receiving of deposits, under any scheme or arrangement or in any other manner and not being Investment, Asset Financing, Loan Company. These companies are required to maintain investments as per directions of RBI, in addition to liquid assets. The functioning of these companies is different from those of NBFCs in terms of method of mobilization of deposits and requirement of deployment of depositors' funds as per Directions. Besides, Prudential Norms Directions are applicable to these companies also.

- **Insurance Companies**



The insurance companies are financial intermediaries as they collect and invest large amounts of premiums. They offer protection to the investors, provide means for accumulating savings, and channelise funds to the government, and other sectors. They are contractual saving agencies which receive, mostly without fail, steady inflow of funds in the form of premiums or regular contributions to pension plans. They are also in a position to predict, relatively accurately, when what amounts of insurance or pension benefits have to be paid. Further, their liabilities in most cases are long-term liabilities, for many life policies are held for 30 or 40, or 50 or even more years. As a result, the liquidity is not a problem for them, and their major activity is in the field of long-term investments. Since they offer life-cover to the investors, the guaranteed rate of return specified in insurance policies is relatively low.

Therefore, they do not need to seek high rates of return on their investments.

The insurance companies are active in the following fields among other—life, health, and general, and they have begun to operate the pension schemes and mutual funds also. Insurance business consists of spreading risks over time and sharing them between persons and organisations. The major part of insurance business is life insurance, the operations of which depend on the laws of mortality.

The distinction between life and general insurance business is that with regard to the former, the claim is fixed and certain, but in the case of the latter, the claim is uncertain i.e., the amount of claim is variable and it is ascertainable only sometime after the event. Pension business is a specialised form of life assurance.

Insurance Sector Reforms

The insurance sector in India has gone through the process of reforms following these recommendations. The Insurance Regulatory & Development Authority (IRDA) Bill was passed by the Indian Parliament in December 1999. The IRDA became a statutory body in April, 2000 and has been framing regulations and registering the private sector insurance companies. The insurance sector was opened upto the private sector in August 2000. Consequently, some Indian and foreign private companies have entered the insurance business now. There are about 31 general insurance and 24 life insurance companies operating in the private sector in India, early in 2022.

Statutory Functions of IRDA:

- Issue to the applicant a certificate of registration, renew, modify, withdraw, suspend or cancel such registration.
- Protection of the interests of the policyholders in matters concerning assigning of policy, nomination by policy holders, insurable interest, settlement of insurance claim, surrender value of policy and other terms and conditions of contracts of insurance.
- Specifying requisite qualifications, code of conduct and practical training for intermediaries or insurance intermediaries and agents.
- Specifying the code of conduct for surveyors and loss assessors.
- Promoting efficiency in the conduct of insurance business.
- Promoting and regulating professional organisations connected with insurance and reinsurance business.
- Levying fees and other charges for carrying out the purposes of the Act.
- Calling for information from, undertaking inspection of, conducting enquiries and investigations including audit of the insurers, intermediaries, insurance intermediaries and other organisations connected with the insurance business.

- Control and regulation of rates, advantages, terms and conditions that may be offered by the insurers in respect of general insurance business not so controlled and regulated by the Tariff Advisory Committee under Section 64 U of the Insurance Act 1938 (4 of 1938).
- Specifying the form and manner in which books of accounts shall be maintained and statements of accounts shall be rendered by insurers and other insurance intermediaries.
- Regulating investment of funds by insurance companies.
- Regulating maintenance of margin of solvency.
- Adjudication of disputes between insurers and intermediaries or insurance intermediaries .
- Supervising the functioning of the Tariff Advisory Committee.
- Specifying the percentage of the premium income of the insurer to finance schemes for promoting and regulating professional organisations referred to in clause (f).
- Specifying the percentage of life insurance business and general insurance business to be undertaken by the insurers in the rural and social sector.
- Exercising such other powers as may be prescribed.

List of Life Insurance Companies in India

1	Life Insurance Corporation of India
2	HDFC Life Insurance Co. Ltd
3	Max Life Insurance Co. Ltd.
4	ICICI Prudential Life Insurance Co. Ltd.
5	Kotak Mahindra Life Insurance Co. Ltd
6	Aditya Birla SunLife Insurance Co. Ltd.
7	TATA AIA Life Insurance Co. Ltd.
8	SBI Life Insurance Co. Ltd.
9	Exide Life Insurance Co. Ltd
10	Bajaj Allianz Life Insurance Co. Ltd
11	PNB MetLife India Insurance Co. Ltd.
12	Reliance Nippon Life Insurance Company Limited
13	Aviva Life Insurance Company India Ltd.
14	Sahara India Life Insurance Co. Ltd
15	Shriram Life Insurance Co. Ltd.
16	Bharti AXA Life Insurance Company Ltd.
17	Future Generali India Life Insurance Company Limited
18	Ageas Federal Life Insurance Company Limited
19	Canara HSBC Oriental Bank of Commerce Life Insurance Company Limited
20	Aegon Life Insurance Company Limited
21	Pramerica Life Insurance Co. Ltd.
22	Star Union Dai-Ichi Life Insurance Co. Ltd

23	India First Life Insurance Company Ltd.
24	Edelweiss Tokio Life Insurance Company Limited

List of Non-Life Insurance Companies in India

1	Acko General Insurance Ltd.
2	Aditya Birla Health Insurance Co. Ltd.
3	Agriculture Insurance Company of India Ltd.
4	Bajaj Allianz General Insurance Co. Ltd.
5	Bharti AXA General Insurance Co. Ltd.
6	Care Health Insurance Ltd
7	Cholamandalam MS General Insurance Co. Ltd.
8	ECGC Ltd.
9	Edelweiss General Insurance Co. Ltd.
10	Future Generali India Insurance Co. Ltd.
11	Go Digit General Insurance Ltd.
12	HDFC ERGO General Insurance Co. Ltd.
13	ICICI LOMBARD General Insurance Co. Ltd.
14	IFFCO TOKIO General Insurance Co. Ltd.
15	Kotak Mahindra General Insurance Co. Ltd.
16	Liberty General Insurance Ltd.
17	Magma HDI General Insurance Co. Ltd.
18	Manipal Cigna Health Insurance Company Limited
19	Niva Bupa Health Insurance Co. Ltd
20	National Insurance Co. Ltd.
21	Navi General Insurance Ltd.
22	Raheja QBE General Insurance Co. Ltd.
23	Reliance General Insurance Co. Ltd.
24	Royal Sundaram General Insurance Co. Ltd.
25	SBI General Insurance Co. Ltd.
26	Shriram General Insurance Co. Ltd.
27	Star Health & Allied Insurance Co. Ltd.
28	Tata AIG General Insurance Co. Ltd.
29	The New India Assurance Co. Ltd.
30	The Oriental Insurance Co. Ltd.
31	United India Insurance Co. Ltd.
32	Universal Sompo General Insurance Co. Ltd.

- **Pension Funds**

Pension Funds (PNFs) have grown rapidly to become the primary vehicle of retirement benefit or retirement saving, and retirement income in many countries. A Pension Plan (PP) is an arrangement to provide income to participants in the plan when they retire. PPs are generally sponsored by private employers, government as an employer, and labour unions. They may be Funded Pension Plans (FPPs) or Unfunded Pension Plans (UPPs). If the benefits promised by the PP are secured by assets specifically dedicated for that purpose, it is called a FPP. If the fulfilment of the promised benefits by the sponsor depends on the general credit and not by any specific contribution to be made year after year, it is called an UPP. There may also be Individual Retirement Pension Plans (IRPPs).

Classification of Pension Plans - The financial intermediary, or an organisation, or an institution, or a trust that manages the assets and pays the benefits to the old and retirees is called a Pension Fund (PNF). Some pension plans are said to be insured i.e., in such cases, the sponsor pays premiums to a life insurance company in exchange for a group annuity that would pay retirement benefits to the participants.

Another classification of PPs is:

(a) Defined Benefits Pension Plan (DBPP),

(b) Defined Contribution Pension Plan (DCPP) or Money Purchase Pension Plan (MPPP),

(c) Pay-as-you-go Pension Plan (PAYGPP)

These are discussed below:

(i) Defined Benefits Pension Plan (DBPP)

Under DBPP, the final pension is pre-defined based on the final salary and the period of service. Most of the pension plans offered by public sector enterprises and the government as employer in India are of DBPP variety. This type ensures a predictable amount of pension to the employees for all the years after their retirement and it is guaranteed by the State. DBPPs involve considerable cost to the employer. The firms with DBPP typically establish a legally separate trust fund, and the trustees invest employers' contributions in shares and bonds.

(ii) Defined Contribution Pension Plan (DCPPs)

It is popular in US, do not guarantee the amount of final benefit which the employees would get after they retire. In DCPP, the employee and employer make a pre-determined contribution each year, and these funds are invested over the period of time till the retirement of employee. Whatever the value of these investments at the time of retirement, the employee will get a certain amount which he would use to purchase an annuity. From the point of view of the employer. DCPP is also known as "money purchase pension plan".

(iii) Pay-As-You-Go-Pension Plan (PAYGPP)

In most European countries, including France and Germany, pensions are paid through PAYGPP, under which the current employees pay a percentage of their income to provide for the old, and, this, along with the contribution
of the State, goes as a pension that sustains the older generation. In US, there has been a trend towards a decline in DBPPs and an increase in DCPPs.
Management of Pension Funds Some sponsors of pension plans manage their pension funds themselves, but most of the sponsors appoint a
trustee to do so on their behalf. This trustee is usually a trust department of a commercial bank, or an insurance company, or a mutual fund. The trustee manager invests contributions provided by the sponsor and pays benefits to the retired persons.

In case of DBPPs, the assets of the PNF remain the property of the sponsor, who sets general investment policy in respect of portfolio composition, target return, quality of securities, etc. The fund manager takes day-today
decisions on buying or selling specific assets. Some large sponsors may divide the management of their PNFs among several trustee-managers.

There are certain advantages in managing PNFs by outside trustees: (a) Transaction costs are lower. The trustee has greater expertise and he possesses all the necessary personnel, equipment, and expertise in regulatory requirements, (b) It enhances the credibility of the pension plan.

Pension System in India

In India, the pension system coverage is very small at present. The pension market in India is highly unorganised which covers hardly three per cent of the Indian population. The Employees' Provident Fund (EPF), Employees' Pension Scheme (EPS), and the PPF are the only schemes, which cover the pension market in India. The regular salaried employees in the organised sector have been relatively better off in that public policy provided vehicles for compulsory savings and old age provisions. It is estimated that, around 23% of people employed in the government sector were the beneficiaries of the government's 'defined benefit pension scheme', and 49 per cent of people employed in the private sector were covered by the mandatory employee provident fund.

Last seven years, from 2000 to 2007, have seen a marked shift in pension policy in India through introduction of a new pension system. OASIS committee has recommended two major pension reforms for the government employees and the unorganised sector respectively. These efforts culminated in setting up of the Pension Fund
Regulatory and Development Authority in October 2003.

The Pension Fund Regulatory and Development Authority (PFRDA) was established by the Government of India on August 23, 2003 to promote old age income security by establishing, developing and regulating pension funds, to protect the interests of subscribers to schemes of pension funds and for matters connected therewith or incidental thereto. The authority consists of a Chairperson and not more than five members, of whom at least three shall be whole-time members, to be appointed by the Central Government.

The pension schemes in operation in India currently can broadly be divided into the following categories:
(1) Civil Services Pension Schemes (Pay as- you-go), (2) Employees' Provident Fund (EPF), (3) Employees' Pension Scheme (EPS). (4) New Pension Scheme (NPS), (5) Voluntary Pension Schemes under which two schemes are in operation such as (i) Personal / Group Pension Plans, (ii) Public Provident Fund.

Current Pension Schemes

Some of the pension schemes available in India at present are:
(i) Government Employees' Pension Scheme: The Government Employees' Pension Scheme (GEPS), which has been made mandatory from 1995. It is a subset of Employees' Provident Fund (EPF). It provides (a) superannuation pension, (b) retirement pension, (c) permanent total disability pension, (d) widow or widower's pension, and (e) orphan pension. It is essentially a defined-contribution and defined benefit payas-you-go scheme, which is financed by diverting 8.33 per cent of the employers' existing share of PF contributions.

The Central government contributes an amount equivalent to 1.16 percent of a worker's salary. The scheme provides a minimum pension of ₹ 500 per month and a maximum pension of 60 per cent of the salary. All assets and liabilities of the erstwhile Family Pension Fund Scheme, 1971 have been transferred to this GEPS, 1995 scheme. After the introduction of this scheme, the employees who had enrolled in the LIC pension schemes will also obtain pension benefits from GEPS, which is also known as Employees Pension Scheme (EPS), 1995. However, only the scheme (Pension and Provident Fund Scheme for employees of establishments covered under the Employees Provident Fund Act, 1952) run by Central Provident Fund Commissioner (CPFC) is eligible for the government contribution of 1.16 per cent of salary, thereby discouraging establishments to seek exemption from running their own schemes. The employers who want to be exempted have to contribute the balance 1.16 per cent of the salary, thereby ensuring that a contribution rate of 9.5 per cent is maintained for both exempted and non-exempted schemes. All benefits from exempted schemes have to be at least equal to those provided under the EPS 1995. Employers who do not wish To contribute to centrally administered EPF can set up their own trustee managed funds and seek the same

exemption from Employees' Provident Fund Organisation.

The EPF and EPS funds are invested mainly in government securities and government special deposit schemes, and individual employees do not have any say in the choice of investments.

(ii) BEPS and IEPS: Bank Employees Pension Scheme (BEPS), 1993, and Insurance Employees Pension Scheme (IEPS), 1993 are for the benefit of the employees of public sector banks, and government owned insurance companies respectively. They are financed by the entire employer's portion of the PF contribution which is 10% of the basic salary. The main benefit under these schemes (after superannuation at 60 years of age or after 33 years of service) is in the form of a pension of 50% of the average basic salary during the last 10 months of employment. An additional benefit of 50% of the average of the allowances which rank for the PF but not for DA during the last 10 months of service is also provided to the employees, and this amounts to 2-4% of the employee's salary.

(iii) Privately Administered Superannuation Fund: So far, the private sector has been kept out in respect of setting up and running of pension funds; they have been run by the government or semi-government organisations. If any employer sets up a privately administrated superannuation fund, it is stipulated that he can accumulate funds in the form of an irrevocable trust fund during the employment period of the employee concerned, but when the pension becomes payable, suitable annuities have to be purchased from the LIC.

Alternatively, the employer can have a superannuation scheme with the LIC and pay suitable contributions for the employees in service. LIC has introduced 4 pension plans in the recent past:

(i) Varistha Pension Bima Yojana (VPBY)
(ii) New Jeevan Akshay (NJA)
(iii) New Jeevan Dhara (NJD)
(iv) New Jeevan Suraksha (NJS)

- **Alternative Investment Funds (AIF): Angel Fund, Venture Capital Fund, Private Equity Fund and Hedge Funds**

Alternative Investment Fund (AIF) means any fund established or incorporated in India which is a privately pooled investment vehicle which collects funds from sophisticated investors, whether Indian or foreign, for investing it in accordance with a defined investment policy for the benefit of its investors.

AIF does not include funds covered under the SEBI (Mutual Funds) Regulations, 1996, SEBI (Collective Investment Schemes) Regulations, 1999 or any other regulations of the SEBI to regulate fund management activities. Further, certain exemptions from registration are provided under the AIF Regulations to family trusts set up for the benefit of 'relatives' as

defined under the Companies Act, 1956, employee welfare trusts or gratuity trusts set up for the benefit of employees, 'holding companies' within the meaning of Section 4 of the Companies Act, 1956 etc. [Ref. Regulation 2(1)(b) of the SEBI]

Categories of AIF

Category -I

AIFs which invest in start-up or early-stage ventures or social ventures or SMEs or infrastructure or other sectors or areas which the government or regulators consider as socially or economically desirable and shall include venture capital funds, SME Funds, social venture funds, infrastructure funds and such other Alternative Investment Funds as may be specified. [Ref. Regulation 3(4)(a)]

Category -II

AIFs which do not fall in Category I and III and which do not undertake leverage or borrowing other than to meet day-to-day operational requirements and as permitted in the SEBI (Alternative Investment Funds) Regulations, 2012. [Ref. Regulation 3(4)(b)] Various types of funds such as real estate funds, private equity funds (PE funds), funds for distressed assets, etc. are registered as Category II AIFs.

Category -III

AIFs which employ diverse or complex trading strategies and may employ leverage including through investment in listed or unlisted derivatives. [Ref. Regulation 3(4)(c)] Various types of funds such as hedge funds, PIPE Funds, etc. are registered as Category III AIFs.

Angel Fund

"Angel fund" is a sub-category of Venture Capital Fund under Category I Alternative Investment Fund that raises funds from angel investors and invests in accordance with the provisions of Chapter III-A of AIF Regulations. In case of an angel fund, it shall only raise funds by way of issue of units to angel investors.

Angel funds shall accept, up to a maximum period of 3 years, an investment of not less than ₹25 lakh from an angel investor.

"Angel investor" means any person who proposes to invest in an angel fund and satisfies one of the following conditions, namely,

(a) an individual investor who has net tangible assets of at least two crore rupees excluding value of his principal residence, and who:

(i) has early-stage investment experience, or

(ii) has experience as a serial entrepreneur, or

(iii) is a senior management professional with at least ten years of experience;

Explanation: For the purpose of this clause, 'early-stage investment experience' shall mean prior experience in investing in start-up or emerging or early-stage ventures and 'serial entrepreneur' shall mean a person who has promoted or copromoted more than one start-up venture.

(b) a body corporate with a net worth of at least ten crore rupees; or

(c) an Alternative Investment Fund registered under these regulations or a Venture Capital Fund registered under the SEBI (Venture Capital Funds) Regulations, 1996.

Investment in Angel Funds

Section 19D of the SEBI regulations state

(1) Angel funds shall only raise funds by way of issue of units to angel investors.

(2) An angel fund shall have a corpus of at least ten crore rupees.

(3) Angel funds shall accept, up to a maximum period of three years, an investment of not less than twenty-five lakh rupees from an angel investor.

(4) Angel fund shall raise funds through private placement by issue of information memorandum or placement memorandum, by whatever name called.

Investment by Angel Funds

As per Section 19F of the SEBI regulations:

Angel funds shall invest only in venture capital undertakings which:

(a) have been incorporated during the preceding three years from the date of such investment;

(b) have a turnover of less than twenty-five crore rupees;

(c) are not promoted or sponsored by or related to an industrial group whose group turnover exceeds three hundred crore rupees; and

Explanation I: For the purpose of this clause, "industrial group" shall include a group of body corporates with the same promoter(s)/promoter group, a parent company and its subsidiaries, a group of body corporates in which the same person/ group of persons exercise control, and a group of body corporates comprised of associates/subsidiaries/holding companies.

Explanation II: For the purpose of this clause, "group turnover" shall mean combined total revenue of the industrial group.

(1) are not companies with family connection with any of the angel investors who are investing in the company.

(2) Investment by an angel fund in any venture capital undertaking shall not be less than fifty lakh rupees and shall not exceed five crore rupees.

(3) Investment by an angel fund in the venture capital undertaking shall be locked-in for a period of three years.

(4) Angel funds shall not invest in associates.

(5) Angel funds shall not invest more than twenty-five per cent of the total investments under all its schemes in one venture capital undertaking:
Provided that the compliance to this sub-regulation shall be ensured by the Angel Fund at the end of its tenure.

Venture Capital Fund

Venture Capital funding is different from traditional sources of financing. Venture capitalists finance innovation and ideas which have potential for high growth but with inherent uncertainties. This makes it a high-risk, high return investment. Apart from finance, venture capitalists provide networking, management and marketing support as well. In the broadest sense, therefore, venture capital connotes risk finance as well as managerial support. In the global venture capital industry, investors and investee firms work together closely in an enabling environment that allows entrepreneurs to focus on value creating ideas and venture capitalists to drive the industry through ownership of the levers of control in return for the provision of capital, skills, information and complementary resources.
This very blend of risk financing and hand holding of entrepreneurs by venture capitalists creates an environment particularly suitable for knowledge and technology-based enterprises.

As per the 2(1)(z) of the Securities and Exchange Board of India (Alternative Investment Funds) Regulations, 2012, "Venture Capital Fund" means an Alternative Investment Fund which invests primarily in unlisted securities of start-ups, emerging or early-stage venture capital undertakings mainly involved in new products, new services, technology or intellectual property right based activities or a new business model and shall include an angel fund as defined under Chapter III-A of the SEBI regulations.

Minimum investment in a Venture Capital Fund

(1) A venture capital fund may raise monies from any investor whether Indian, Foreign or non-resident Indian [by way of issue of units].
(2) No venture capital fund set up as a company or any scheme of a venture capital fund set up as a trust shall accept any investment from any investor which is less than five lakh rupees.

Private Equity Fund

As per the section 2(1)(r) of the Securities and Exchange Board of India (Alternative Investment Funds) Regulations, 2012, "private equity fund" means an Alternative Investment Fund which invests primarily in equity or equity linked instruments or partnership interests of investee companies according to the stated objective of the fund.

Hedge Funds

Hedge funds are private investment vehicles not open to the general investment public. Hedge funds face less regulation than publicly traded mutual funds, allowing them to hold substantial short positions to preserve capital during market downturns. Typically, hedge fund managers generate profit from both long as well as short positions. the private nature of hedge funds often suits both the needs of investors and managers.

Features of Hedge Fund

- Reduce risk, enhance returns and minimize the correlation with equity and bond markets.
- Flexibility in investment options.
- Variety in terms of investment returns, volatility and risk.
- consistency of returns and capital preservation.
- Managed by experienced investment professionals who are generally disciplined and diligent.
- Pension funds, endowments, insurance companies, private banks and high net worth individuals and families invest in hedge funds to minimize overall portfolio volatility and enhance returns.
- Hedge funds benefit by heavily weighting hedge fund managers' remuneration towards performance incentives.

Hedging strategies adopted in case of Hedge Funds

- Selling short: Selling shares without owning them, to buy them back at a future date at a lower price in the expectation that their price will drop.
- Using arbitrage: Seeking to exploit pricing inefficiencies between related securities.
- Trading options or Derivatives: Contracts whose values are based on the performance of any underlying financial asset, index or other investment.
- Investing in anticipation of a specific event: Merger transaction, hostile takeover, spin-off, exiting of bankruptcy proceedings, etc.
- Investing in deeply discounted securities: Of companies about to enter or exit financial distress or bankruptcy, often below liquidation value.

Benefits of Hedge Funds

- Seek higher returns: Hedge fund strategies generate positive returns in both rising and falling equity and bond markets.
- Investment styles: Huge variety of hedge fund investment styles - many uncorrelated with each other provides investors with a wide choice of hedge fund strategies to meet their investment objectives.
- Long term Solution: Hedge funds provide an ideal long-term investment solution, eliminating the need to correctly time entry and exit from markets.

Diversification:

(i) Inclusion of hedge funds in a balanced portfolio reduces overall portfolio risk and volatility and increases returns.

(ii) Adding hedge funds to an investment portfolio provides diversification not otherwise available in traditional investing.

- **SEBI Regulations (including AIF Circulars)**

The Securities and Exchange Board of India was established on April 12, 1992 in accordance with the provisions of the Securities and Exchange Board of India Act, 1992.

The Preamble of the Securities and Exchange Board of India describes the basic functions of the Securities and Exchange Board of India as **"...to protect the interests of investors in securities and to promote the development of, and to regulate the securities market and for matters connected therewith or incidental thereto".**

Role of SEBI or Steps taken by SEBI for the Development of Capital Markets in India

To introduce improved practices and greater transparency in the capital markets and for capital market development, the roles of SEBI are:

(1) SEBI has drawn up a programme for inspecting stock exchanges. Under this programme, inspections of some stock exchanges have already been carried out. The basic objective of such inspections is to improve the functioning of stock exchanges.

(2) SEBI has been authorised to conduct inspections of various mutual funds. In this respect, it has already undertaken inspection of some mutual funds. Various deficiencies of the individual mutual funds have been pointed out in the inspection reports and corrective steps undertaken to rectify these deficiencies.

(3) SEBI has introduced a number of measures to reform the primary market in order to make stronger the standards of disclosure. SEBI has introduced certain procedural norms for the issuers and intermediaries, and removed the inadequacies and systemic deficiencies in the issue procedures.

(4) The process of registration of intermediaries such as stockbrokers has been provided under the provisions of the Securities and Exchange Board of India Act, 1992.

(5) In order to encourage companies to exercise greater care for timely actions in matters relating to the public issue of capital. SEBI has advised the stock exchanges to collect from companies making public issues, a deposit of 1 % of the issue amount which could be forfeited in case of noncompliance with the provisions of the listing agreement and non-despatch of refund orders and share certificates by registered post within the prescribed time.

(6) Through an order under the Securities Contracts (Regulations) Act 1956, SEBI has directed the stock exchanges to broad base their governing boards and change the

composition of their arbitration, default and disciplinary committees. The broad basing of the governing boards of the stock exchanges would help them function with greater degree of autonomy and independence or that they become truly self-regulatory organisations.

(7) Merchant banking has been statutorily brought under the regulatory framework of SEBI. The merchant bankers have to be authorised by SEBI. They will have to hold to specific capital adequacy norms and bear by a code of conduct, which specifies a high degree of responsibility towards inspectors in respect of the pricing and premium fixation of issues.

(8) SEBI issued regulations pertaining to "Insider Trading" in November 1992 prohibiting dealings, communication in matters relating to insider trading. Such regulations will help in protecting the market's integrity, and in the long run inspire investor confidence in the market.

(9) SEBI issued a separate set of guidelines for development financial institutions in September 1992 for disclosure and investment protection regarding their raising of funds from the market. As per the guidelines, there is no need for promoter's contribution. Besides, underwriting is not mandatory.

(10) SEBI has notified the regulations for mutual funds. For the first time mutual fund's are governed by a uniform set of regulations which require them to be formed as trusts and managed by a separate Asset Management Company (AMC) and supervised by a board of trustees. SEBI (Mutual fund) regulations provide for laissez-faire relationship between the various constituents of the mutual funds and thus bring about a structural change which will ensure qualitative improvement in the functioning of the mutual funds and require that the AMCs have a minimum net worth of ₹6 crores of which the sponsors must contribute at least 40 percent. The SEBS (Mutual Fund) Regulations also provide for an approval of the offer documents of schemes by SEBI. The regulations are intended to ensure that the mutual funds grow on healthy lines and investors' interest is protected.

(11) To bring about greater transparency in transactions, SEBI has made it mandatory for brokers to maintain separate accounts for their clients and for themselves. They must disclose the transaction price and brokerage separately in the contract notes issued to their clients. They must also have their books audited and audit reports filed with SEBI.

(12) SEBI has issued directives to the stock exchanges to ensure that contract notes are issued by brokers to clients within 24 hours of the execution of the contract. Exchanges are to see that time limits for payment of sale proceeds and deliveries by brokers and payment of margins by clients to brokers are complied with.

(13) In August 1994, guidelines were issued in respect of preferential issues for orderly development of the securities market and to protect the interest of investors.

(14) The 'Banker to the issue' has been brought under purview of SEBI for investor protection. Unit Trust of India (UTI) has also been brought under the regulatory jurisdiction of SEBI.

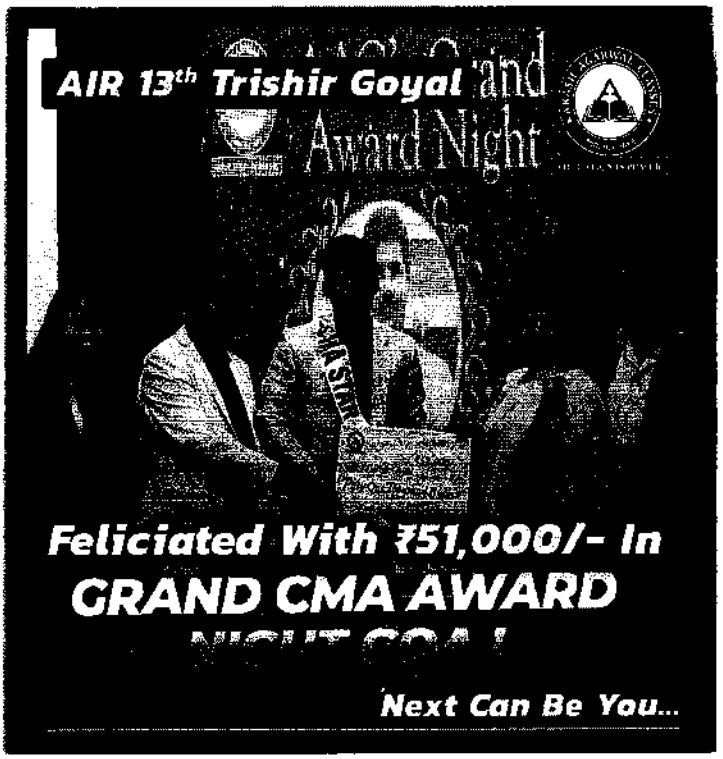
(15) In July 1995, the Committee set up by SEBI under the chairmanship of Y. H. Malegam to look into the disclosure of norms for public issues, recommended stricter regulations to control irregularities affecting the primary market. Following the recommendations of the Malegam Committee, SEBI issued a number of guidelines in September and October 1995 to protect the interest of investors.

(16) A series of measures to control the prices and to check other malpractices on the stock exchanges were announced by SEBI on December 21, 1995.

(17) Guidelines for reduction the entry norms for companies accessing capital market were issued by SEBI on April 16, 1996.

(18) The above discussion shows that SEBI has undertaken a number of steps to establish a fair, transparent and a strong regulatory structure for the efficient functioning of the capital market and for protecting the interest of the investors. These steps have helped in developing the capital market on healthy lines.

CMA STUDENTS AND TEAM AAC CELEBRATING SUCCESS OF CMA INTER CLEARED STUDENT IN GOA



TOKEN OF MOTIVATION TO ACHIEVERS

.....NEXT CAN BE YOU.

PART B: Capital Market

Capital market is a market for equity shares and long-term debt. In this market, the capital funds comprising of both equity and debt are issued and traded. This also includes private placement sources of debt and equity as well as organized markets like stock exchanges. Capital market includes financial instruments with more than one year maturity. It is defined as a market in which money is provided for periods longer than a year, as the raising of short-term funds takes place on other markets (e.g., the money market). The capital market is characterized by a large variety of financial instruments: equity and preference shares, fully convertible debentures (FCDs), non-convertible debentures (NCDs) and partly convertible debentures (PCDs) currently dominate the capital market. However new instruments are being introduced such as debentures bundled with warrants, participating preference shares, zero-coupon bonds, secured premium notes, etc.

Functions of Capital Market

The capital market is an important constituent of the financial system. The functions of an efficient capital market are as follows:

- Mobilises long-term savings to finance long-term investments.
- Provide risk capital in the form of equity or quasi-equity to entrepreneurs.
- Encourage broader ownership of productive assets.
- Provide liquidity with a mechanism enabling the investor to sell financial assets.
- Lower the costs of transactions and information.
- Improve the efficiency of capital allocation through a competitive pricing mechanism.
- Enable quick valuation of financial instruments-both equity and debt.
- Provide insurance against market risk or price risk through derivative trading and default risk through investment protection fund.
- Provide operational efficiency through:
  - Simplified transaction procedures;
  - Lowering settlement timings; and
  - Lowering transaction costs.
- Develop integration among:
  - Real and financial sectors;
  - Equity and debt instruments;
  - Long-term and short-term funds;
  - Long-term and short-term interest costs;

- Private and government sectors; and
- Domestic and external funds.

➢ Direct the flow of funds into efficient channels through investment, disinvestment, and reinvestment.

➢ Enable wider participation by enhancing the width of the market by encouraging participation through networking institutions and associating individuals. constituents of capital market

The following are the constituents of capital market:

➢ **Investment trust:** Financial institutions which collects savings from public and invest that amount in industrial securities. Example: Tata Investment Trust Pvt Ltd.

➢ **Specialised financial Institutions:** These types of financial institution provide long term finance to industries. Example: Industrial Financial Corporation of India (IFCI) Ltd.

➢ **Insurance company:** Insurance companies collect premium from policy holders and invest the amount in different industrial securities. Example: Life Insurance Corporation Of India (LICI).

➢ **Securities market:** Securities is a broader term which encompasses shares, debentures, bonds etc. the market where securities transactions are held is known as securities market. Securities market can be further classified into primary or new issue market and secondary or share market.

• Primary and Secondary Markets and its Instruments

Classification of Capital Market

Primary Market

The primary market is a market for new issues. Hence it is also known as new issue market. This refers to the long-term flow of funds from the surplus sector to the government and corporate sector through primary issues and to banks and non-bank financial intermediaries through secondary issues. Funds are mobilized in the primary market through prospectus, rights issues, and private placement.

Types of Issues or Methods of rising Funds in Primary Market

Public Issue	Rights Issue	Bonus Issue	Private Placement	Bought out deals	Depository Receipts
Initial Public offering (IPO)- this is the offer of sale of securities of an unlisted company for the first time.	If a company issue share in the market to raise additional capital, the existing members are given the first preference	Bonus issues are made by the company when it has huge amount of accumulated reserves and wants to	1) Private Placement (Unlisted companies)- It is direct sale of securities to some specified individuals or financial institutions.	When the new issued shares of an unlisted company is bought large by investor or by small investors in group it is	Issue of negotiable equity instruments by Indian companies for rising capital from the international capital market. Example ADRs, GDRs.

Follow-on Public Offering (FPO)-This is the offer of sale of securities by listed company	to apply for new shares in proportion to their existing share holdings. this is known as right issue mentioned in sec 62(1) of companies act 2013.	capitalize the reserves. Bonus shares are issued on fully paid up shares only, to the existing shareholders free of cost. sec 63 of companies act states this.	2) Preferential issue Allotment of shares to selected persons 3) Qualified institutions Placement (for listed companies) allotment of securities to qualified institutional buyers.	known as the bought out deal.	

Participants in the Primary Market:

- Merchant Bankers
- Bankers to an Issue
- registrar to an Issue
- Underwriters to the issue
- Debenture Trustees
- investment Banks
- Depositories
- Portfolio Managers
- Custodians

Procedure of selling securities:

- Direct Sale
- Through Broker
- Through Underwriter
- Through intermediary financial institutions

Secondary Market

The secondary market is a market in which existing securities are resold or traded. This market is also known as the stock market. It is a market where buying, selling of those securities which have been granted the stock exchange quotation takes place. In India, the secondary market consists of recognized stock exchanges operating under rules, by-laws and regulations duly approved by the government.

Bombay Stock Exchange (BSE) was established in 1875, it is the oldest stock exchange in India. Subsequently other stock exchanges like in Ahmedabad, Kolkata were established. At present, in India there are 7 stock exchanges operating.

1. BSE Ltd.
2. Calcutta Stock Exchange Ltd.
3. Indian Commodity Exchange Ltd.
4. Metropolitan Stock Exchange of India Ltd.
5. Multi Commodity Exchange of India Ltd.
6. National Commodity & Derivatives Exchange Ltd.
7. National Stock Exchange of India Ltd.

Functions of the Secondary Market

- To contribute to economic growth through allocation of funds to the most efficient channel through the process of disinvestment to reinvestment.
- To facilitate liquidity and marketability of the outstanding equity and debt instruments.
- To ensure a measure of safety and fair dealing to protect investors' interests.
- To induce companies to improve performance since the market price at the stock exchanges reflects the performance and this market price is readily available to investors.
- To provide instant valuation of securities caused by changes in the internal environment.

The Indian secondary market can be segregated into two:

1. The secondary market for corporate and financial intermediaries: The participants in this market are registered brokers - both individuals and institutions. They operate through a network of sub- brokers and sub-dealers and are connected through an electronic networking system.

2. The secondary market for government securities and public sector undertaking bonds: The trading in government securities is basically divided into the short-term money market instruments such as treasury bills and long-term government bonds ranging in maturity from 5 to 20 years.

The main participants in the secondary market for government securities are entities like primary dealers, banks, financial institutions, and mutual funds.

Difference between Primary and Secondary Market

Basis	Primary Market	Secondary Market
Nature of Securities	It deals with new securities, i.e. securities which were not previously available, and are offered for the first time to the investors.	It is a market for old securities which have been issued already and granted stock exchange quotation.

Sale/Purchase	Securities are acquired from issuing companies themselves.	Securities are purchased and sold by the investors without any involvement of the companies.
Nature of Financing	It provides funds to new enterprises & also for expansion and diversification of the existing one and its contribution to company financing is direct.	It does not supply additional funds to company since the company is not involved in transaction.
Liquidity	It does not lend any liquidity to the securities.	The secondary market provides facilities for the continuous purchase and sale of securities, thus lending liquidity and marketability to the securities.
Organisational difference	It is not rooted in any particular spot and has no geographical existence. it has neither any tangible form nor any administrative organisational set up.	Secondary markets have physical existence in the form of stock exchange and are located in a particular geographical area having an administrative organisation.
Requirement	Helps in creating new capital.	Helps in maintenance of existing capital.
Volume	Volume of transaction is low as compared to secondary market.	Volume of transaction is high as compared to primary market.

Similarities between Primary and Secondary Market:

1. **Listing:** One aspect of inseparable connection between them is that the securities issued in the primary market are invariably listed on a secondary market (recognized stock exchange) for dealings in them. The practice of listing of new issues on the stock market is of immense utility to the potential investors who can be sure that when they receive an allotment of new issues, they will subsequently be able to dispose them off any time in the stock exchange.

2. **Control:** The stock exchanges exercise considerable control over the organisation of new issues. The new issues of securities which seek stock quotation/listing have to comply with statutory rules as well as regulations framed by the stock exchanges. If the new issues do not conform to the prescribed stipulations, the stock exchanges would refuse listing facilities to them. This requirement obviously enables the stock exchange to exercise considerable control over the new issues market and is indicative of close relationship between the two.

3. Mutual Interdependence: The markets for new and old securities are, economically, an integral part of a single market- the capital market. Their mutual interdependence from the economic point of view has two dimensions. When value of share increases, the volume of new issue increases and vice-versa. The functioning of secondary market has direct influence on the activities of new issue market. If stock market performs well then it also inspires the new issue market.

Basic Capital Market Instruments

A. Equity Securities	B. Debt Securities
Equity Shares	Debentures
Preference Shares	Bonds

These two types of securities are traded in separate markets in stock exchanges. They are briefly outlined as under:

A. Equity Securities:

(i) Equity Shares: Equity share represents the form of fractional ownership in which a shareholder, as a fractional owner, undertakes the maximum entrepreneurial risk associated with a business venture. A company may issue such shares with differential rights as to voting, payment of dividend, etc.

(ii) Preferred Stock/Preference Shares: Preference Shareholders are entitled to a fixed dividend or dividend calculated at a fixed rate to be paid regularly before dividend is paid in respect of Equity Share. They also enjoy priority over the equity shareholders in payment of surplus. there are various types of Preference Shares viz. Cumulative and Non-Cumulative Preference Shares, Convertible and Non-Convertible Preference Shares, Participating and Non-Participating Preference Shares, Redeemable and Non-Redeemable Preference Shares etc.

B. Debt Securities:

(i) Debentures: A Debenture is a document issued by a company under its common seal acknowledging a debt to the holders. It is a debt security issued by a company which offers to pay interest for the money it borrows for a certain period. Debenture holders are treated as creditors of the company. As per SEBI guidelines, no public or rights issue of convertible or non-convertible debentures shall be made unless a credit rating from a credit rating agency has been obtained and disclosed in the offer document.

Where the public or rights issue of debt security of issue greater than ₹100 crore or its equivalent are issued, two ratings from two different agencies shall be obtained. in case of issue of debentures with maturity of more than 18 months, the issuer shall also appoint a debenture trustee. The names of the debenture trustees must be stated in the offer document. a company issuing debentures with a maturity of more than 18 months should create a debenture redemption reserve.

Some of the prominent types of debentures are: a) Based on Security- Secured and Unsecured Debentures, b) Based on Registration of the instrument- Registered and Bearer Debentures, c) Based on Convertibility- Fully Convertible Debentures, Zero Interest Fully Convertible Debentures, Partly Convertible Debentures, Non-convertible Debentures, Non-convertible Debentures with Detachable Warrants, Optionally Convertible Debentures , d) Based on Redemption- Redeemable Debentures and Irredeemable Debentures, e) Other Types- Participating Debentures and Debentures with a Floating rate of interest.

(ii) Bonds: A bond is a negotiable certificate which entitles the holder for repayment of the principal sum plus interest. They are debt securities issued by a company, or government agency whereby a bond investor lends money to the issuer, and in exchange, the issuer promises to repay the loan amount on a specified maturity date. Features and the various types of Bonds have been discussed in study note 2.4 (financial market instruments) already.

Other Financial Instruments that are traded in Market

1. Secured Premium Notes (SPNs)

(a) Meaning: Secured Premium Notes are debt instruments issued along with a detachable warrant and is redeemable after a specified period (4 to 7 Years).

(b) Option to Convert: SPNs carry an option to convert into equity shares, i.e. the detachable warrant can be converted into equity shares.

(c) Period for Conversion: Conversion of detachable warrant into equity shares should be done within a time period specified by the company.

2. American Depository Receipts (ADRs): American Depository Receipts popularly known as ADRs were introduced in the American market in 1927. ADRs are negotiable instruments, denominated in dollars, and issued by the US Depository Bank. A non-US company that seeks to list in the US, deposits its shares with a bank and receives a receipt which enables the company to issue ADRs. These ADRs serve as stock certificates and are used interchangeably with ADRs which represent ownership of deposited shares. Among the Indian ADRs listed on the US markets, are Infy (the Infosys Technologies ADR), WIT (the Wipro ADR), Rdy (the Dr Reddy's Lab ADR), and Say (the Satyam Computer ADR). ADRs are listed in New York Stock Exchange (NYSE) and NASDAQ (National association of Securities Dealers automated quotations). Issue of ADR offers access to both institutional and retail market in Us.

3. Global Depository Receipts (GDRs): GDRs are equity instruments issued abroad by authorized overseas corporate bodies against the shares/bonds of Indian companies held with nominated domestic custodian banks. An Indian company intending to issue GDRs will issue the corresponding number of shares to an overseas depository bank. GDRs are freely transferable outside India and dividend in respect of the share represented by the GDR is paid

in Indian rupees only. They are listed and traded on a foreign stock exchange. GDRs are fungible, which means the holder of GDRs can instruct the depository to convert them into underlying shares and sell them in the domestic market. GDRs re traded on Over the Counter (OTC) basis. Most of the Indian companies have their GDR issues listed on the Luxembourg Stock Exchange and the London Stock Exchange. Indian GDRs are primarily sold to institutional investors and the major demand is in the UK, US, Hongkong, Singapore, France and Switzerland. There is no such difference between ADR and GDR from legal point of view.

4. Derivatives: A derivative is a financial instrument, whose value depends on the values of basic underlying variable. In the sense, derivatives is a financial instrument that offers return based on the return of some other underlying asset, i.e., the return is derived from another instrument. Derivatives are a mechanism to hedge market, interest rate, and exchange rate risks. Derivatives is divided into two types- Financial derivatives and Commodity derivatives. Types of Financial derivatives include: Forwards, Futures, Options, Warrants, Swaps, Swaptions. There are three types of traders in the derivatives market: Hedger, Speculator and arbitrageur.

5. External Commercial Borrowings (ECBs): ECBs are used by Indian companies to rise funds from foreign sources like bank, export credit agencies, foreign collaborators, foreign share holders etc. Indian companies rise funds through ECBs mainly for financing infrastructure projects.

6. Foreign Currency Convertible Bonds (FCCBs): Foreign currency convertible Bonds (FCCBs) are issued by Indian companies but are subscribed by non-residents. These bonds have a specified fixed interest rate and can be converted into ordinary shares at price preferred, either in part or in full.

- **Compulsory / Optionally Convertible Financial Instruments, Deep Discount Bonds**

Compulsory / Optionally Convertible Financial Instruments

(i) Compulsory Convertible Debenture (CCD)

A compulsory convertible debenture (CCD) is a type of bond which must be converted into stock by a specified date. It is classified as a hybrid security, as it is neither purely a bond nor purely a stock.

(ii) Optionally Convertible Debentures (OCD)

These are the debentures that include the option to get converted into equity. the investor has the option to either convert these debentures into shares at price decided by the issuer/agreed upon at the time of issue.

Advantages of OCD:

(a) Issuer

- **Quasi-equity:** Dependence of financial institutions is reduced because of the inherent option for conversion
  (i.e. since these are converted into equity, they need not be repaid in the near future.)
- **High Equity Line:** It is possible to maintain equity price at a high level, by issuing odd-lot shares consequent to conversion of the debentures, and hence lower floating stocks.
- **Dispensing Ownership:** Optionally Convertible Debentures enable to achieve wide dispersal of equity ownership in small lots pursuant to conversion.
- **Marketability:** The marketability of the issue will become significantly easier, and issue expenses can be expected to come down with the amounts raised becoming more.

(b) Investor

- **Assured Interest:** Investor gets assured interest during gestation periods of the project, and starts receiving dividends once the project is functional and they choose to convert their debentures. thereby, it brings down the effective gestation period at the investor's end to zero.
- **Secured Investment:** The investment is secured against the assets of the company, as against company deposits which are unsecured.
- **Capital Gains:** There is a possibility of capital gains associated with conversion, which compensates for the lower interest rate on debentures.

(c) Government

- Debentures helped in mobilizing significant resources from the public and help in spreading the Equity investors, thereby reducing the pressure on financial institutions (which are managed by government) for their resources.
- By making suitable tax amendments, benefits are extended to promote these instruments, to :-
  (i) safeguard the funds of financial institutions,
  (ii) encouraging more equity participation, which will also require a higher compliance under corporate laws, whereby organisations can be monitored more effectively.

Disadvantages of OCD:

Issuer

(a) Ability to match the projected cash inflows and outflows by altering the terms and timing of conversion is diluted, and becomes a function of performance of the company and hence its market price.

(b) The company is not assured of hefty share premiums based on its past performance and an assured conversion of debentures.

(c) Planning of capital structure becomes difficult in view of the uncertainties associated with conversion.

Investor: There are many regulatory requirements to be complied with for conversion.

(iii) Deep Discount Bonds (DDBs)

Deep Discount Bond is a form of zero-interest bonds, which are sold at a discounted value (i.e. below par) and on maturity, the face value is paid to investors. A bond that sells at a significant discount from par value and has no coupon rate or lower coupon rate than the prevailing rates of fixed-income securities with a similar risk profile. They are designed to meet the long term funds requirements of the issuer and investors who are not looking for immediate return and can be sold with a long maturity of 25-30 years at a deep discount on the face value of debentures. Example: Bond of a face value of ´1lakh may be issued for ´5,000 for a maturity value of ´1,00,000 after 20 Years.

Periodic Redemption: Issuing company may also give options for redemption at periodical intervals such as 5 Years or 10 Years etc.

No Interest: There is no interest payment during the lock-in / holding period.

Market Trade: These bonds can be traded in the market. Hence, the investor can also sell the bonds in stock market and realize the difference between initial investment and market price.

- **Euro Bond and Masala Bond**

A **Eurobond** is a debt instrument that is denominated in a currency other than the home currency of the country or market in which it is issued. Eurobonds are frequently grouped together by the currency in which they are denominated, such as euro dollar or Euro-yen bonds.

Masala Bonds were introduced in India in 2014 by International Finance Corporation (IFC). The IFC issued the first masala bonds in India to fund infrastructure projects.

Masala Bonds are rupee-denominated bonds issued outside India by Indian entities. They are debt instruments which help to raise money in local currency from foreign investors. Both the government and private entities can issue these bonds. Investors outside India who would like to invest in assets in India can subscribe to these bonds. Any resident of that country can subscribe to these bonds which are members of the Financial Action Task Force. The investors who subscribe should be whose securities market regulator is a member of the International Organisation of Securities Commission. Multilateral and Regional Financial Institutions which India is a member country can also subscribe to these bonds.

- Rolling Settlement, Clearing House Operations

Rolling Settlement

Settlement refers to the process in which traders who have made purchases make payments while those who have sold shares, deliver them. The exchange ensures that buyers receive their shares and the sellers receive payment for the same. The process of settlement is managed by stock exchanges through clearing Houses. SEBI introduced a new settlement cycle known as the 'rolling settlement cycle'.

A rolling settlement is the settlement cycle of the stock exchange, where all trades outstanding at the end of the day have to be settled, i.e., the buyer has to make payments for securities purchased and seller has to deliver the securities sold.

Example: In case of t + 1 settlement, transactions entered on a day should be settled within the next working day. in case of t + 2 settlement, settlement should be made within two working days from the date of transaction. In India the rolling settlement process was Trading Day (T) +5 but now it is T+3, made effective from April 2002 i.e all transactions to be settled within 3 working days.

Process of Rolling Settlement

1	Trading	Day of Trading	t
2	Clearing	Confirmation of Custodial Delivery Generation	t + 1 t + 1
3	Settlement	Securities & Funds Pay in Securities & Funds Pay-out	t + 2 t + 2

Benefits of Rolling Settlement:

- In rolling settlements, payments are quicker than in weekly settlements. Thus, investors benefit from increased liquidity,
- It keeps cash and forward markets separate,
- Rolling settlements provide for a higher degree of safety,
- From an investor's perspective, rolling settlement reduces delays. this also reduces the tendency for price trends to get exaggerated. Hence, investors not only get a better price but can also act at their leisure.

Clearing House Operations (CHO)

Clearing House is a body either owned by or independently associated with an exchange and charged with the function of ensuring the financial integrity of each trade. Orders entered into by members are cleared by means of the clearing house. Clearing Houses provide a range of

services related to the guarantee of contracts, clearance and settlement of trades, and management of risk for their members and associated exchanges.

Role of Clearing House

(a) It ensures adherence to the system and procedures for smooth trading.

(b) It minimizes credit risks by being a counter party to all trades.

(c) It involves daily accounting of all gains or losses.

(d) It ensures delivery of payment for assets on the maturity dates for all outstanding contracts.

(e) it monitors the maintenance of speculation margins.

Working of CHO

(a) The clearinghouse acts as the medium of transaction between the buyer and the seller. Every contract between a buyer and a seller is substituted by two contracts so that clearing house becomes the buyer to every seller and the seller to every buyer.

Example: In a transaction where P sells futures to R, R is replaced by the clearing house and the risk taken by P becomes insignificant. Similarly, the credit risk of R is taken over by the clearing house; thus, the credit risk is now assumed by the clearing house rather than by individuals.

(b) The credit risk of the clearing house is minimized by collecting margins depending upon the volatility of the instrument and adjusted every day for price movements.

- **Dematerialization, Re-materialization and Depository System**

Dematerialization

Dematerialization is the process of converting physical certificates to an equivalent number of securities in electronic form and credited into the investor's account with his / her Depository Participant. In simple terms, it refers to paperless trading. Dematerialized shares do not have any distinctive numbers. These shares are fungible, which means that all the holdings of a particular security will be identical and interchangeable.

Process of Dematerialization

In order to dematerialize physical securities, one has to fill in a DRF (Demat Request Form) which is available with the DP and submit the same along with physical certificates that are to be dematerialized. Separate DRF has to be filled for each ISIN. The complete process of dematerialization is outlined below:

- Surrender certificates for dematerialization to your DP.
- DP intimates to the depository regarding the request through the system.
- DP submits the certificates to the registrar of the issuer company.
- Registrar confirms the dematerialization request from depository.

- After dematerializing the certificates, Registrar updates accounts and informs depository regarding completion of dematerialization.
- Depository updates its accounts and informs the DP.
- DP updates the demat account of the investor.

Scheme

(a) The shareholder does not have a certificate to claim ownership of shares in a company. His interest is reflected by way of entries in the books of depository (an intermediary agent who maintains the share accounts of the shareholders).

(b) This is similar to bank account, where the account holder, and not the banker, is the true owner of the money value of sum indicated against his name in the bank's books.

Depository and Depository Participant

(a) A Depository is an organisation, which holds securities of investors in electronic form at the request of the investor through a registered Depository Participant. Example: National Depository Securities Limited (NSDL), Central Depository Securities Limited (CSDL).

(b) It also provides services related to transactions in securities.

(c) A Depository Participant (DP) is an agent of the depository registered with SEBI through which it interfaces with the investor.

Advantages: The advantages of holding securities in demat form are —

Advantages

Investor's view Point	Issuer-Company's view Point
(a) It is speedier and avoids delay in transfers.	(a) Savings in printing certificates, postage expenses
(b) Avoids lot of paper work.	(b) Stamp duty waiver.
(c) Saves on stamp duty.	(c) Easy monitoring of buying/selling patterns in securities, increasing ability to spot takeover attempts and attempts at price rigging.

Rematerialisation

Rematerialiation is the process by which a client/ shareholder can get his electronic holdings converted into physical certificates.

Features of Rematerialisation

(a) A client can rematerialise his dematerialised holdings at any point of time.

(b) The rematerialisation process is completed within 30 days.

(c) The securities sent for rematerialisation cannot be traded.

Process of Rematerialisation

The process is called rematerialisation. If one wishes to get back his securities in the physical form he has to fill in the RRF (Remat Request Form) and request his DP for rematerialisation of the balances in his securities account.

The process of rematerialisation is outlined below:

(a) Make a request for rematerialisation.

(b) Depository participant intimates depository regarding the request through the system.

(c) Depository confirms rematerialisation request to the registrar.

(d) Registrar updates accounts and prints certificates.

(e) Depository updates accounts and downloads details to depository participant.

(f) Registrar dispatches certificates to investor.

Depository System

A depository is an organisation which holds securities (like shares, debentures, bonds, government securities, mutual fund units etc.) of investors in electronic form at the request of the investors through a registered Depository Participant. It also provides services related to transactions in securities. At present two Depositories viz. National Securities Depository Limited (NSDL) and Central Depository Services (India) Limited (CDSL) are registered with SEBI.

The increase in the volume of activity on stock exchanges with the advent of on-screen trading coupled with operational inefficiencies of the former settlement and clearing system led to the emergence of a new system called the depository system. The SEBI mandated compulsory trading and settlement of select securities in dematerialized form.

Need for Setting-up a Depository in India

The need was realized in the 1990s due to various reasons as under:

- A lot of time was consumed in the process of allotment and transfer of shares.
- Increase in volume of transactions.
- Large scale irregularities in the securities scam of 1992 exposed the limitations of the prevailing settlement system.
- Problems associated with dealing in physical shares, such as
  - Problems of theft, fake and/or forged transfers,
  - Share transfer delays particularly due to signature mismatches; and
  - Paper work involved in buying, selling, and transfer leading to costs of handling, storage, transportation, and other back-office costs.

To overcome these problems, the Government of India, in 1996, enacted the Depositories Act, 1996 to start depository services in India.

Depository Process

There are four parties in a demat transaction: the customer, the depository participant (DP), the depository, and the share registrar and transfer agent (R&T). A Depository Participant (DP) is an agent of the depository through which it interfaces with the investor and provides depository services. Public financial institutions, scheduled commercial banks, foreign banks operating in India with the approval of the Reserve Bank of India, state financial corporations, custodians, stock-brokers, clearing corporations /clearing houses, NBFCs and registrar to an issue or Share Transfer Agent complying with the requirements prescribed by SEBI can be registered as DP. Banking services can be availed through a branch whereas depository services can be availed through a DP. The investor has to enter into an agreement with the DP after which he is issued a client account number or client ID number. PAN Card is now mandatory to operate a demat account.

- **Initial Public Offering (IPO), Follow on Public Offer (FPO), Book Building, Green shoe Option**

Initial Public Offering (IPO)

An initial public offering (IPO) or stock market launch is a type of public offering where shares of stock in a company are sold to the general public, on a securities exchange, for the first time. Through this process, a private company transforms into a public company. It is an offering of either a fresh issue of securities or an offer for sale of existing securities, or both by an unlisted company for the first time to the public. Initial public offerings are used by companies to raise expansion capital, to possibly monetize the investments of early private investors, and to become publicly traded enterprises. a company selling shares is never required to repay the capital to its public investors. After the IPO, when shares trade freely in the open market, money passes between public investors. Although an IPO offers many advantages, there are also significant disadvantages. Important among these are the costs associated with the process, and the requirement to disclose certain information that could prove helpful to competitors, or create difficulties with vendors. Details of the proposed offering are disclosed to potential purchasers in the form of a lengthy document known as a prospectus. Most companies undertaking an IPO do so with the assistance of an investment banking firm acting in the capacity of an underwriter. Underwriters provide a valuable service, which includes help with correctly assessing the value of shares (share price), and establishing a public market for shares (initial sale). Alternative methods such as the Dutch auction have also been explored. In terms of size and public participation, the most notable example of this method is the LICI IPO.

The SEBI has laid down eligibility norms for entities raising funds through an IPO and an FPO. The entry norms for making an IPO of equity shares or any other security which may be converted into or exchanged with equity shares at a later date are as follows:

- Entry Norm I- Profitability Route
- Entry Norm II- QIB Route
- Entry Norm III- Appraisal Route

However, the SEBI has exempted the following entities from entry norms:

- Private sector banks
- Public sector banks
- An infrastructure company whose project has been appraised by a PFI or IDFC or IL&FS or a bank which was earlier a PFI and not less than 5 per cent of the project cost is financed by any of these institutions.
- Rights issue by a listed company.

A company cannot make a public or rights issue of debt instruments unless it fulfills the following two conditions: credit rating of not less than investment grade is obtained from not less than two SEBI registered credit rating agencies and it should not be in the list of willful defaulters of the reserve Bank. Moreover, it should not have defaulted payment of interest or repayment of principal, if any, for a period of more than six months.

The IPO process in India consists of the following steps:

- Appointment of merchant banker and other intermediaries
- Registration of offer document
- Marketing of the issue
- Post- issue activities

Follow on Public Offer (FPO)

A follow-on offering (often but incorrectly called secondary offering) is an offer of sale of securities by a listed company. A follow-on offering can be either of two types (or a mixture of both): dilutive and non-dilutive. A secondary offering is an offering of securities by a shareholder of the company (as opposed to the company itself, which is a primary offering). A follow on offering is preceded by release of prospectus similar to IPO: a Follow-on Public Offer (FPO).

For example, Google's initial public offering (IPO) included both a primary offering (issuance of Google stock by Google) and a secondary offering (sale of google stock held by shareholders, including the founders).In the case of the dilutive offering, the company's board of directors agrees to increase the share float for the purpose of selling more equity in the company. This new inflow of cash might be used to pay off some debt or used for needed company expansion. When new shares are created and then sold by the company, the number of shares outstanding increases and this causes dilution of earnings on a per share basis. Usually the gain of cash inflow from the sale is strategic and is considered positive for the longer term goals of the company and its shareholders. Some owners of the stock however may not view the event as favorably over a more short-term valuation horizon.

One example of a type of follow-on offering is an at-the-market offering (ATM offering), which is sometimes called a controlled equity distribution. In an ATM offering, exchange-listed companies incrementally sell newly issued shares into the secondary trading market through a designated broker- dealer at prevailing market prices. The issuing company is able to raise capital on an as-needed basis with the option to refrain from offering shares if unsatisfied with the available price on a particular day.

The non-dilutive type of follow-on offering is when privately held shares are offered for sale by company directors or other insiders (such as venture capitalists) who may be looking to diversify their holdings. Because no new shares are created, the offering is not dilutive to existing shareholders, but the proceeds from the sale do not benefit the company in any way. Usually however, the increase in available shares allows more institutions to take non-trivial positions in the company.

As with an IPO, the investment banks who are serving as underwriters of the follow-on offering will often be offered the use of a green shoe or over-allotment option by the selling company.

A non-dilutive offering is also called a secondary market offering. Follow on Public offering is different from initial public offering.

- IPO is made when company seeks to raise capital via public investment while FPO is subsequent public contribution.
- First issue of shares by the company is made through IPO when company first becoming a publicly traded company on a national exchange while Follow on Public Offering is the public issue of shares for an already listed company.

SEBI has introduced fast track issues (FTI) in order to enable well-established and compliant listed companies satisfying certain specific entry norms/conditions to raise equity through follow-on and rights issues. These norms reduce the process of issue and thereby the time period thus enabling issuers a quick access to primary capital market. Such companies can proceed with follow-on public offers (FPOs)/right issues by filing a copy of Red Herring Prospectus (RHP)/prospectus with the Registrar of Companies (RoC) or the letter of offer with designated stock exchange (SE), SEBI and stock exchanges. Moreover, such companies are not required to file draft offer document for SEBI comments and to stock exchanges as the relevant information is already in the public domain.

Book Building

Book building means a process by which a demand for the securities proposed to be issued by a body corporate is elicited and built up and the price for such securities is assessed for the determination of the quantum of such securities to be issued by means of notice/ circular / advertisement/ document or information memoranda or offer document. It is a mechanism where, during the period for which the book for the offer is open, the bids are collected from

investors at various prices, which are within the price band specified by the issuer. The process is directed towards both the institutional as well as the retail investors. The issue price is determined after the bid closure based on the demand generated in the process.

The book-building system is part of Initial Public Offer (IPO) of Indian Capital Market. It was introduced by SEBI on recommendations of Mr. Y.H. Malegam in October 1995. It is most practical, fast and efficient management of mega issues. Book building involves sale of securities to the public and the institutional bidders on the basis of predetermined price range.

Book building is a price discovery mechanism and is becoming increasingly popular as a method of issuing capital. The idea behind this process is to find a better price for the issue. The issue price is not determined in advance. Book Building is a process wherein the issue price of a security is determined by the demand and supply forces in the capital market. Book building is a process used for marketing a public offer of equity shares of a company and is a common practice in most developed countries.

- Book building refers to the collection of bids from investors, which is based on an indicative price range.
- The issue price is fixed after the bid closing date. The various bids received from the investors are recorded
- in a book that is why the process is called Book Building.
- Unlike international markets, India has a large number of retail investors who actively participate in initial Public Offer (IPOs) by companies. Internationally, the most active investors are the mutual funds and other institutional investors, hence the entire issue is book built. But in India, 25 per cent of the issue has to be offered to the general public. Here there are two options with the company.
- An issuer company may make an issue of securities to the public through a prospectus in the following manner:
  - 100% of the net offer to the public through the book building process, or
  - 75% of the net offer to the public through the book building process and 25% at the price determined through the book building. The fixed portion is conducted like a normal public issue after the book built which the issue is determined.

Book Building Process

1.The issuer company shall appoint an eligible Merchant Banker(s) as Book Runner(s) and their name(s) shall be mentioned in the draft prospectus submitted to SEBI.

2.The issuer company shall enter into an agreement with one or more of the stock exchange(s) which have the requisite system of online offer of securities.

3.The draft prospectus shall be filed with SEBI by the Lead Merchant Banker as per the SEBI Regulations containing all the disclosures except that of price and the number of securities to be offered to the public.

(a)The Book runner(s)/syndicate members shall appoint brokers of the exchange, who are registered with SEBI, for the purpose of accepting bids, applications and placing orders with the company and ensure that the brokers so appointed are financially capable of honouring their commitments arising out of defaults of their clients/investors, if any.

(b)The brokers so appointed, accepting applications and application monies, shall be considered as bidding/collection centres.

(c)The brokers so appointed, shall collect the money from his/their client for every order placed by him/them and in case the client/investor fails to pay for shares allocated as per the regulations, the broker shall pay such amount.

(d) The company shall pay to the broker(s) a commission/fee for the services rendered by him/ them.

(e) The Red Herring Prospectus shall disclose, either the floor price of the securities offered through it or a price band along with the range within which the price can move, if any. However, the issuer may not disclose the floor price or price band in the red herring prospectus if the same is disclosed in case of an IPO, at least two working days before the opening of the bid and in case of an FPO, at least one working day before the opening of the bid, by way of an announcement in all the newspapers in which the preissue advertisement was released by the issuer or the merchant banker.

(f) In case the Red Herring Prospectus discloses the price band, the lead book runner shall ensure compliance with the following conditions:

(i) The cap of the price band should not be more than 20% of the floor of the band; i.e., cap of the price band shall be less than or equal to 120% of the floor of the price band.

(ii) The price band can be revised during the bidding period in which case the maximum revision on either side shall not exceed 20% i.e., floor of the price band can move up or down to the extent of 20% of floor of the price band disclosed in the red herring prospectus and the cap of the revised price band will be fixed in accordance with clause (i) above.

(iii)Any revision in the price band shall be widely disseminated by informing the stock exchanges, by issuing press release and also indicating the change on the relevant website and the terminals of the syndicate members.

(iv)In case the price band is revised, the bidding period shall be extended for a further period of three days, subject to the total bidding period not exceeding thirteen days.

4.The issuer company shall after receiving the final observations, if any, on the offer document from SEBI make an advertisement in an English national daily with wide circulation, one Hindi national newspaper and Regional language newspaper with wide circulation at the place where the registered office of the issuer company is situated.

5.Bids shall be open for at least 3 working days and not more than 7 working days, which may be extended to a maximum of 10 working days in case the price band is revised.

6. Retail Individual Investors (RIIs) may bid at 'cut-off' price instead of their writing the specific bid prices in the bid forms.

7. Once the final price is determined, all those bidders whose bids have been found to be successful shall become entitled for allotment of securities.

8. The broker may collect an amount to the extent of 100% of the application money as margin money from the clients/investors before he places an order on their behalf.

9. Additional Disclosures:

a. The particulars of syndicate members, brokers, registrars, bankers to the issue, etc.

b. Statement to be given under the 'basis for issue price', 'the issue price has been determined by the issuer in consultation with the Book runner(s), on the basis of assessment of market demand for the offered securities by way of book-building.'

c. The following accounting ratios shall be given under the basis for issue price for each of the accounting periods for which the financial information is given:

i. EPS, pre-issue, for the last three years.

ii. P/E pre-issue.

iii. Average return on net worth in the last three years.

iv. Comparison of all the accounting ratios of the issuer company as mentioned above with the industry average and with the accounting ratios of the peer group.

10. On determination of the entitlement under clause 6, the information regarding the same (i.e., the number of securities to which the investor becomes entitled) shall be intimated immediately to the investors.

11. The final prospectus containing all disclosures as per SEBI Guidelines including the price and the number of securities proposed to be issued shall be filed with the ROC.

12. The investors who had not participated in the bidding process or have not received intimation of entitlement of securities under clause 8 may also make an application.

13. In case an issuer company makes an issue of 100% of the net offer to public through 100% Book Building process: Qualified Institutinal Buyers (QIBs)

- 50% of shares offered are reserved for not less than 35% for small investors and the balance (not less than 15%) for all other investors (i.e., Non-Institutional investors).

Provided that, 50% of the issue size shall be mandatorily allotted to the QIBs in case of compulsorily book-building issues, failing which the full subscription monies shall be refunded.

In case the book-built issues are made pursuant to the requirement of mandatory allocation of 60% to QIBs in terms of Rule 19(2)(b) of Securities Contract (Regulation) Rules, 1957, the respective figures are 30% for RIIs and 10% for NRIs.

14. The company, Lead manager/Book runner shall announce the pay-in day and intimate the same to brokers and stock exchange. it shall be responsibility of the broker to deposit the amount in the escrow account to the extent of allocation to his clients on the pay-in date.
15. On receipt of the basis of allocation data, the brokers shall immediately intimate the fact of allocation to their client/applicant.
16. The broker shall refund the margin money collected earlier, within 3 days of receipt of basis of allocation, to the applicants who did not receive allocation.
17. The brokers shall give details of the amount received from each client/investor and the names of clients/investors who have not paid the application money to Registrar/Book Runner and to the Exchange.
18. Trading shall commence within 6 days from the closure of the issue failing which interest @ 15% p.a. shall be paid to the investors

Advantages of Book Building

1. The book building process helps in discovery of price and demand.
2. The costs of the public issue are much reduced.
3. The time taken for the completion of the entire process is much less than that in the normal public issue.
4. In book building, the demand for the share is known before the issue closes. Infact, if there is not much demand, the issue may be deferred.
5. It inspires investors' confidence leading to a large investor universe.
6. Issuers can choose investors by quality.
7. The issue price is market determined.

Disadvantages of Book Building

1. There is a possibility of price rigging on listing as promoters may try to bail out syndicate members.
2. The book building system works very efficiently in matured market conditions. But, such conditions are not commonly found in practice.
3. It is appropriate for the mega issues only.
4. The company should be fundamentally strong and well known to the investors without it book building process will be unsuccessful.

Green-shoe Option

Green shoe option is the option for stabilisation of the post-listing price of securities in a public issue by allotting excess shares. An issuer may provide green shoe option for stabilisation of the post-listing price of its securities by allotting excess shares. Up to 15 per cent of the issue size may be borrowed by the stabilising agent from the promoters/pre-issue shareholders holding more than 5 per cent of the securities.

As per the Securities and Exchange Board of India (Disclosure and Investor Protection) Guidelines, 2000: an issuer company making a public offer of equity shares can avail of the Green Shoe Option (GSO) for stabilizing the post listing price of its shares, subject to the provisions.

(1) A company desirous of availing the option shall in the resolution of the general meeting authorizing the public issue, seek authorization also for the possibility of allotment of further shares to the 'stabilizing agent' (SA) at the end of the stabilization period.

(2) The company shall appoint one of the (Merchant Bankers or Book Runners to the issue management team, as the "stabilizing agent" (SA), who will be responsible for the price stabilization process, if required. The SA shall enter into an agreement with the issuer company, prior to filing of offer document with SEBI, clearly stating all the terms and conditions relating to this option including fees charged / expenses to be incurred by SA for this purpose.

(3) The SA shall also enter into an agreement with the promoter(s) or preissue shareholders who will lend their shares specifying the maximum number of shares that may be borrowed from the promoters or the shareholders, which shall not be in excess of 15% of the total issue size.

(4) The details of the agreements mentioned above shall be disclosed in the draft prospectus, the draft Red Herring prospectus, Red Herring prospectus and the final prospectus. The agreements shall also be included as material documents for public inspection.

(5) Lead merchant banker or the Lead Book Runner, in consultation with the SA, shall determine the amount of shares to be over allotted with the public issue, subject to the maximum number specified in Point No. 3.

(6) The draft Red Herring prospectus, the Red Herring prospectus and the final prospectus shall contain the following additional disclosures:

(a) Name of the SA

(b) The maximum number of shares (as also the percentage vis a vis the proposed issue size) proposed to be over-allotted by the company.

(c) The period, for which the company proposes to avail of the stabilization mechanism,

(d) The maximum increase in the capital of the company and the shareholding pattern post issue, in case the company is required to allot further shares to the extent of over-allotment in the issue.

(e). The maximum amount of funds to be received by the company in case of further allotment and the use of these additional funds, in final document to be filed with RoC

(f) Details of the agreement/ arrangement entered in to by SA with the promoters to borrow shares from the latter which inter-alia shall include name of the promoters, their existing shareholding, number & percentage of shares to be lent by them and other important terms and conditions including the rights and obligations of each party.

(g) The final prospectus shall additionally disclose the exact number of shares to be allotted pursuant to the public issue, stating separately therein the number of shares to be borrowed from the promoters and Over allotted by the SA, and the percentage of such shares in relation to the total issue size.

(7)(a) In case of an initial public offer by a unlisted company, the promoters and pre-issue shareholders and in case of public issue by a listed company, the promoters and pre- issue shareholders holding more than 5% shares, may lend the shares. (b) The SA shall borrow shares from the promoters or the pre-issue shareholders of the issuer company or both, to the extent of the proposed over-allotment.

(8) The allocation of these shares shall be pro-rata to all the applicants.

(9) The stabilization mechanism shall be available for the period disclosed by the company in the prospectus, which shall not exceed 30 days from the date when trading permission was given by the exchange(s).

(10) The SA shall open a special account with a bank to be called the "Special Account for GSO proceeds of _____ company" (hereinafter referred to as the GSO Bank account) and a special account for securities with a depository participant to be called the "Special Account for GSO shares of company" (hereinafter referred to as the GSO Demat Account).

(11) The money received from the applicants against the overallotment in the green shoe option shall be kept in the GSO Bank Account, distinct from the issue account and shall be used for the purpose of buying shares from the market, during the stabilization period.

(12) The shares bought from the market by the SA, if any during the stabilization period, shall be credited to the GSO Demat Account.

(13) The shares bought from the market and lying in the GSO Demat Account shall be returned to the promoters immediately, in any case not later than 2 working days after the close of the stabilization period.

(14) The prime responsibility of the SA shall be to stabilize post listing price of the shares. To this end, the SA shall determine the timing of buying the shares, the quantity to be bought, the price at which the shares are to be bought etc.

(15) On expiry of the stabilization period, in case the SA does not buy shares to the extent of shares over allotted by the company from the market, the issuer company shall allot shares to the extent of the shortfall in dematerialized form to the GSO Demat Account, within five days of the closure of the stabilization period. These shares shall be returned to the promoters by the SA in lieu of the shares borrowed from them and the GSO Demat Account shall be closed thereafter. The company shall make a final listing application in respect of these shares to all the Exchanges where the shares allotted in the public issue are listed.

(16) The shares returned to the promoters, as the case may be, shall be subject to the remaining lock in period as provided in the regulations.

(17) The SA shall remit an amount equal to (further shares allotted by the issuer company to the GSO Demat Account) × (issue price) to the issuer company from the GSO Bank Account. The amount left in this account, if any, after this remittance and deduction of expenses incurred by the SA for the stabilization mechanism, shall be transferred to the investor protection fund(s) of the stock exchange(s) where the shares of issuer company are listed, in equal parts if the shares are listed in more than one exchanges. The GSO Bank Account shall be closed soon thereafter.

(18) The SA shall submit a report to the stock exchange(s) on a daily basis during the stabilization period. The SA shall also submit a final report to SEBI in the format. This report shall be signed by the SA and the company. This report shall be accompanied with a depository statement for the "GSO Demat Account" for the stabilization period, indicating the flow of the shares into and from the account. The report shall also be accompanied by an undertaking given by the SA and countersigned by the depository(ies) regarding confirmation of lock-in on the shares returned to the promoters in lieu of the shares borrowed from them for the purpose of the stabilization, as per the requirement of the regulations.

(19) The SA shall maintain a register in respect of each issue having the green shoe option in which he acts as a SA. The register shall contain the following details of:

(a) in respect of each transaction effected in the course of the stabilizing action, the price, date and time;

(b) the details of the promoters from whom the shares are borrowed and the number of shares borrowed from each; and details of allotments made.

(20) The register must be retained for a period of at least three years from the date of the end of the stabilizing period."

- **Offer for Sale, Private Placement and Preferential Allotment**

Offer for Sale Offer for sale (OFS), introduced by SEBI, in February 2012, helps promoters of listed companies to dilute their stake through an exchange platform. The promoters are the sellers. The bidders may include market participant such as individuals, companies, qualified

institutional buyers (QIBs) and foreign institutional investors (FII). The facility is available on the BSE Limited (BSE) and National Stock Exchange of India Limited (NSE).

Size of the offer for Sale of Shares

(1) The size of the offer shall be a minimum of ´ 25 crores. However, size of offer can be less than ´ 25 crores so as to achieve minimum public shareholding in a single tranche.

(2) Minimum 10% of the offer size shall be reserved for retail investors. For this purpose, retail investor shall mean an individual investor who places bids for shares of total value of not more than ´ 2 lakhs aggregated across the exchanges.

Eligible Buyer(s)

(1) All investors registered with trading member of the exchanges other than the promoter(s)/ promoter group entities.

(2) In case a non-promoter shareholder offers shares through the OFS mechanism, promoters/ promoter group entities of such companies may participate in the OFS to purchase shares subject to compliance with applicable provisions of SEBI (Issue of Capital and Disclosure Requirements) Regulations, 2009 and SEBI (Substantial Acquisition of Shares and Takeovers) Regulations, 2011.

Private Placement and Preferential Allotment

When an issuer makes an issue of shares or convertible securities to a select group of persons not exceeding 49 persons, and which is neither a rights issue nor a public issue, it is called a private placement. Private placement of shares or convertible securities by listed issuer can be of three types:

(i) Preferential Allotment: When a listed issuer issues shares or convertible securities, to a select group of persons in terms of provisions of Chapter VII of SEBI (ICDR) Regulations, 2009, it is called a preferential allotment. The issuer is required to comply with various provisions which inter–alia include pricing, disclosures in the notice, lock–in etc, in addition to the requirements specified in the Companies Act.

(ii) Qualified Institutions Placement (QIP): When a listed issuer issues equity shares or non-convertible debt instruments along with warrants and convertible securities other than warrants to Qualified Institutions Buyers only, in terms of provisions of Chapter VIII of SEBI (ICDR) Regulations, 2009, it is called a QIP.

(iii) Institutional Placement Programme (IPP): When a listed issuer makes a further public offer of equity shares, or offer for sale of shares by promoter/promoter group of listed issuer in which the offer, allocation and allotment of such shares is made only to qualified institutional buyers in terms Chapter VIII A of SEBI (ICDR) Regulations, 2009 for the purpose of achieving minimum public shareholding, it is called an IPP.

- **Insider Trading**

It is buying or selling or dealing in securities of a listed company by director, member of management, an employee or any other person such as internal or statutory auditor, agent, advisor, analyst consultant etc. who have knowledge of material, 'inside' information not available to general public.

Illegal: Dealing in securities by an insider is illegal when it is predicated upon utilization of inside information to profit at the expense of other investors who do not have access to such investment information. It is prohibited and is considered as an offence as per SEBI (Insider Trading) regulations,1992.

Punishable: Insider trading is an unethical practice resorted by those in power, causing huge losses to common investors thus driving them away from capital market, and hence punishable. Three decades have passed since the SEBI (Prohibition of Insider Trading) Regulations, 1992 were notified which was framed to deter the practice of insider trading in the securities of listed companies. Since then there have been several amendments to the regulations and judicial paradigm through case laws have also evolved in India. in fact, world over, the regulatory focus is shifting towards containing the rising menace of insider trading effectively. To ensure that the regulatory framework dealing with insider trading in India is further strengthened, SEBI seeks review of the extant insider trading regulatory regime in India.

The Securities and Exchange Board of India (Prohibition of Insider Trading) Regulations 1992 requires that a person who is connected with a listed company and is in possession of any unpublished price sensitive information likely to materially affect the price of securities of company, shall not:

(i) On his behalf or on behalf of any other person deal in securities or

(ii) Communicate such information to any other person, who while in possession of such information shall not deal in securities.

Accordingly, SEBI has constituted a High-Level Committee under the Chairmanship of Hon'ble Justice Mr. N.K. Sodhi, retired Chief Justice of Karnataka High Court and Former Presiding officer of the Securities Appellate Tribunal, for reviewing the SEBI (Prohibition of Insider Trading) Regulations, 1992.

With a moto to strengthen the insider trading regulations further in India SEBI decided to review the existing regulations of Insider Trading hence and formed a committee under Chairmanship of Hon'ble Justice N. K. Sodhi. The committee formed by SEBI after several discussions has proposed a new regulation in place of the existing regulations. Based on their recommendation and proposal the new regulations have been approved by SEBI in its Board meeting held on November 19, 2014. Finally SEBI (Prohibition

of Insider Trading) Regulations 2015 has been notified in January 2015 and has been made effective from May 2015. The objective of this amendment is to strengthen the legal framework of insider trading. Those recent changes relating to insider trading are strengthened the legal and enforcement framework, aligning insider trading norms with international practices, clarity in some definitions and concepts and lastly facilitating legitimate business transactions.

The SEBI further amended the regulations in August, 2021 which states that the reward has been increased from ´1 crore to ´10 crores.

- **Credit Rating – Credit Rating Methods and Rating Agencies in India**

Credit rating is the assessment of a borrower's credit quality. it is the assessment carried out from the viewpoint of credit-risk evaluation on a specific date, on the quality of a-

- Specific debt-security issued, or
- Obligation undertaken by an enterprise (Term Loans, etc.)

Areas of Assessment: Assessment is done on the: -

Ability: Financial strength

Willingness: Integrity and attitude, of the obligant to meet principal and interest payments on the rated debt instrument in a timely manner.

Need for Credit Rating:

A firm has to ascertain the credit rating of prospective customers, to ascertain how much and how long can credit be extended. credit can be granted only to a customer who is reliably sound. this decision would involve analysis of the financial status of the party, his reputation and previous record of meeting commitments.

Features:

Ratings are expressed in alphabetical or alphanumeric symbols, enabling the investor to differentiate between debt instruments based on their underlying credit quality.

Credit Rating do not measure the following:

(i) Investment Recommendation: Credit rating does not make any recommendation on whether to invest or not.

(ii) Investment Decision: They do not take into account the aspects that influence an investment decision.

(iii) Issue Price: Credit rating does not evaluate the reasonableness of the issue price, possibilities for capital gains or liquidity in the secondary market.

(iv) Risk of Prepayment: Ratings do not take into account the risk of prepayment by issuer, or interest or exchange risks.

(v) Statutory Compliance: Credit rating does not imply that there is absolute compliance of statutory requirements in relation to audit, taxation, etc. by-the issuing company.

Objectives:

(i) To maintain investors' confidence.

(ii) To protect the interest of investors.

(iii) To provide low cost and reliable information to the investors in debt securities.

(iv) To act as a tool for marketing of debt securities.

(v) To improve a healthy discipline on borrowers.

(vi) To help merchant bankers, financial intermediaries and regulatory authorities in discharging their functions related to the issue of debt securities.

(vii) To provide greater financial and accounting information of the issuers of securities to the investors.

(viii) To facilitate and formulate public guidelines on institutional investment.

(ix) To reduce interest costs for highly rated companies.

(x) To motivate savers to invest in debt securities for the development of trade and industry.

Limitations:

(i) Rating Changes: Rating given to instruments can change over a period of time. they have to be kept under rating watch. Downgrading of an instrument may not be timely enough to help investors.

(ii) Industry Specific rather than Company Specific: Downgrades are linked to industry rather than company performance. Agencies give importance to macro aspects and not to micro-ones; over react to existing conditions which come from optimistic / pessimistic views arising out of up / down turns.

(iii) Cost -Benefit of Rating: Ratings being mandatory, it becomes a must for entities rather than carrying out cost Benefit Analysis of obtaining such, ratings. Rating should be optional and the entity should be free to decide on the issue of obtaining a credit rating.

(iv) Conflict of Interest: The rating agency collects fees from the entity it rates leading to a conflict of interest. Rating market being competitive there is a possibility of such conflict entering into the rating system especially in a case where the rating agencies get their revenues from a single service or group.

(v) Transparency: Greater transparency in the rating process should exist an example being the disclosure of assumptions leading to a specific public rating.

Methods /Process of Credit Rating:

The steps involved in the Credit Rating are:

(1) Rating Request: The Customer (Prospective issuer of Debt Instrument) makes a formal request to the Rating Agency. The request spells out the terms of the rating assignment and contains analysis of the issues viz. historical performance, competitive position, business risk profile, business strategies, financial policies and evaluation of outlook for performance.

information requirements are met through various sources like references, reviews, experience, etc.

(2) Formation of Rating Team: The rating process is initiated once a rating agreement is signed between Rating Agency and the client/ on receipt of a formal request (or mandate) from the client. Then the credit rating agency forms a team, whose composition is based on the expertise and skills required for evaluating the business of the issuer. The client is then provided with a list of information required and the broad framework for discussions.

(3) Initial Analysis: On the basis of the information gathered, the analysts submit the report to the Rating team. The authenticity and validity of the information submitted influences the credit rating activity.

(4) Evaluation by Rating Committee: Rating Committee is the final authority for assigning ratings. The rating team makes a brief presentation about the issuers' business and the management. All the issues identified during discussions stage are analysed.

(5) Actual Rating: Rating is assigned and all the issues, which influence the rating, are clearly spelt out.

(6) Communication to Issuer: Assigned rating together with the key issues is communicated to the issuer's top management for acceptance. the ratings, which are not accepted, are either rejected or reviewed. The rejected ratings are not disclosed and complete confidentiality is maintained.

(7) Review of Rating: If the rating is not acceptable to the issuer, he has a right to appeal for a review of the rating. These reviews are usually taken up, only if the issuer provides fresh inputs on the issues that were considered for assigning the rating. issuer's response is presented to the rating committee. If the inputs are convincing, the committee can revise the initial rating decision.

(8) Surveillance / Monitoring: credit rating agency monitors the accepted ratings over the tenure of the rated instrument. Ratings are reviewed every year, unless warranted earlier. During this course, the initial rating could be retained, upgraded or downgraded.

<u>Various Credit Rating Agencies in India</u>

There are seven credit rating agencies registered with the SEBI at present. They are outlined as follows:

1. CRISIL Ratings Limited (Formerly the Credit Rating Information Services of India Limited):

(a) CRISIL is the oldest rating agency originally promoted by ICICI.

(b) Services Offered: CRISIL offers a comprehensive range of integrated product and service offerings - real time news, analyzed data, opinion and expert advice - to enable investors, issuers, policy makers de-risk their business and financial decision making, take informed investment decisions and develop workable solutions.

(c) Risk Standardisation: CRISIL helps to understand, measure and standardise risks - financial and credit risks, price and market risks, exchange and liquidity risks, operational, strategic and regulatory risks.

Rating Symbols used by CRISIL

Long-Term Debt instruments		Short -Term Debt instruments	
Earlier Rating Symbol	Revised Rating Symbol	Earlier Rating Symbol	Revised Rating Symbol
AAA	CRISIL AAA	P1	CRISIL A1
AA	CRISIL AA	P2	CRISIL A2
A	CRISIL A	P3	CRISIL A3
BBB	CRISIL BBB	P4	CRISIL A4
BB	CRISIL BB	P5	CRISIL D
B	CRISIL B		
C	CRISIL C		
D	CRISIL D		

2.ICRA limited (Formerly Investment Information and Credit Rating Agency of India):

(a)ICRA is an independent and professional company, providing investment information and credit rating services.

(b)Activities: ICRA executes assignments in credit ratings, equity grading, and mandated studies spanning diverse, industrial sectors. ICRA has broad based its services to the corporate and financial sectors, both in India and overseas and offers its services under three banners namely- rating services, information services, advisory services.

Rating Symbols used by ICRA

Long-Term Debt instruments		Short-Term Debt instruments	
Earlier Rating Symbol	Revised Rating Symbol	Earlier Rating Symbol	Revised Rating Symbol
LAAA	ICRA AAA	A1	ICRA A1
LAA	ICRA AA	A2	ICRA A2
LA	ICRA A	A3	ICRA A3
LBBB	ICRA BBB	A4	ICRA A4
LBB	ICRA BB	A5	ICRA D
LB	ICRA B		
LC	ICRA C		
LD	ICRA D		

3.Care Ratings Limited (Credit Analysis and Research Limited)

(a)CARE is equipped to rate all types of debt instruments like Commercial Paper, Fixed Deposit, Bonds, Debentures and Structured Obligations.

(b)Services: CARE's information and advisory services group prepares credit reports on specific requests from banks or business partners, conducts sector studies and provides advisory services in the areas of financial restructuring, valuation and credit appraisal systems.

Rating Symbols used by CARE

Long-Term Debt instruments		Short-Term Debt instruments	
Earlier Rating Symbol	**Revised Rating Symbol**	**Earlier Rating Symbol**	**Revised Rating Symbol**
AAA	CARE AAA	PR-1	CARE A1
AA	CARE AA	PR-2	CARE A2
A	CARE A	PR-3	CARE A3
BBB	CARE BBB	PR-4	CARE A4
BB	CARE BB	PR-5	CARE D
B	CARE B		
C	CARE C		
D	CARE D		

4.India Ratings and Research Pvt. Ltd. (Formerly Fitch Ratings India Pvt. Ltd.):

Fitch Rating India was formerly known as DCR India- Duff and Phelps Credit Rating Co. Fitch Ratings, USA and DCR India merged to form a new entity called Fitch India. Fitch India is a 100% subsidiary of fitch ratings, USA and is the wholly owned foreign operator in India. fitch is the only international rating agency with a presence on the ground in India. fitch rating India rates corporates, banks, financial institutions, structured deals, securitized paper, global infrastructure and project finance, public finance, SMEs, asset management companies, and insurance companies.

Rating Symbols used by India Ratings and Research Pvt. Ltd.

Long-Term Debt instruments		Short-Term Debt instruments	
Earlier Rating Symbol	Revised Rating Symbol	Earlier Rating Symbol	Revised Rating Symbol
AAA (ind)	Fitch AAA	F1(ind)	Fitch A1
AA (ind)	Fitch AA	F2(ind)	Fitch A2
A (ind)	Fitch A	F3 (ind)	Fitch A3
BBB (ind)	Fitch BBB	F4(ind)	Fitch A4
BB (ind)	Fitch BB	F5(ind)	Fitch D
B (ind)	Fitch B		
C (ind)	Fitch C		
D	Fitch D		

5.Brickwork Ratings India Private Limited

It is the fifth agency in the ratings business which commenced its activities from September 24, 2008. It rates IPOs, perpetual bonds of banks, non-convertible debenture issues, and certificate of deposits.

Long Term Instruments	Short-Term Instruments
BWR AAA (BWR Triple A)	BWR A1
BWR AA (BWR Double A)	BWR A2
BWR A	BWR A3
BWR BBB (BWR Triple B)	BWR A4
BWR BB (BWR Double B)	BWR D
BWR B	
BWR C	
BWR D	

6.Acuite Ratings & Research Limited (Formerly SMERA):

Acuite Ratings & Research Limited (www.acuite.in) is a full-service credit rating agency accredited by Reserve Bank of India (RBI) as an External Credit Assessment Institution (ECAI) and registered with the Securities and Exchange Board of India (SEBI). This CRA started its first

bond rating in 2012 and has a track record of over 5 years in rating the entire range of debt instruments including NCDs, Commercial Paper and Bank Loan Ratings (BLR).

Rating Symbols used by Acuite Ratings & Research Limited

For Long Term Instruments

Ratings	Interpretation
ACUITE AAA	Highest Safety, Lowest Credit Risk
ACUITE AA	High Safety, Very Low Credit Risk
ACUITE A	Adequate Safety, Low Credit Risk
ACUITE BBB	Moderate Safety, Moderate Credit Risk
ACUITE BB	Moderate Risk, Moderate Risk of Default
ACUITE B	High Risk, High Risk of Default
ACUITE C	Very High Risk, Very High Risk of Default
ACUITE D	Default / Expected to be in Default soon

For Short Term Instrument

Ratings	Interpretation
ACUITE A1	Very Strong degree of Safety, Lowest Credit Risk
ACUITE A2	Strong degree of Safety, Low Credit Risk
ACUITE A3	Moderate degree of Safety, Higher Credit Risk as compared to instruments rated in the two higher categories
ACUITE A4	Minimal degree of Safety, Very High Credit Risk
ACUITE D	Default / Expected to be in Default on Maturity

7.Infomerics Valuation and Rating Pvt. Ltd.

Infomerics Valuation and Rating Private Limited is a SEBI registered and RBI accredited Credit Rating Agency in the year 2015.

Rating symbols used by Infomerics Valuation and Rating Pvt. Ltd.

Long term structured finance Instruments	Long Term Debt Instruments
IVR AAA (SO)	IVR AAA
IVR AA (SO)	IVR AA
IVR A (SO)	IVR A
IVR BBB (SO)	IVR BBB
IVR BB (SO)	IVR BB
IVR B (SO)	IVR B
IVR C (SO)	IVR C
IVR D (SO)	IVR D

PART C: MONEY MARKET

Money market is the market for dealing in monetary assets of short-term in nature. Short-term funds up to one year and for financial assets that are close substitutes for money are dealt in the money market. It is not a physical location (like the stock market), but an activity that is conducted over the telephone. Money market instruments have the characteristics of liquidity (quick conversion into money), minimum transaction cost and no loss in value. Excess funds are deployed in the money market, which in turn is availed to meet temporary shortages of cash and other obligations. Money market provides access to providers (financial and other institutions and individuals) and users (comprising institutions and government and individuals) of short-term funds to fulfil their borrowings and investment requirements at an efficient market-clearing price. The rates struck between borrowers and lenders represent an array of money market rates. The interbank overnight money rate is referred to as the call rate. There are also a number of other rates such as yields on treasury bills of varied maturities. The instruments were limited to call (overnight) and short notice (up to 14 days) money, inter-bank deposits and loans and commercial bills. Interest rates on market instruments were regulated. Sustained efforts for developing and deepening the money market were made only after the initiation of financial sector reforms in early nineties.

- **Features of Money Market:**

(a) Instruments Traded: Money market is a collection of instruments like Call Money, Notice Money, Repos, Term Money, Treasury Bills, Commercial Bills, Certificate of Deposits, Commercial Papers, Inter-Bank Participation Certificates, Inter Corporate Deposits, Swaps, etc.

(b) Large Participants : The participants of money market are — (i) lenders, (ii) mutual funds, (iii) financial institutions including the RBI, Scheduled Commercial Banks, Discount and Finance House of India and (iv) borrowers. Network of a large number of Participants exists which add greater depth to the market. This network can be broadly classified as follows:

Organized Sector

(i) Commercial and Other Banks

(ii) Non-Banking Financial Companies

(iii) Co–operative Banks

Unorganised Sector

(i) Indigenous Bankers

(ii) Nidhis and Chit Funds

(iii) Unorganized Money Lenders

(c) Zone Centric Activities: Activities in the money market tend to concentrate in some centre, which serves a region or an area. The width of such area may vary depending upon the size and needs of the market itself.

(d) Pure Competition: Relationship between participants in a money market is impersonal in character, and the competition is relatively pure.

(e) Lower Price Differentials: Price differentials for assets of similar type tend to be eliminated by the interplay of demand and supply.

(f) Flexible Regulations: Certain degree of flexibility in the regulatory framework exists and there are constant endeavours for introducing a new instruments / innovative dealing technique.

(g) Market Size: It is a wholesale market and the volume of funds or financial assets traded are very large, i.e., in crores of rupees.

Major characteristics of money market instruments are:

- Short-term nature;
- Low risk;
- High liquidity (in general);
- Close to money.

- **Call Money**

Call/Notice money is an amount borrowed or lent on demand for a very short period. If the period is more than one day and upto 14 days, it is called notice money and if the period is more than 14 days, it is called call money.

Exclusions: Intervening holidays and / or Sundays are excluded for this purpose. No collateral security is required to cover these transactions.

Participants of Call Money

Nature of Persons	Persons
Borrow and Lend	Reserve Bank of India (RBI) through IAFS, Banks, Primary Dealers (PD)
Lenders	Financial Institutions such as: - (a) Life insurance corporation of India (LIC) (b) Unit Trust of India (UTI) and other mutual funds (c) General Insurance Corporation (GIC) (d) Industrial Development Bank of India (IDBI) (e) National Bank for Agricultural and Rural Development (NABARD) (f) Industrial Credit Investment Corporation of India (ICICI)

Benefits:

(a) Banks and Institutions: Call market enables banks and financial institutions to even out their day- to-day deficits and surpluses of money.

(b) Cash Reserve Requirements: Commercial Banks, Co-operative Banks and Primary Dealers are allowed to borrow and lend in this market for adjusting their cash reserve requirements.

(c) Outlet for Deploying Funds: It serves as an outlet for deploying funds on short-term basis to the lenders having steady inflow of funds.

Nature of Call Money Market

Call money represents the amount borrowed by the commercial banks from each other to meet their temporary funds requirements. The market for such extremely short period loans is referred to as the "call money market".

Call loans in India are given:

(i) to the bill market,

(ii) to dealers in stock exchange for the purpose of dealings in stock exchange,

(iii) between banks, and

(iv) to individuals of high financial status in Mumbai for ordinary trade purpose in order to save interest on cash credit and overdrafts.

Among these uses, inter-bank use has been the most significant. These loans are given for a very short duration, between 1 day to 15 days. There are no collateral securities demanded against these loans i.e., unsecured. The borrower has to repay the loans immediately they are called for i.e., highly liquid. As such, these loans are described as "call loans" or "call money".

- **Treasury Bills**

Treasury bills are short-term instruments issued by the Reserve Bank on behalf of the government to tide over short-term liquidity shortfalls. This instrument is used by the government to raise short-term funds to bridge seasonal or temporary gaps between its receipts (revenue and capital) and expenditure. They form the most important segment of the money market not only in India but all over the world as well.

T-bills are repaid at par on maturity. The difference between the amount paid by the tenderer at the time of purchase (which is less than the face value) and the amount received on maturity represents the interest amount on T-bills and is known as the discount. Tax deducted at source (TDS) is not applicable on T-bills.

Features of T-bills

- They are negotiable securities.
- They are highly liquid as they are of shorter tenure and there is a possibility of inter-bank repos in them.

- There is an absence of default risk.
- They have an assured yield, low transaction cost, and are eligible for inclusion in the securities for SLR purposes.
- They are not issued in scrip form. the purchases and sales are effected through the subsidiary general ledger (sgl) account.
- At present, there are 91-day, 182-day, and 364-day T-bills in vogue. The 91-day T-bills are auctioned by the RBI every Friday and the 364-day T-bills every alternate Wednesday, i.e., the Wednesday preceding the reporting Friday.
- Treasury bills are available for a minimum amount of ₹ 25,000 and in multiples thereof.

Issue Price: Treasury Bills are issued at a discount and redeemed at face value.

Investors: Banks, Primary Dealers, State governments, Provident funds, financial institutions, Insurance companies, NBFCs, FIIs (as per prescribed norms), NRIs can invest in T-Bills.

Participants in the T-Bills Market: The Reserve Bank of India, commercial banks, mutual funds, financial institutions, primary dealers, provident funds, corporates, foreign banks, and foreign institutional investors are all participants in the T-bills market. The state governments can invest their surplus funds as non-competitive bidders in T-bills of all maturities.

Yield in Treasury Bills: It is calculated as per the following formula:

$$\text{Yield} = \frac{100 - P}{P} \times \frac{365}{D} \times 100$$

Where,

P = Purchase price

D= Days to maturity

Day Count for Treasury Bill: Actual number of days to maturity/ 365

Example

Assuming that the price of a 91 -Day Treasury Bill issues at ₹98.20, the yield on the same would be-

$$= \left[\frac{100 - 98.20}{98.2}\right] \times \frac{365}{91} \times 100$$

=7.3521%

If the same T- Bill traded after 41 days at ′99, the yield then would be

$$= \left[\frac{100 - 99}{99}\right] \times \frac{365}{50} \times 100$$

=7.3737%

Types of Treasury Bills

At present, the Reserve Bank issues T-bills of three maturities: 91-day, 182-day, and 364-day.

(1) 91 Day T-Bills

These are again two types- ordinary and ad-hoc. Ordinary treasury bills are issued to public and RBI for enabling central government to meet temporary requirements of funds. Treasury bills were used to be sold to public at a fixed rate throughout the week to commercial banks and the public. They are repaid at par on maturity. The difference between the amount paid by the tenderer at the time of purchase and the amount received on maturity represents the interest earned and also known by discount.

(2) 182 Day T-Bills

These bills were reintroduced in 1999 to enable the development a market for government securities. The Reserve Bank of India introduced 182 days Treasury Bills, as an active money market instrument with flexible interest rates. Features of these T-Bills are:

(a) These Treasury Bills are issued following the procedure of auction.

(b) 182 Days treasury Bills are issued in minimum denomination of ₹1 lakh and in multiples thereof. However, in the secondary market, the deals are presently transacted for a minimum amount of ₹ 25 lakhs and thereafter in multiples of ₹10 lakhs.

(c) RBI does not purchase 182 Days Treasury bills before maturity but the investors (holders of these treasury Bills) can sell them in the secondary market.

(d) These bills are also eligible for repo transactions.

(3) 364 Day T-Bills

In April 1992, the 364-day T-bills were introduced to replace the 182-day T-bills. These T-bills are issued to generate market loans. The auction of these bills is done fortnightly, as their issue has become a regular activity by the Central Government. These bills offer short-term investment offer for investors and created good response. RBI offers these bills periodically and auctions by giving an opportunity to banks and other financial institutions. The Government of India has now floated Treasury bills of varying maturities upto 364 days on an auction basis which are identical to that for the 182 days treasury bills. They contain varying period of maturities help the short-term investors to decide on the period of investment of their funds.

- **Commercial Bills**

The working capital requirement of business firms is provided by banks through cash-credits / overdraft and purchase/discounting of commercial bills.

Commercial bill is a short term, negotiable, and self-liquidating instrument with low risk. It enhances the liability to make payment in a fixed date when goods are bought on credit. The bill of exchange is a written unconditional order signed by the drawer requiring the party to

whom it is addressed to pay on demand or at a future time, a definite sum of money to the payee. It is negotiable and self-liquidating money market instrument which evidences the liquidity to make a payment on a fixed date when goods are bought on credit. It is an asset with a high degree of liquidity and a low degree of risk. Such bills of exchange are discounted by the commercial banks to lend credit to the bill holder or to borrow from the Central Bank. The bank pays an amount equal to face value of the bill minus collection charges and interest on the amount for the remaining maturity period. The writer of the bill (debtor) is drawer, who accept the bill is drawee and who gets the amount of bill is payee.

Types of Commercial Bills

Commercial bills can be inland bills or foreign bills.

Inland bills must:

(1) be drawn or made in India and must be payable in India: or

(2) drawn upon any person resident in India.

Foreign bills, on the other hand, are:

(1) drawn outside India and may be payable and by a party outside India, or may be payable in India or drawn on a party in India or

(2) it may be drawn in India and made payable outside India A related classification of bills is export bills and import bills. While export bills are drawn by exporters in any country outside India, import bills are drawn on importers in India by exporters abroad.

Purpose: Commercial Bills may be used for financing the movement and storage of goods between countries, before export (pre-export credit), and also within the country. In India, the use of bill of exchange appears to be in vogue for financing agricultural operations, cottage and small-scale industries, and other commercial and trade transactions.

The indigenous variety of bill of exchange for financing the movement of agricultural produce, called a 'hundi' has a long tradition of use in India it is vogue among indigenous bankers for raising money or remitting funds or to finance inland trade. A hundi is an important instrument in India; so indigenous bankers dominate the bill market. However, with reforms in the financial system and lack of availability of funds from private sources, the role of indigenous bankers is declining.

Commercial paper (CP) is an unsecured short-term promissory note, negotiable and transferable by endorsement and delivery with a fixed maturity period. It is issued only by large, well known, creditworthy companies and is typically unsecured, issued at a discount on face value, and redeemable at its face value. the aim of its issuance is to provide liquidity or finance company's investments, e.g., in inventory and accounts receivable.

The major issuers of commercial papers are financial institutions, such as finance companies, bank holding companies, insurance companies. Financial companies tend to use CPs as a regular source of finance. Non-financial companies tend to issue CPs on an irregular basis to meet special financing needs.

Commercial paper was introduced in 1990 to enable highly rated investors to diversify their sources, of their short-term borrowings and also to produce an additional instrument in the market. Guidelines issued by RBI are applicable to issuers of CP like Non-banking Finance Companies and non-financial companies. Primary dealers are also permitted to issue commercial paper. CP should be issued for a minimum period of 7 days to a maximum period of one year. No grace period is allowed for payment and if the maturity date falls on a holiday it should be paid on the previous working day. Commercial paper can be permitted to be issued by the companies whose tangible net worth is not less than ₹4 crore and fund based working capital limits are not less than ₹4 crore. It must be a listed company on a stock exchange and should have given credit rating by CRISIL.

The difference between the initial investment and the maturity value, constitutes the income of the investor. e.g. a company issues a commercial Paper each having maturity value of ₹ 5,00,000. The investor pays (say) ₹ 4,82,850 at the time of his investment. On maturity, the company pays ₹ 5,00,000 (maturity value or redemption value) to the investor. The Commercial Paper is said to be issued at a discount of ₹ 5,00,000 - ₹ 4,82,850 = ₹ 17,150. This constitutes the interest income of the investor.

Advantages

(1) Simplicity: Documentation involved in issue of Commercial Paper is simple and minimum.

(2) Cash Flow Management: The issuer company can issue Commercial Paper with suitable maturity periods (not exceeding one year), tailored to match the cash flows of the Company.

(3) Alternative for Bank Finance: A well-rated company can diversify its sources of finance from Banks, to short-term money markets, at relatively cheaper cost.

(4) Returns to Investors: CP's provide investors with higher returns than the banking system.

(5) Incentive for Financial Strength: Companies which raise funds through CP become well-known in the financial world for their strengths. They are placed in a more favourable position

for raising long-term capital also. So, there is an inbuilt incentive for Companies to remain financially strong.

RBI Guidelines in respect of issue of Commercial Paper

(1) Eligible issuers of CP: (a) Corporates, (b) Primary Dealers (PDs), and (c) All-India Financial Institutions (FIs) that have been permitted to raise short-term resources under the umbrella limit fixed by RBI are eligible to issue CP.

- All-India Financial Institutions (FIs) mean those financial institutions which have been permitted specifically by the RBI to raise resources by way of Term Money, Term Deposits, Certificates of Deposit, Commercial Paper and Inter-Corporate Deposits, where applicable, within umbrella limit.
- Primary Dealer means a non-banking financial company which holds a valid letter of authorization as a Primary Dealer issued by the RBI.

(2) Investors for CP: CP may be issued to and held by —

(a) Individuals
(b) Banking companies
(c) Other corporate Bodies registered/ incorporated in India
(d) Unincorporated Bodies
(e) Non-Resident Indians (NRIs) and
(f) Foreign Institutional Investors (FIIs)

(3) Maturity: CP can be issued for maturities between a minimum of 7 days and a maximum up to one year from the date of issue. Maturity date of CP should not go beyond the date up to which the credit rating of the issuer is valid.

(4) Denominations: CP can be issued in denominations of ₹5 lakh or multiples thereof. Amount invested by a single investor should not be less than ₹ 5 lakh (face value).

(5) Basic issue conditions for a corporate: A Corporate would be eligible to issue CP provided–

(a) Its tangible net worth, as per the latest audited balance sheet, is not less than ₹ 4 Crores.
(b) It has been sanctioned working capital limit by bank/s or all-India financial institution/s.
(c) Its Borrowal account is classified as a standard asset by the financing bank(s)/ institution(s).

(6) Credit Rating: All eligible participants shall obtain the credit rating for issuance of CP from –

(a) Credit Rating Information Services of India Ltd. (CRISIL) or
(b) Investment Information and Credit Rating Agency Of India Ltd. (ICRA) or
(c) Credit Analysis and Research Ltd. (CARE) or

(d) Fitch Ratings India Pvt. Ltd. or

(e) Such other credit rating agencies as may be specified by the RBI.

Minimum credit rating shall be P-2 of CRISIL or such equivalent rating by other agencies. At the time of issuance of CP, the rating so obtained should be current and not fallen due for review.

(7) Amount of CP:

(a) The aggregate amount of CP from an issuer shall be the least of—

- limit as approved by its Board of Directors, or
- quantum indicated by the Credit Rating Agency for the specified rating.

(b) An FI can issue CP within the overall umbrella limit fixed by the RBI, i.e. issue of CP together with Term Money Borrowings (TMB), Term Deposits (TD), Certificates of Deposit (CD) and Inter-Corporate Deposits (ICD) should not exceed 100% of its Net Owned Funds, as per the latest audited Balance sheet.

(8) Time Period: The total amount of CP proposed to be issued should be raised within two weeks from the date on which the issue is open for subscription. Every CP issue shall be reported to the RBI, through the Issuing and Paying Agent (IPA) within three days from the date of completion of the issue.

(9) Mode of Issuance: The following points are relevant –

(a) CP can be issued either in the form of a promissory note (physical form) or in a dematerialized form (Demat form) through any of the depositories approved by and registered with SEBI.

(b) CP will be issued at a discount to face value as may be determined by the issuer.

(c) No issuer shall have the issue of CP underwritten or co-accepted.

(10) Issuing and Paying Agent (IPA): Only a scheduled bank can act as an IPA for issuance of CP. Every issuer must appoint an IPA for issuance of CP.

(11) Procedure for Issuance: Issuer should disclose its financial position to the potential investors. After the exchange of deal confirmation, issuing Company shall issue physical certificates to the investor or arrange for crediting the CP to the investor's account with a depository. Investors shall be given a copy of IPA certificate to the effect that the issuer has a valid agreement with the IPA and documents are in order.

(12) Mode of Investment in CP: The investor in CP shall pay the discounted value (issue price) of the CP by means of a crossed account payee cheque to the account of the issuer through IPA.

(13) Repayment of CP on Maturity: On maturity of CP, when the CP is held in physical form, the holder of the CP shall present the instrument for payment to the issuer through the IPA.

When the CP is held in demat form, the holder of the CP will get it redeemed through the depository and receive payment from the IPA.

(14) Defaults in CP Market: In order to monitor defaults in redemption of CP, Scheduled Banks which act as IPAs, shall immediately report, on occurrence, full particulars of defaults in repayment of CPs to the RBI.

(15) Stand-by Facility: Non-bank entities including corporates may provide unconditional and irrevocable guarantee for credit enhancement for CP issue provided –

(a) the issuer fulfils the eligibility criteria prescribed for issuance of CP,

(b) the guarantor has a credit rating at least one notch higher than the issuer given by an approved credit rating agency, and

(c) the offer document for CP properly discloses the net worth of the guarantor company, the names of the Companies to which the guarantor has issued similar guarantees, the extent of the guarantees offered by the guarantor Company, and the conditions under which the guarantee will be invoked.

- **Certificate of Deposits (CD)**

CD is a negotiable money market instrument and issued in dematerialized form or as a usance promissory note, for funds deposited at a Bank or other eligible Financial Institution for a specified time period.

Salient Features:

- CDs can be issued to individuals, corporations, companies, trusts, funds, associates, etc.
- NRIs can subscribe to CDs on non-repatriable basis.
- CDs attract stamp duty as applicable to negotiable instruments.
- Banks have to maintain SLR and CRR on the issue price of CDs. no ceiling on the amount to be issued.
- The minimum issue size of CDs is rs1 lakh and in multiples thereof.
- CDs are transferable by endorsement and delivery.
- The minimum lock-in-period for CDs is 15 days.

CDs are issued by Banks, when the deposit growth is sluggish and credit demand is high and a tightening trend in call rate is evident. CDs are generally considered high-cost liabilities and banks have recourse to them only under tight liquidity conditions.

Important RBI guidelines are as follows:

1. Eligible Issuers of CD: CDs can be issued by – (a) Scheduled Commercial Banks excluding Regional Rural Banks (RRBs) and Local Area Banks (LABs), and (b) select All-India Financial Institutions that have been permitted by RBI to raise short-term resources within the umbrella limit fixed by RBI.

2. Investors in CD: CDs can be issued to Individuals, Corporations, Companies, Trusts, Funds, Associations, etc. Non-resident Indians (NRIs) may subscribe to CDs, but only on non-repatriable basis which should be clearly stated on the Certificate. Such CDs cannot be endorsed to another NRI in the secondary market.

3. Maturity Period: The maturity period shall be as under —

(a) CD's issued by Banks: Not less than 7 days and not more than 1 year from the date of issue.

(b) CD's issued by FIs: Not less than 1 year and not exceeding 3 years from the date of issue.

4. Repayment: There will be no grace period for repayment of CDs. If the maturity date happens to be holiday, the issuing bank should make payment on the immediately preceding working day. Banks/FIs may, therefore, so fix the period of deposit that the maturity date does not coincide with a holiday to avoid loss of discount/interest rate.

5. Minimum Size of Issue and Denominations: Minimum amount of a CD should be ₹1 lakh i.e., the minimum deposit that could be accepted from a single subscriber should not be less than ₹1 lakh and in the multiples of ₹1 lakh thereafter.

6. Aggregate amount of CD: Banks have the freedom to issue CDs depending on their requirements. Bank may issue CDs within the overall umbrella limit fixed by RBI, i.e., issue of CD together with Term Money Borrowings (TMB), Term Deposits (TD), Commercial Papers (CP) and Inter-Corporate Deposits should not exceed 100% of its Net Owned funds, as per the latest audited Balance Sheet.

7. Format of CDs: Issuance of CD will attract stamp duty. Banks / FIs should issue CDs only in the dematerialized form. However, under the Depositories Act, 1996, investors have the option to seek certificate in physical form. Such requests should be reported to RBI separately.

8. Transferability: Physical CDs are freely transferable by endorsement and delivery. Dematted CDs can be transferred as per the procedure applicable to other demat securities. There is no lock-in period for CDs.

9. Security Aspect: Physical CDs are freely transferable by endorsement and delivery. So, the CD certificates should be printed on good quality security paper and necessary precautions are

taken to guard against tampering with the document. The CD should be signed by two or more authorized signatories.

10. Duplicate Certificates: In case of the loss of physical CD certificates, duplicate certificates can be issued after compliance of the following:
(a) Public Notice in at least one local newspaper, (b) Lapse of a reasonable period (say 15 days) from the date of the notice in newspaper, and (c) Execution of an indemnity bond by the investor to the satisfaction of the issuer of CD. Duplicate Certificate should state so and should only be issued in physical form. no fresh stamping is required.

11. Discount/ Coupon Rate: CDs may be issued at a discount on face value. Banks/FIs are also allowed to issue CDs on floating rate basis provided the methodology of compiling the floating rate is objective, transparent and market based. The issuing bank/FI is free to determine the discount/coupon rate. The interest rate on floating rate CDs would have to be reset periodically in accordance with a pre- determined formula that indicates the spread over a transparent benchmark.

12. Reserve Requirements: Banks have to maintain the appropriate reserve requirements, i.e., cash reserve ratio (CRR) and statutory liquidity ratio (SLR), on the issue price of the CDs.

13. Loans/Buy-backs: Banks / FIs cannot grant loans against CDs. They cannot buy-back their own CDs before maturity.

14. Payment of Certificate: Since CDs are transferable, the physical certificate may be presented for payment by the last holder and payment shall be made only by a crossed cheque. The holders of dematted CDs will claim the payment through their respective Depository Participants (DPs) and give transfer/delivery instructions to transfer the demat security. The holder should also communicate to the issuer by a letter/fax enclosing the copy of the delivery instruction it had given to its DP and intimate the place at which the payment is requested to facilitate prompt payment.

15. Accounting: Banks/FIs may account the issue price under the head "CDs issued" and show it under Deposits. Accounting entries towards discount will be made as in the case of "Cash Certificates". Banks/ FIs should maintain a register of CDs issued with complete particulars.

16. Standardized Market Practices and Documentation: Fixed Income Money Market and Derivatives Association of India (FIMMDA) may prescribe, in consultation with the RBI, for operational flexibility and smooth functioning of CD market, any standardized procedure and documentation that are to be followed by the Participants , in consonance with the international best practices.

17. Reporting: Banks should include the amount of CDs in the fortnightly return u/s 42 of RBI Act and also separately indicate the amount so included by way of a footnote in the return. A

further fortnightly return is required to be submitted to the RBI within 10 days from the end of the fortnight date.

- **Repo, Reverse Repo**

Repo or ready forward contact is an instrument for borrowing funds by selling securities with an agreement to repurchase the said securities on a mutually agreed future date at an agreed price which includes interest for the funds borrowed. Repo rate is the return earned on a repo transaction expressed as an annual interest rate.

The Reverse of the repo transaction is called 'reverse repo' which is lending of funds against buying of securities with an agreement to resell the said securities on a mutually agreed future date at an agreed price which includes interest for the funds lent.

It can be seen from the definition above that there are two legs to the same transaction in a repo/ reverse repo. The duration between the two legs is called the 'repo period'. Predominantly, repos are undertaken on overnight basis, i.e., for one day period. Settlement of repo transactions happens along with the outright trades in government securities.

The consideration amount in the first leg of the repo transactions is the amount borrowed by the seller of the security. On this, interest at the agreed 'repo rate' is calculated and paid along with the consideration amount of the second leg of the transaction when the borrower buys back the security. The overall effect of the repo transaction would be borrowing of funds backed by the collateral of Government securities.

Features of Repo:

(1) Banks and primary dealers are allowed to undertake both repo and reverse repo transactions.

(2) It is a collateralized short-term lending and borrowing agreement.

(3) It serves as an outlet for deploying funds on short-term basis.

(4) The interest rates depend on the demand and supply of the short-term surplus/deficit amongst the interbank players.

(5) In addition to T-Bills all Central and State Government securities are eligible for repo.

(6) No sale of securities should be affected unless the securities are actually held by the seller in his own investment portfolio.

(7) Immediately on sale, the corresponding amount should be reduced from the investment account of the seller.

(8) The securities under repo should be marked to market on the balance sheet.

Participants: Buyer in a Repo is usually a Bank which requires approved securities in its investment portfolio to meet the statutory liquidity ratio (SLR).

Types of Repos:

- Overnight Repo: When the term of the loan is for one day, it is known as an overnight repo. Most repos are overnight transactions, with the purchase and sale taking place one day and being reversed the next day.
- Term Repo: When the term of the loan is for more than one day it is called a term repo. Long-term repos which are as such can be extended for a month or more.
- Open Repo: Open repo simply has no end date. Usually, repos are for a fixed period of time, but open ended deals are also possible.

Interest:

(a) Computation: Interest for the period of Repo is the difference between Sale Price and Purchase Price.

(b) Recognition: Interest should be recognized on a time-proportion basis, both in the books of the buyer and seller.

RBI Guidelines:

(a) Accounting for Repo / Reverse Repo transactions should reflect their legal form, viz., an outright purchase and outright sale.

(b) Thus, securities sold under Repo would not be included in the Investment Account of the seller, instead, these would be included by the Buyer in its Investment Account.

(c) The buyer can consider the approved securities acquired under reverse repo transactions for the purpose of SLR during the period of the repo.

• Promissory Notes and Government Securities

Promissory Notes

A written, dated and signed two-party instrument containing an unconditional promise by the maker to pay a definite sum of money to a payee on demand or at a specified future date.

Essentials of a Promissory Note:

- It must be in writing.
- It must not be a bank note or a currency note.
- It must contain unconditional undertaking.
- It must be signed by the maker.
- The undertaking must be to pay on demand or at a fixed or determinable future time.
- The undertaking must be to pay a certain sum of money.
- The money must be payable to a certain person or to his order, or to the bearer of the instrument.

"Derivative Usance Promissory Notes" (DuPN)

Derivative Usance Promissory Notes is an innovative instrument issued by the RBI to eliminate movement of

papers and facilitating easy multiple rediscounting.

Features:

(a) Backing: DuPN is backed by up to 90 days Usance Commercial Bills.

(b) Stamp Duty: Government has exempted stamp duty on DuPN to simplify and stream line the instrument and to make it an active instrument in the secondary market.

(c) Period: The minimum rediscounting period is 15 days.

(d) Transfer: DuPN is transferable by endorsement and delivery and hence is liquid.

(e) Regulated Entry: RBI has widened the entry regulation for bill market by selectively allowing, besides banks and PDs, Co-operative Banks, Mutual Funds and financial institutions.

(f) Rediscounting: DFHI trades in these instruments by rediscounting DuPNs drawn by commercial banks. DuPNs which are sold to investors may also be purchased by DFHI.

Government Securities

A government security is a tradable instrument issued by the central government or the state governments. It acknowledges the Government's debt obligation. Such securities are short-term (usually called treasury bills, with original maturities of less than one year) or long-term (usually called Government bonds or dated securities with original maturity of one year or more). In India, the Central Government issues both, treasury bills and bonds or dated securities while the State Governments issue only bonds or dated securities, which are called the State Development Loans (SDLs). Government securities carry practically no risk of default and, hence, are called risk free gilt-edged instruments. Government of India also issues savings instruments (Savings Bonds, National Saving Certificates (NSCs), etc.) or special securities (oil bonds, Food Corporation of India bonds, fertilizer bonds, power bonds, etc.). They are, usually not fully tradable and are, therefore, not eligible to be SLR securities.

Government securities are mostly interest bearing dated securities issued by RBI on behalf of the government of India GOI uses these funds to meet its expenditure commitments. These securities are generally fixed maturity and fixed coupon securities carrying semi-annual coupon. Since the date of maturity is specified in the securities, these are known as dated Government Securities.

Features of Government Securities

1. Issued at face value.
2. No default risk as the securities carry sovereign guarantee.

3. Ample liquidity as the investor can sell the security in the secondary market.
4. Interest payment on a half yearly basis on face value.
5. No tax deducted at source.
6. Can be held in demat form.
7. Rate of interest and tenor of the security is fixed at the time of issuance and is not subject to change (unless intrinsic to the security like FRBs - Floating Rate Bonds).
8. Redeemed at face value on maturity.
9. Maturity ranges from 91 days-30 years.
10. Government securities qualify as SLR (Statutory Liquidity Ratio) investments, unless otherwise stated.

Government Securities- Types

1. Treasury Bills
2. Government Bonds or Dated Securities
3. State Development Loans
4. Any other security created and issued by the Government in such form and for such of the purposes of the act as may be prescribed

Government Securities- Issuers

Government securities are issued by the following agencies:

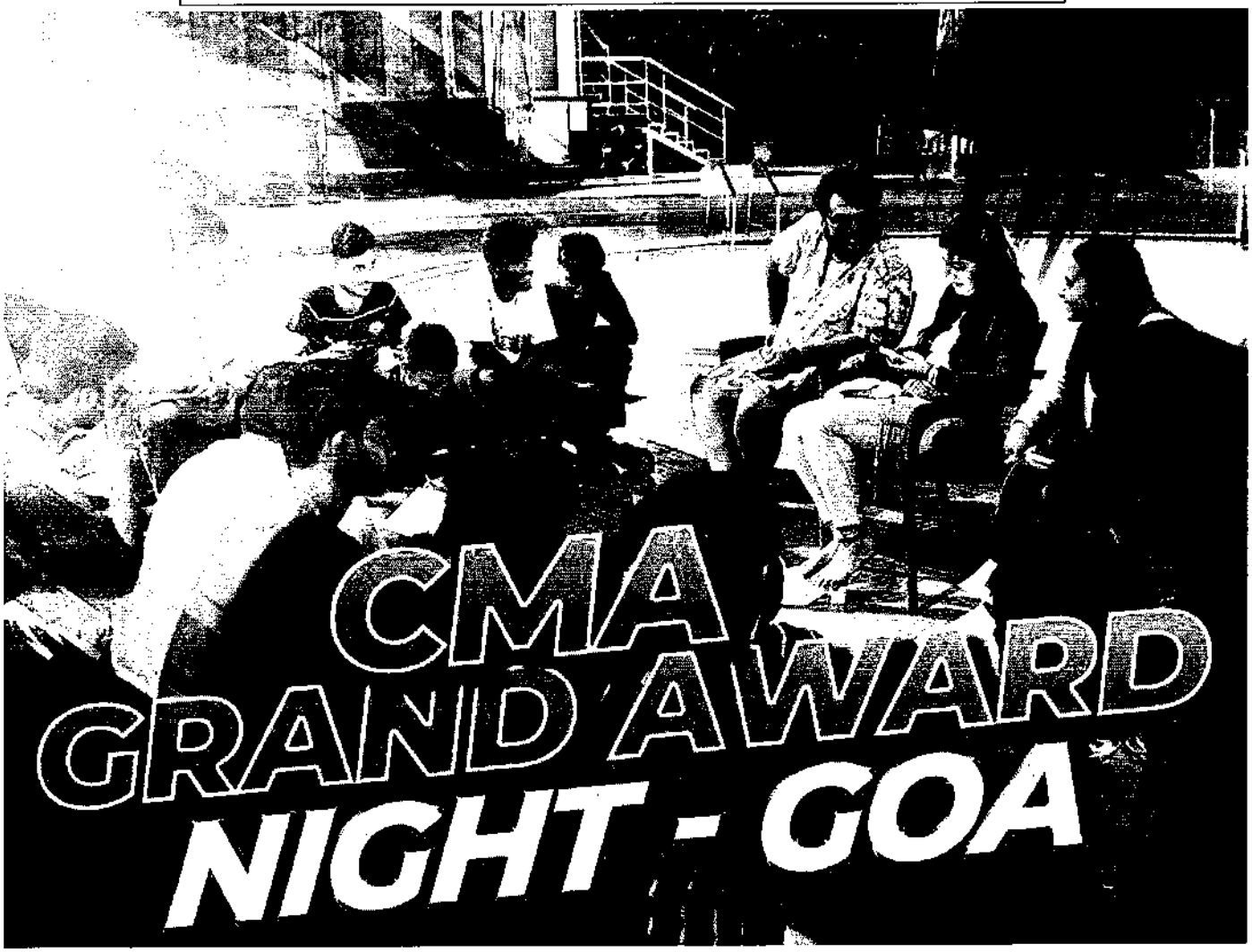
1. Central Government
2. State Government
3. Semi-government authorities
4. Public sector undertakings

Government Securities- Issue Procedure

Government securities are issued through auctions conducted by the RBI. Auctions are conducted on the electronic platform called the NDS – Auction platform. Commercial banks, scheduled urban co-operative banks, Primary Dealers, insurance companies and provident funds, who maintain funds account (current account) and securities accounts (SGL account) with RBI, are members of this electronic platform. All members of PDO-NDS can place their bids in the auction through this electronic platform. All non-NDS members including non-scheduled urban co-operative banks can particIPAte in the primary auction through scheduled commercial banks or Primary Dealers. For this purpose, the urban co-operative banks need to open a securities account with a bank / Primary Dealer – such an account is called a gilt account. a gilt account is a dematerialized account maintained by a scheduled commercial bank or Primary Dealer for its constituent (e.g., a non-scheduled urban co-operative bank).

The RBI, in consultation with the Government of India, issues an indicative half-yearly auction calendar which contains information about the amount of borrowing, the tenor of security and the likely period during which auctions will be held. A Notification and a Press Communique giving exact particulars of the securities, viz., name, amount, type of issue and procedure of auction are issued by the Government of India about a week prior to the actual date of auction. RBI places the notification and a Press Release on its website (www.RBI.org.in) and also issues an advertisement in leading English and Hindi newspapers. Information about auctions is also available with the select branches of public and private sector banks and the Primary Dealers.

CMA STUDENTS AND TEAM AAC CELEBRATING SUCCESS OF CMA INTER CLEARED STUDENT IN GOA



PROMISE MADE BY AKASH SIR IN LAST SUCCESS BATCH IS DELIVERED

.....NEXT CAN BE YOU.

CHAPTER 3 - LEVERAGE ANALYSIS AND EBIT - EPS

• Meaning and Concept of Leverage

- The term leverage represents influence or power. In financial analysis leverage represents the influence of one financial variable over some other related financial variable.
- These financial variables may be costs, output, sales revenue, Earnings Before Interest and Tax (EBIT), Earning per share (EPS) etc. Generally, if we want to calculate impact of change in variable X on variable Y, it is termed as Leverage of Y with X, and it is calculated as follows:

$$\text{MEASUREMENT OF LEVERAGE} = \frac{\text{CHANGE IN Y/Y}}{\text{CHANGE IN X/X}}$$

Leverage is used to describe the firm's ability to use fixed cost assets or funds to magnify the return to its owner James van Home has defined leverage, as "the employment of an asset or funds for which the firm pays a fixed cost or fixed return." In other words, Leverage is the employment of fixed assets or funds for which a firm has to meet fixed costs or fixed rate of interest obligation irrespective of the level of activities or the level of operating profit.

• Importance of Leverage

The importance of leverage are discussed below:

(a) Leverage is an important technique in deciding the optimum capital structure of a firm. With the help of this technique, it is easy to determine the ratio of various securities comprising the capital structure of a firm at which the average cost of capital is minimum. If financial leverage is present in a firm, it is possible to increase EPS by increasing the EBIT in a firm.

(b) Leverage is also very helpful in taking a capital budgeting decision. If contribution in a firm is not able to meet the fixed operating costs, then business will suffer loss. In other words, the degree of operating leverage must be greater than 1 to make the project operationally profitable.

(c) Leverage is most important in assessing the risk involved in a firm. Operating leverage measures the business risk of a firm. Financial leverage measures the financial risk in a firm. The combined leverage measures the total risk involved in a firm.

• Types of Leverage

There are three commonly used measures of leverage in financial analysis. These are:

(a) Operating Leverage	(b) Financial Leverage	(c) Combined Leverage
Degree of Operating Leverage (DOL)	Degree of Financial Leverage (DFL)	Degree of Combined Leverage (DCL)
It is the relationship between Sales and EBIT and indicated business risk.	it is the relationship between EBIT and EPS and indicates financial risk.	It is the relationship between Sales and EPS and indicated total risk.

• Income/Profitability statement

Profitability Statement			
Sales	xxx	Operating Leverage	Degree of Combined Leverage
Less: Variable Cost	(xxx)		
Contribution	xxx		
Less: Fixed Cost	(xxx)		
Operating Profit / EBIT	xxx		
Less: Interest	(xxx)		
Earnings Before Tax (EBT)	xxx	Financial Leverage	
Less Tax	(xxx)		
Profit After Tax (PAT)	xxx		
Less: Pref. Dividend (if any)	(xxx)		
Net Earnings available to equity shareholders/ PAT	xxx		
No. Equity Shares (N)			
Earnings per Share (EPS) = (PAT ÷ N)			

• OPERATING LEVERAGE:

- Operating Leverage means tendency of operating income (EBIT) to change disproportionately with change in sale volume.
- This disproportionate change is caused by operating fixed cost, which does not change with change in sales volume.
- In other words, operating leverage (OL) maybe defined as the **employment of an asset with a fixed cost** so that enough revenue can be generated to cover all the fixed and variable costs.

The use of assets for which a company pays a fixed cost is called operating leverage. Operating leverage is a function of three factors:

(i) Amount of fixed cost,

(ii) Variable contribution margin, and

(iii) Volume of sales.

Degree of Operating Leverage (DOL)

- When we measure magnitude of disproportionate change it is termed as degree of leverage.
- Degree of Operating Leverage may be defined as percentage change in EBIT with respect to percentage change in sales quantity.

$$\text{DEGREE OF OPERATING LEVERAGE} = \frac{\text{percentage change in EBIT}}{\text{Percentage Change in Sales}}$$

Note: Operating leverage affects a firm's operating profit (EBIT).

OR

The formula of Degree of Operating Leverage (DOL) is represented as,

Degree of Operating Leverage (DOL) = (Sales – Variable cost) / (Sales – Fixed Cost – Variable Cost)

$$= \frac{\text{Contribution}}{\text{EBIT}}$$

Break-Even Analysis and Operating Leverage:

Break-even analysis is a generally used to study the Cost Volume Profit analysis. It is concerned with computing the break-even point.

At this point of production level and sales there will be no profit and loss i.e. total cost is equal to total sales revenue.

BREAK-EVEN POINT= $\frac{\text{Fixed cost}}{\text{Contribution per unit}}$

Margin of Safety and Operating Leverage:

In cost accounting, one studies that margin of safety (MOS) may be calculated as follows:

$$\text{Margin of safety} = \frac{\text{Sales} - \text{BEP sales}}{\text{Sales}} \times 100$$

Higher margin of safety indicates lower business risk and higher profit and vice versa. If we multiply both and divide above formula with profit volume (PV) ratio then:

Operating Leverage and CVP Analysis

There is a relation between Operating Leverage and CPV.

We know that,

Margin of Safety (MOS) = Actual Sales (S) – Break-Even Sales (BES)

Again, Margin of Safety Ratio (MOSR) = $\frac{(S - BES)}{S}$

= 1 – BES / S

= 1 – (F / PV Ratio) / S

[F = Fixed Cost, PV Ratio= Profit-Volume Ratio, BES = Fixed Cost / Profit-Volume Ratio]

= 1 – (F / C / S) / S

[C = Contribution, PV Ratio = Contribution / Sales]

= 1 – (F / C)

= (C – F) / C

= EBIT / C

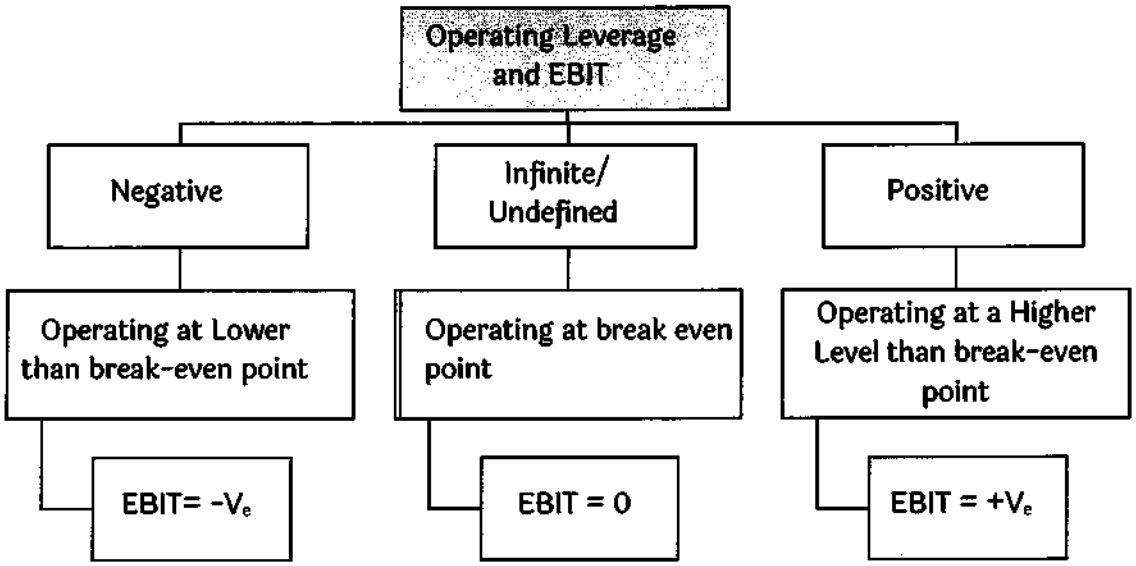
= 1 / (C / EBIT)

= 1 / DOL [since DOL = C / EBIT, DOL = Degree of Operating Leverage]

So, it is evident that there exists an inverse relationship between DOL and margin of safety. It implies that with an increase in DOL margin of safety decreases and vice versa

Analysis and Interpretation of operating leverage

S. No.	Situation	Result
1	No Fixed Cost	No operating leverage
2.	Higher Fixed cost	Higher Break-even point
3.	Higher than Break-even level	Positive operating leverage
4.	Lower than Break-even level	Negating operating leverage



QUESTION 1.

Gopu Limited has estimated that for a new product its break-even point is 20,000 units if the item is sold for ₹ 14 per unit and variable cost ₹ 9 per unit. Calculate the degree of operating leverage for sales volume 25,000 units & 30,000 units.

QUESTION 2.

Calculate the operating leverage for each of the four firms, A, B, C and D from the following price and cost data. What conclusions can you draw with respect to levels of fixed cost and the degree of operating leverage DOL result? Explain. Assume number of units sold is 5,000.

	Firms			
	A	B	C	D
Sale Price per Unit (₹)	20	32	50	70
Variable Cost per Unit (₹)	6	16	20	50
Fixed Operating Cost (₹)	80,000	40,000	2,00,000	NIL

• FINANCIAL LEVERAGE:

Financial leverage is actually the use of fixed financing costs by the firm. The financial leverage is defined as the ability of a firm to use fixed financial charges to magnify the effects of changes in operating profits, on the firm's earning per share. In other words, the financial leverage is the tendency of a residual net income to vary disproportionately with operating profit. It indicates the change that takes place in the taxable income as a result of change in the operating income.

The most commonly used measures of financial leverages are:

(i) Debt Ratio $= \dfrac{\text{Debt}}{\text{Total capital (v)}} = \dfrac{\text{Debt (D)}}{\text{Debt (D) + Shareholders Equity (E)}}$

(ii) Debt-Equity Ratio $= \dfrac{\text{Debt (D)}}{\text{Shareholders Equity (E)}}$

(iii) Interest Coverage Ratio $= \dfrac{\text{EBIT}}{\text{Interest}}$

Where, EBIT = Sales - (Variable cost+ Fixed cost)

EBT = EBIT – Interest

Degree of Financial Leverage (DFL):

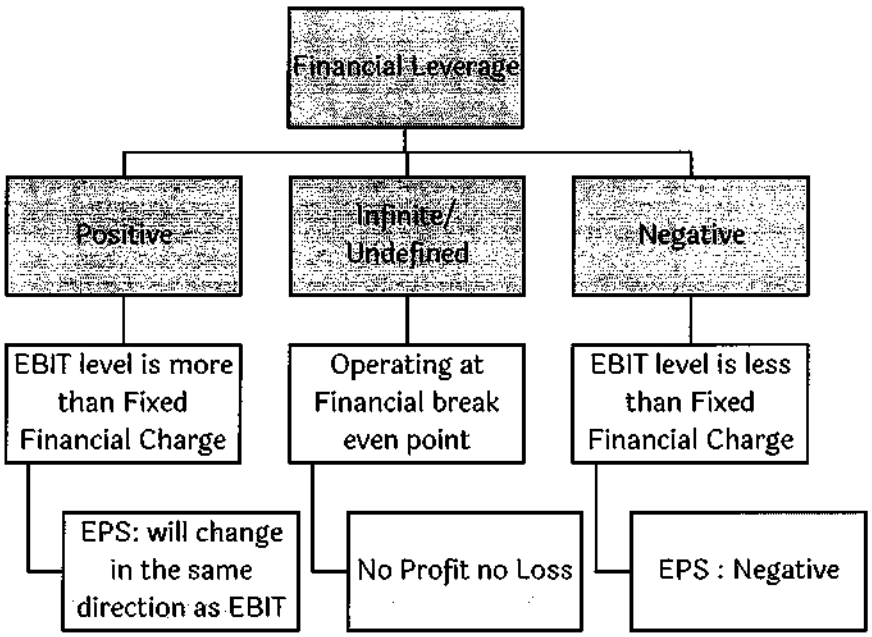
- Degree of financial leverage is the ratio of the percentage increase in earnings per share (EPS) to the percentage increase in earnings before interest and taxes (EBIT).
- Financial Leverage (FL) is also defined as "the ability of a firm to use fixed financial charges to magnify the effect of changes in EBIT on EPS.

$$\text{Degree of Financial Leverage (DFL)} = \frac{\text{Percentage change in Earnings per Share (EPS)}}{\text{Percentage change in Earnings before Interest Tax } (EBIT)}$$

Or

$$\frac{\dfrac{\Delta EPS}{EPS}}{\dfrac{\Delta EBIT}{EBIT}}$$

- Δ EPS means change in EPS and Δ EBIT means change in EBIT
- When DFL is more than one (1), financial leverage exists. More is DFL higher is financial leverage.
- A positive DFL/ FL means firm is operating at a level higher than break-even point and EBIT and EPS moves in the same direction. Negative DFL/ FL indicates the firm is operating at lower than break-even point and EPS is negative.



Analysis and Interpretation of Financial leverage:

SR. No.	Situation	Result
1	No Fixed Financial Cost	No Financial leverage
2.	Higher Fixed Financial cost	Higher Financial Leverage
3.	When EBIT is higher than Financial Break-even point	Positive Financial leverage
4.	When EBIT is levy then Finance Break-even point	Negating Financial leverage

Financial Leverage as 'Trading on Equity'

- Financial leverage indicates the use of funds with fixed cost like long term debts and preference share capital along with equity share capital which is known as trading on equity.
- The basic aim of financial leverage is to increase the earnings available to equity shareholders using fixed cost fund.
- A firm is known to have a positive leverage when its earnings are more than the cost of debt.

- If earnings is equal to or less than cost of debt, it will be an unfavourable leverage. When the quantity of fixed cost fund is relatively high in comparison to equity capital it is said that the firm is "trading on equity".

Financial Leverage as a 'Double edged Sword'

- On one hand when cost of 'fixed cost fund' is less than the return on investment financial leverage will help to increase return on equity and EPS.
- The firm will also benefit from the saving of tax on interest on debts etc. However, when cost of debt will be more than the return it will affect return of equity and EPS unfavourably and as a result firm can be under financial distress.
- This is why financial leverage is known as "double edged sword".

Effect on EPS and ROE:

When, ROI > Interest – Favourable – Advantage

When, ROI < Interest – Unfavourable – Disadvantage

When, ROI = Interest – Neutral – Neither advantage nor disadvantage.

QUESTION 3.

A firm has Sales of ₹ 40 lakhs; Variable Cost of ₹ 25 lakhs Fixed Cost of ₹ 6 lakhs; 10% debt of ₹ 30lakhs; and Equity Capital of ₹ 45 lakhs.

Required: Calculate operating and financial leverage.

QUESTION 4.

A company uses the DFL formula as DFL = $\frac{EBIT}{EBT}$ and finds DFL when EBIT = ₹ 2,06,000 and EBT = ₹ 1,72,000.

• COMBINED LEVERAGE:

Combined leverage is a leverage which refers to high profits due to fixed costs. It includes fixed operating expenses with fixed financial expenses. It indicates leverage benefits and risks which are in fixed quantity. The degrees of operating and financial leverages are combined to see the effect of total leverage on EPS associated with a given change in sales.

Combined Leverage (CL) = Operating Leverage (OL) × Financial Leverage (FL)

$$= \frac{C}{EBIT} \times \frac{EBIT}{EBT}$$

$$= \frac{C}{EBT}$$

Degree of Combined Leverage (DCL)

Degree of combined leverage (DCL) is the ratio of percentage change in earning per share to the percentage change in sales. **It indicates the effect the sales changes will have on EPS.**

$$DCL = DOL \times DFL$$

$$= \frac{\%\ \text{Change in EBIT}}{\%\text{Change in Sales}} \times \frac{\%\ \text{Change}}{\%\ \text{Change in EBIT}}$$

$$= \frac{\%\ \text{Change in EPS}}{\%\ \text{Change in}}$$

Like operating leverage and financial leverage, combined leverage can also be positive and negative combined leverage.

QUESTION 5

Calculate the operating leverage, financial leverage and combined leverage for the following firms and interpret the results:

	P	Q	R
Output (units)	2,50,000	1,25,000	7,50,000
Fixed Cost (₹)	5,00,000	2,50,000	10,00,000
Unit Variable Cost (₹)	5	2	7.50
Unit Selling Price (₹)	7.50	7	10.0
Interest Expense (₹)	75,000	25,000	-

QUESTION 6.

The ABC Ltd. has the following balance sheet and income statement information:

Balance sheet as on March 31, 2021			
Liabilities	₹	Assets	₹
Equity capital (₹ 10 per share)	8,00,000		
10% Debt	6,00,000	Net fixed assets	10,00,000
Retained earnings	3,50,000	Current assets	9,00,000
Current liabilities	1,50,000		
Total	19,00,000		19,00,000

Income statement for the year ending March 2021	
Particulars	Amount (₹)
Sales	3,40,000
Operating Expenses (including ₹ 60,000 depreciation)	1,20,000
EBIT	2,20,000
Less: Interest	60,000
Earnings Before Tax (EBT)	1,60,000
Less: Taxes	56,000
Net Earnings after Tax (EAT)	1,04,000

(a) Determine the degree of operating, financial and combined leverages at the current sales level, if all operating expenses, other than depreciation, are variable costs.
(b) If total assets remain at the same level, but sales (i) increase by 20% and (ii) decrease by 20%, what will be the earnings per share in the new situation?

QUESTION 7.

A firm's sales, variable costs and fixed cost amount to ₹ 75 lakh, ₹ 42 lakh and ₹ 6 lakh respectively. It has borrowed ₹ 45 lakh at 9% and its equity capital totals ₹ 55 lakh.
(a) What is the firm's ROI?
(b) Does it have favorable financial leverage?
(c) If the firm belongs to an industry whose asset turnover is 3, does it have high or low asset leverage?
(d) What are the operating, financial and combined leverages of the firm?
(e) If the sales drop to ₹ 50 lakh what will the new EBIT be?
(f) At what level will the EBT of the firm equal to zero?

QUESTION 8.

Calculate operating leverage and financial leverage under situations A, B and C and financial plans 1, 2 and 3 respectively from the following information relating to the operation and capital structure of X, Y, Z Ltd. Also find out the combinations of operating and financial leverage which give the highest value and the least value.

Installed capacity (units)	1,200
Actual production and sales (units)	800
Selling price per unit (₹)	15
Variable cost per unit (₹)	10
Fixed costs (₹):	
Situation A	1,000
Situation B	2,000
Situation C	3,000

Particulars	Financial Plan		
	1	2	3
Equity (₹)	5,000	7,500	2,500
Debt (₹)	5,000	2,500	7,500
Cost of debt (for all plans) (%)	12		

QUESTION 9:

Following information are related to five firms of the same industry :

Firm	Change in Revenue	Change in Operating Income	Change in EPS
A	28 %	26 %	32 %
B	27 %	34 %	26 %
C	25 %	38 %	23 %
D	23 %	43 %	27 %
E	25 %	40 %	28 %

You are required to Calculate – 1) Degree of Operating Leverage & 2) Degree of Combined Leverage, all the firms

QUESTION 10.

The following summarizes the percentage changes in operating income, percentage changes in revenues, and betas for four pharmaceutical firms.

Firm	Change in Revenue	Change in Operating Income	Beta
ABC Ltd.	27 %	25 %	1.00
STU Ltd.	25 %	32 %	1.15
VWX Ltd.	23 %	36 %	1.30
LMN Ltd.	21 %	40 %	1.40

Required:

1) Calculate the degree of operating leverage for each of these firms. Comment also.

2) Use the operating leverage to explain why these firms have different beta.

QUESTION 11.

Consider the following information for Elephant Ltd:

	₹ in lakhs
EBIT (Earning before Interest and Tax)	15,750
Earning before Tax (EBT):	7,000
Fixed Operating costs:	1,575

Calculate percentage change in earnings per share, if sales increase by 5%.

QUESTION 12.

You are given two financial plans of a company which has two financial situations. The detailed information are as under:

Installed capacity -10,000 units

Actual production and sales – 60% of installed capacity

Selling price per unit - ₹ 30

Variable cost per unit - ₹ 20

Fixed cost – Situation 'A' = ₹ 20,000, Situation 'B' = ₹ 25,000

Capital structure of the company is as follows-

	Financial Plans	
	Mini (₹)	Chilli (₹)
Equity	12,000	35,000
Debt (Cost of debt 12%)	40,000	10,000
	52,000	45,000

You are required to calculate Operating Leverage and Financial Leverage of both the plans.

QUESTION 13.

Orange Limited is considering the installation of a new project costing ₹ 80,00,000. Expected annual sales revenue from the project is ₹ 90,00,000 and its variable costs are 60 percent of sales. Expected annual fixed cost other than interest is ₹ 10,00,000. Corporate tax rate is 30 percent. The company wants to arrange the funds through issuing 4,00,000 equity shares of ₹ 10 each and 12 percent debentures of ₹ 40,00,000.

You are required to:

i) Calculate the operating, financial and combined leverages and Earnings per Share (EPS).

ii) Determine the likely level of EBIT, if EPS is ₹ 4, or ₹ 2, or Zero.

QUESTION 14.

A Company had the following Balance Sheet as on March 31, 2019

Liabilities and Equity	Amount (₹)	Assets	Amount (₹)
Equity Share Capital of ₹10 each	40,00,000	Fixed Assets (Net) Current	1,28,00,000
Reserves and Surplus	8,00,000	Assets	32,00,000
15% Debentures	80,00,000		
Current Liabilities	32,00,000		
	1,60,00,000		1,60,00,000

The additional information given is as under:

Fixed cost per annum (excluding Interest) - ₹ 32,00,000 Variable Operating Cost Ratio – 70%

Total Assets Turnover Ratio – 2.5 Income Tax Rate – 30%

Calculate the following and comment:

i) Earnings per share

ii) Operating Leverage

iii) Financial Leverage

iv) Combined Leverage.

QUESTION 15.

A Company had the following Balance Sheet as on March 31, 2020.

Liabilities and Equity	Amount (₹)	Assets	Amount (₹)
Equity Share Capital of ₹10 each	10,00,000	Fixed Assets	30,00,000
Reserves and Surplus	2,00,000	Current Assets	18,00,000
15% Debentures	28,00,000		
Current Liabilities	8,00,000		
	48,00,000		48,00,000

The additional information given is as under:

Fixed cost per annum (excluding Interest) - ₹ 28,00,000 Variable Operating Cost Ratio – 60%

Total Assets Turnover Ratio – 2.5 Income Tax Rate – 30%

Calculate the following and comment:

i) Earnings per share

ii) Combined Leverage.

QUESTION 16.

The following information related to Honey Company Ltd for the year ended 31st March –

Equity share capital of ₹ 10 each	₹ 50 Lakhs	Financial Leverage	1.49
12% bonds of ₹ 1,000 each	₹ 37 Lakhs	Profit – Volume Ratio	27.55 %
Sales	₹ 84 Lakhs	Income tax rate applicable	40%
Fixed Cost (excluding Interest)	₹ 6.96 Lakhs		

QUESTION 17.

A company operates at a production level of 5,000 units. The contribution is ₹ 60 per unit, operating leverage is 6, combined leverage is 24. If tax rate is 30%, what would be its earnings after tax?

QUESTION 18.

A company operates at a production level of 1,000 units. The contribution is ₹ 60 per unit, operating leverage is 6, and combined leverage is 24. If tax rate is 30%, what would be its earnings after tax?

QUESTION 19.

From the following financial data of Company Sonu and Company Monu: Prepare their Income Statements.

	Company Sonu (₹)	Company Monu (₹)
Variable Cost	56,000	60% of sales
Fixed Cost	20,000	-
Interest Expenses	12,000	9,000
Financial Leverage	5 : 1	-
Operating Leverage	-	4 : 1
Income Tax Rate	30%	30%
Sales	-	1,05,000

QUESTION 20.

From the following details of Jethalal Ltd., prepare the Income Statement for the year ended 31st December, 2017:

Financial Leverage	2
Interest	₹ 2,000
Operating Leverage	3
Variable cost as a percentage of sales	75%
Income tax rate	30%

QUESTION 21.

The following details of Newton Limited for the year ended 31st March, 2015 are given below.

Operating Leverage	1.4 times
Combined Leverage	2.8 times
Income Tax Rate	30%
Fixed cost (Excluding Interest)	₹ 2.04 Lakhs
Sales	₹ 30.00 Lakhs
12% Debentures of ₹ 100 each	₹ 21.25 Lakhs
Equity share capital of ₹ 10 each	₹ 17.00 Lakhs

a) Calculate Financial leverage

b) Calculate P/V ratio and Earning per Share (EPS)

c) If the company belongs to an industry, whose assets turnover is 1.5, does it have a high or low assets Leverage?

d) At what level of sales the Earning before Tax (EBT) of the company will be equal to zero?

QUESTION 22.

Apple Ltd. currently has an equity share capital of ₹ 10,00,000 consisting of 1,00,000 Equity share of ₹ 10 each. The company is going through a major expansion plan requiring to raise funds to the tune of ₹ 6,00,000. To finance the expansion the management has following plans:

Plan-I : Issue 60,000 Equity shares of ₹ 10 each

Plan-II : Issue 40,000 Equity shares of ₹ 10 each and the balance through long-term borrowing at 12% interest p.a.

Plan-III : Issue 30,000 Equity shares of ₹ 10 each and 3,000, 9% Debentures of ₹ 100 each

Plan-IV : Issue 30,000 Equity shares of ₹ 10 each and the balance through6% Preference shares.

The EBIT of the company is expected to be ₹ 4,00,000 p.a. assume corporate tax rate of 40%.

Required:

i) Calculate EPS in each of the above plans.
ii)Ascertain financial leverage in each plan.

QUESTION 23.

The net sales of Pubg Ltd. is ₹ 30 crores. Earnings before interest and tax of the company as a percentage of net sales is 12%. The capital employed comprises ₹ 10 crores of equity, ₹ 2 crores of 13% Cumulative Preference Share Capital and 15% Debentures of ₹ 6 crores. Income- tax rate is 40%.
i)Calculate the Return-on-equity for the company and indicate its segments due to the presence of Preference Share Capital and Borrowing (Debentures).
ii) Calculate WACC for the above company.
iii) Calculate the Operating Leverage of the Company given that combined leverage is 3.

QUESTION 24.

The capital structure of Doremon Ltd. as at 31.3.15 consisted of ordinary share capital of ₹ 5,00,000 (face value ₹ 100 each) and 10% debentures of ₹ 5,00,000 (₹ 100 each). In the year ended with March 15, sales decreased from 60,000 units to 50,000 units. During this year and in the previous year, the selling price was ₹ 12 per unit; variable cost stood at ₹ 8 per unit and fixed expenses were at ₹ 1,00,000 p.a. The income tax rate was 30%.
You are required to calculate the following:
i) The percentage of decrease in earnings per share.
ii) The degree of operating leverage at 60,000 units and 50,000 units.
iii) The degree of financial leverage at 60,000 units and 50,000 units.

QUESTION 25.

A firm has sales of ₹ 75,00,000 variable cost is 56% and fixed cost is ₹ 6,00,000. It has a debt of ₹45,00,000 at 9% and equity of ₹ 55,00,000.
i) What is the firm's ROI?
ii) Does it have favorable financial leverage?
iii) If the firm belongs to an industry whose capital turnover is 3, does it have a high or low capital turnover?
iv) What are the operating, financial and combined leverages of the firm?
v) If the sales is increased by 10% by what percentage EBIT will increase?
vi) At what level of sales the EBT of the firm will be equal to zero?
vii) EBIT increases by 20%, by what percentage EBT will increase?

CHAPTER 4 - COST OF CAPITAL

• Meaning of Cost of Capital

- We know that the basic task of a finance manager is procurement of funds and its effective utilization. Whereas objective of financial management is maximization of wealth. Here wealth or value is equal to performance divided by expectations.
- Therefore finance manager is required to select such a capital structure in which expectation of investors is minimum hence shareholders' wealth is maximum. For that purpose first he need to calculate cost of various sources of finance. In this chapter we will learn to calculate cost of debt, cost of preference shares, cost of equity shares, cost of retained earnings and also overall cost of capital.
- Cost of capital is the return expected by the providers of capital (i.e. shareholders, lenders and the debt-holders) to the business as a compensation for their contribution to the total capital .When an entity (corporate or others)procured finances from either sources as listed above, it has to pay some additional amount of money besides the principal amount.
- The additional money paid to these financiers may be either one off payment or regular payment at specified intervals.

According to **James C. Van Horne,** 'Cost of capital is 'a cut-off rate for the allocation of capital to investments of projects. It is the rate of return on a project that will leave unchanged the market price of the stock.'

Soloman Ezra stated that 'Cost of capital is the minimum required rate of earnings or the cut-off rate of capital expenditure.'

Assumptions of Cost of Capital

The theory of cost of capital is based on certain assumptions. These are –

(a) A basic assumption of traditional cost of capital analysis is that the firm's business and financial risks are unaffected by the acceptance and financing of projects.

(b) The capital budgeting decision determines the business risk complexion of the firm. The financing decision determines financial risk. In general, the greater the proportion of long-term debt in the capital structure of the firm, the greater is the financial risk because there is a need for a larger amount of periodic interest payment and principal repayment at the time of maturity.

(c) For the purpose of capital budgeting decisions, benefits from undertaking a proposed project are evaluated on an after-tax basis. In fact, only the cost of debt requires tax adjustment as interest paid on debt is deductible expense from the point of view of determining taxable income whereas dividends paid either to preference shareholders or to equity-holders are not eligible items as a source of deduction to determine taxable income.

Cost of capital (k) consists of the following three components:

(a) The riskless cost of the particular type of financing, rj

(b) The business risk premium, b; and

(c) The financial risk premium, f

Or, k = rj + b + f

Business risk is the risk to the firm of being unable to cover fixed operating costs. Financial risk is the risk of being unable to cover required financial obligations such as interest and preference dividends.

• SIGNIFICANCE OF THE COST OF CAPITAL

The cost of capital is important to arrive at correct amount and helps the management or an investor to take an appropriate decision. The correct cost of capital helps in the following decision making:

A] Evaluation of investment options: The estimated benefits (future cashflows) from available investment opportunities (business or project) are converted into the present value of benefits by discounting them with the relevant cost of capital. Here it is pertinent to mention that every investment option may have different cost of capital hence it is very important to use the cost of capital which is relevant to the options available.

B] Financing Decision: When a finance manager has to choose one of the two sources of finance, he can simply compare their cost and choose the source which has lower cost. Besides cost heal so considers financial risk and control.

C] Designing of optimum credit policy: While appraising the credit period to be allowed to the customers, the cost of allowing credit period is compared against the benefit/ profit earned by providing credit to customer of segment of customers. Here cost of capital is used to arrive at the present value of cost and benefits received.

D] Inventory Management: While taking the decision regarding the inventory management cost of capital can be used as a guide to evaluate financial cost of carrying inventory.

(f) Dividend Decision: The dividend policy of the firm can also be formulated after considering the cost of capital. Here, internal rate of return (r) is compared with the cost of capital (k) for fixing up the %age of dividend to be distributed to the shareholders.

• DETERMINATION OF THE COST OF CAPITAL

- Cost is not the amount which the company plans to pay or actually pays, rather than it is the expectation of stakeholders. Here Stakeholders include providers of capital (shareholders, debenture holder, money lenders etc.), intermediaries (brokers, underwriters, merchant bankers etc.), and Government (for taxes).
- For example if the company issues 9% coupon debentures but expectation of investors is 10% then investors will subscribe it at discount and not at par. Hence cost to the company will not be 9%, rather than it will be 10%. Besides giving return to investors company will also have to give commission, brokerage, fees etc. To intermediaries for issue debentures. It will increase cost of capital above 10%. On the other hand payment of interest is a deductible expense under the Income tax act hence it will reduce cost of capital to the company .Cost of any sources of finance is expresses in terms of percent per annum. To calculate cost first of all we should identify various cash flows like:

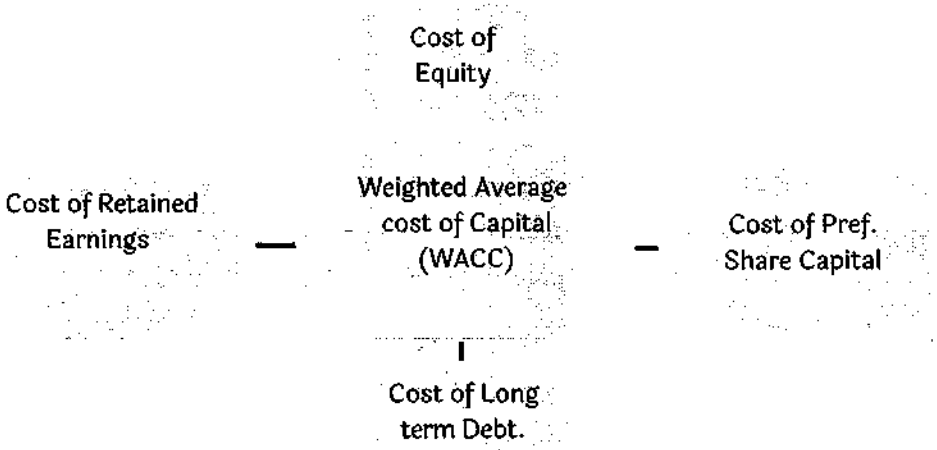
A] inflow of amount received at the beginning

B] outflows of payment of interest, dividend, redemption amount etc.

C] Inflow of tax benefit on interest or outflow of payment of dividend tax.

Thereafter we can use trial &error method to arrive at a rate where present value of out flows is equal to present value of inflows. That rate is basically IRR. In investment decisions IRR indicates income, because there we have initial outflow followed by series of inflows. In cost of capital chapter this IRR represents cost, because here we have initial inflow followed by series of net out flows.

Alternatively we can use shortcut formulas. Though these shortcut formulas are easy to use but they give approximate answer and not the exact answer. We will discuss the cost of capital of each source of finance separately.



• DETERMINATION OF THE COST OF DEBT

External borrowings or debt instruments do no confers ownership to the providers of finance. The providers of the debt fund do not participate in the affairs of the company but enjoys the charge on the profit before taxes. Long term debt includes long term loans from the financial institutions, capital from issuing debentures or bonds etc. (In the next chapter we will discuss in detail about the sources of long term debt.)

As discussed above the external borrowing or debt includes long term loan from financial institutions, issuance of debt instruments like debentures or bonds etc. The calculation of cost of loan from a financial institution is similar to that of redeemable debentures. Here we confine our discussion of cost debt to Debentures or Bonds only.

A] Face Value: Debentures or Bonds are denominated with some value; this denominated value is called face value of the debenture. Interest is calculatedonthefacevalueofthedebentures.E.g.Ifacompanyissue9%Non-convertible debentures of ₹100 each, this means the face value is ₹ 100 and the interest @ 9% will be calculated on this face value.

B] Interest (Coupon) Rate: Each debenture bears a fixed interest (coupon) rate (except Zero coupon bond and Deep discount bond). Interest (coupon) rate is applied to face value of debenture to calculate interest, which is payable to the holders of debentures periodically.

C] Maturity period: Debentures or Bonds has a fixed maturity period for redemption. However, in case of irredeemable debentures maturity period is not defined and it is taken as infinite.

D] Redemption Value: Redeemable debentures or bonds are redeemed on its specified maturity date. Based on the debt covenants the redemption value is determined. Redemption value may vary from the face value of the debenture.

E] Benefit of tax shield: The payment of interest to the debenture holders are allowed as expenses for the purpose of corporate tax determination. Hence, interest paid to the debenture holders save the tax liability of the company. Saving in the tax liability is also known as tax shield.

• DETERMINATION FACTORS OF COST OF CAPITAL

Cost of capital, like all other costs, is a variable term, subject to changes in a number of factors. The various factors that play a part in determination of cost of capital are described below:

(a) Risk Profile of the Project

Given a particular set of economic conditions, the cost of capital might vary between industries and between firms in the same industry. This happens because of variation in the risk profile of the firm. A project considered risky would attract capital at a higher cost than a project in the same industry having lesser risk.

(b) Market Conditions

If the security is not readily marketable when the investor wants to sell, or even if a continuous demand for the security exists but the price varies significantly, an investor will require a relatively high rate of return. Conversely, if a security is readily marketable and its price is reasonably stable, the investor will require a lower rate of return and the company's cost of capital will be lower.

(c) General Economic Conditions

The structure of interest rates is linked to the general economic conditions prevalent in the economy. Cost of capital, in turn, is related to the interest rate structure. Fluctuation in interest rates occurs as a result of changes in the demand supply equilibrium of investible funds. When investment demand is more than the supply, the rate of interest tends to rise and hence the cost of capital is also more during these periods. On the other hand, during times of slack investment demand, the cost of capital declines due to available supply of funds being more than the demand. The fluctuation in the cost of capital may not be as frequent as the changes in interest rates because the deployment of funds in the debt component of capital is for a longer period of time.

(d) Amount of Financing

As the financing requirements of the firm become larger, the weighted cost of capital increases for several reasons. For instance, as more securities are issued, additional flotation costs, or the cost incurred by the firm from issuing securities, will affect the percentage of cost of the funds to the firm. Also, as management approaches the market for large amounts of capital relative to the firm's size, the investors' required rate of return may rise. Suppliers of capital become hesitant to grant relatively large sums without evidence of management's capability to absorb this capital into the business.

• CLASSIFICATION OF COSTS

Costs can be classified as follows:

A. Historical Cost and Future Cost: Historical cost is the cost which has already been incurred for financing a particular project. It is based on the actual cost incurred in the previous project. Historical cost is useful for analyzing the existing capital structure of the firm.

Future cost is the estimated cost for the future. In financing decision, the future cost is more important than the historical cost as most of the financing decision are related with the future or proposed project that are taken in future period. But at the same time, the future cost is estimated on the basis of previous experience or historical data, so both are related.

B. Specific Cost and Composite Cost: The cost of each component or source of capital is known as the specific cost or component cost. The cost of finance is the minimum return expected by the investors which again depend on the degree of risk involved in the investment.

When all the specific cost of individual source are combined together to get a single cost of capital of the firm, it is known as overall or composite or combined or weighted average cost of capital (WACC). Composite cost is commonly referred as the firm's cost of capital. It represents the minimum return that a firm must earn on its existing investment or asset base to satisfy its creditors, owners and other providers of capital.

C. Explicit and Implicit Cost: Explicit cost of any source of finance is the discount rate which equates the present value of cash inflows with the present value of cash outflows. Van Horne defined explicit cost as – 'the discount rate that equates the present value of the funds received by the firm, net of underwriting and other cost, with the present value of expected outflows.' These outflows are interest payment, repayment of principal or dividends, etc. For example, a firm raises ₹1,00,000 by issue of 10% Debenture. In this case, there will be an initial inflow of cash of ₹1,00,000 and an annual cash out flow of ₹10,000. So, explicit cost is that rate of return which equates the present value of cash inflows ₹1,00,000 with the present value of cash outflows ₹10,000. The process of calculation of explicit cost of capital is similar to the determination of IRR. In case of IRR, cash outflow are involved in beginning followed by cash inflow subsequently. But in explicit cost of capital, it is just opposite, that is cash inflows takes places only once at beginning and there are series of cash outflow subsequently. The explicit cost of capital can be determined by following formula:

$$I_0 + \frac{C_1}{(1+k)^1} + \frac{C_2}{(1+k)^2} + \ldots\ldots\ldots\ldots\ldots\ldots + \frac{C_n}{(1+k)^n}$$

Where –

I_0 = Initial cash inflow i.e. net amount of funds received by the firm at time 0

C = Cash outflow in period concerned

k = Explicit cost of capital / Discount factor appropriate for the cash investment

n = No. of years.

Finally, it can be said that explicit cost of capital is the internal rate of return that the firm pays to procure financing.

Implicit cost, also known as the opportunity cost is the cost of the opportunity foregone in order to take up a particular project. The implicit cost can be defined as "the rate of return associated with the best investment opportunity for the firm and its shareholders that would be foregone, if the projects presently under consideration by the firm were accepted." For example, the implicit cost of retained earnings is an opportunity cost or implicit cost of capital to the shareholders as they could have invested the fund in anywhere else if the retained earnings were distributed to them as dividend.

Now, it can be said that explicit cost arises where funds are raised, whereas the implicit cost arises when funds are used.

D. Average Cost and Marginal Cost: An average cost is the combined cost or weighted average cost of various source of capital. When the aggregate of the cost of capital of each such source is divided by the aggregate of the weight of sources, the average cost of capital is obtained. The weight represents the proportion of each source of in the capital structure.

Marginal cost refers to the average cost of new additional funds required by a firm. It is simply the cost of additional fund raised. Marginal cost of capital is an important tool for evaluating a new project. The return of the new project is compared with the marginal cost of capital to decide on the acceptance or rejection of the project.

• CLASSIFICATION OF COSTS

The term cost of capital, as a decision criterion, is the overall cost. This is the combined cost of the specific costs associated with specific sources of financing. The cost of the different sources of financing represents the components of the combined cost. The computation of the cost of capital, therefore, involves two steps: (I) the computation of the different elements of the cost in terms of the cost of the different sources of finance (specific costs), and (II) the calculation of the overall cost by combining the specific costs into a composite cost.

(I) Computation of Specific Sources of Capital

The first step in the measurement of the cost of capital of the firm is the calculation of the cost of individual sources of raising funds. Apart from its relevance to the measurement of the combined cost, the specific cost will also indicate the relative cost of pursuing one line of financing rather than another. From the viewpoint of capital budgeting decision, the long-term sources of funds are relevant as they constitute the major sources of financing of fixed assets. In calculating the cost of capital, therefore, the focus is on long-term funds. In other words, the specific costs have to be calculated for (A) long-term debt (including debentures); (B) preference shares; (C) equity capital; and (D) retained earnings.

A. Cost of Debt Capital (k_d)

Cost of debt capital is the required rate of return on investment of the lenders of a company. Long-term debt means Long-term loans from financial institutions, capital from issuing debentures or bonds, etc. These Long-terms debts do not have ownership to the providers of finance. The providers of debt finance do not participate in the affairs of the firm but they enjoy the charge on profit before tax. This means they are paid before the payment to the preference shareholders or equity shareholders.

For calculation of cost of debt, first we have to compute 'Net cash proceed' out of the issue and 'Net cash outflow'. Net cash proceeds are the funds actually received from the sale of securities. Debt like debenture may be issued at a premium or discount and sometime the issue involve floatation cost like underwriting, brokerage, etc. So, the amount of discount, premium or floatation cost should be adjusted for calculation of 'net cash proceed'.

Net Cash Proceeds = Face value of the debt – Floatation cost – Discount allowed at the time of issue (if any) + Premium charged at the time of issue (if any)

The 'net cash outflow' is the amount of periodic interest and repayment of principal in installment or in lump-sum at maturity.

The calculation of cost of loan from a financial institution is similar to that of redeemable debenture. So, the discussion is mainly on debenture and bonds. Financing through debenture or bonds have some specific feature and some benefits also.

A debenture or bond may be issued at par or at discount as at premium as compared to its face value. Again, the debenture as bond may be redeemable or irredeemable (perpetual) in nature.

Perpetual / Irredeemable Debt:

Debts may be issued for perpetuity. The debentures which are not redeemed by the issuer is known as irredeemable debentures. Practically, a firm follows the policy of maintaining a given proportion of debt in its capital structure. Individual debts may be repaid but they are replaced by new ones. So, debts are never really paid. So, the permanent part of the debt capital continues for perpetuity.

Formula

$$K_d = \frac{I}{NP}(1-t)$$

Where,

K_d = Cost of debt after tax

I = Annual interest payment

NP = Net proceeds of debentures or current market price

t = Tax rate

The cost of debt will be different if the bonds or debentures are issued (i) at par or (ii) at discount or (iii) at premium. The following example will make it clear.

When Debentures are issued (i) at par or (ii) at discount or (iii) at premium –

QUESTION 1

A Company issues ₹ 10,00,000, 12% debentures of ₹ 100 each. The debentures are redeemable after the expiry of fixed period of 7 years. The company is in 35% tax bracket Calculate the cost of debt after tax, if debentures are issued at–

(a) Par (b) 10% Discount (c) 10%Premium

If brokerage is paid at 2%, what will be the cost of debentures, if issue is at par?

When both net Proceed of issue and market price of debenture are given –

QUESTION 2

Five years ago, KPM Ltd issued 12% irredeemable debentures at ₹ 105, a ₹ 5 premium to their par value of ₹ 100. The current market price of these debentures is ₹ 95. If the company pays corporate tax at a rate of 35 % what is its current cost of debenture capital?

When Coupon is mentioned, Issued at Premium or Discount –

QUESTION 3

XYZ Limited keeps a perpetual fixed amount of debt in its books. It pays coupon of 15%. Its debt sells at par in the market. What is the cost of debt if the firm pays 35% tax? What is the cost of debt if it sells (a) at 5% premium (b) at 5% discount to the face value?

The cost of debenture (k_d) will be calculated as below:

$$\text{Cost of debenture} = kd = \frac{I(1-t) + \frac{R.V. - N.P.}{n}}{\frac{RV + NP}{2}}$$

Where,

I = Interest payment

NP = Net proceeds from debentures in case of new issue of debt or current market price in case of existing debt

RV = Redemption value of debentures

t = Tax rate applicable to the company

n = Life of debentures

The above formula to calculate cost of debt is used where only interest on debt is tax deductable. Sometimes, debts are issued at discount and/or redeemed at a premium. If discount on issue and/or premium on redemption are tax deductible, the following formula can be used to calculate the cost of debts.

$$\text{Cost of debenture} = kd = \frac{I + \frac{R.V. - N.P.}{n}}{\frac{RV + NP}{2}} (1-t)$$

In absence of any specific information, students may use any of the above formulae to calculate the cost of debt
(k_d) with logical assumption.

When Net Proceed of Debenture is given –

QUESTION 4

ABC Ltd. issued 5,000, 12% debentures of ₹ 100 each at a premium of 10% on 1.4.2016 to be matured on 1.4.2021. The debentures will be redeemed on maturity. Compute the cost of debentures assuming 35% as tax rate.

When Market Price of Debenture is given –

QUESTION 5

PQR Ltd. issued 5,000, 12% debentures of ₹100 each on 1.4.2016 to be matured on 1.4.2021. The market price of the debenture is ₹ 80. Compute the cost of existing debentures assuming 35% tax rate.

When issue of Debenture involved Floatation Cost –

QUESTION 6

Rima & Co. has issued 12% debenture of face value ₹ 100 for ₹ 10 lakh. The debenture is expected to be sold at 5% discount. It will also involve flotation cost of ₹ 5 per debenture. The debentures are redeemable at a premium of 5% after 10 years. Calculate the cost of debenture if the tax rate is 50%.

Amortisation of Bond

A bond may be amortised every year i.e. principal is repaid every year rather than at maturity. In this situation, the principal will go down with annual payments and interest will be computed on the outstanding amount. The cash flows of the bonds will be uneven.

The formula for determining the value of a bond or debenture that is amortised every year is as follows:

$$V_B = \frac{C_1}{(1+k_d)^1} + \frac{C_2}{(1-k_d)^2} + \ldots\ldots + \frac{C_n}{(1-k_d)^n}$$

$$V_B = (x-a) = \sum \frac{C_t}{(1-k_d)^t}$$

QUESTION 7 (Homework sum)

X Ltd. has 10% perpetual debt of ₹ 1,00,000. The tax rate is 35 %. Determine the cost of capital (before tax as well as after tax) assuming the debt is issued at
(i) par, (ii) 10% discount, and (iii) 10% premium.

QUESTION 8

X Ltd. is proposing to sell a 5-year bond of ₹ 10,000 at 10 % rate of interest per annum. The bond amount will be amortised equally over its life. What is the bond's present value for an investor if he expects a minimum rate of return of 6 %?

Cost of Convertible Debenture:

A convertible debenture is a type of loan issued by a company that can be converted into stock. Holders of the convertible debentures has the option to either get the debentures redeemed into the cash or get specified numbers of companies shares in leiu of cash. The calculation of cost of convertible debentures is very much similar to the redeemable debentures. While determining the redeemable value of the debentures, it is assumed that all the debenture holders will chose the option which has the higher value and accordingly it is considered to calculate cost of debt.

QUESTION 9

RR Ltd. issued 10,000, 12% convertible debentures of ₹100 each with a maturity period of 5 years. At maturity, the debenture holders will have the option to convert the debentures into equity shares of the company in the ratio of 1:10 (10 shares for each debenture). The current market price of the equity shares is ₹ 14 each and historically the growth rate of the shares are 5% per annum. Compute the cost of debentures assuming 35% tax rate.

Note: In practice, the corporate are normally likely to have multiple debt issues most likely subject to different interest rates. To determine the overall cost of debt, cost of each debt issue is to be separately computed. The weighted average of costs of all debt issues would be cost of debt of the firm as a whole.

Cost of Redeemable Debt:

While calculating the cost of redeemable debt, it is necessary to consider the repayment of the principal in addition to interest payments. The cost of redeemable debt can be calculated by using the following formula:

$$\text{After - tax cost of Debt i.e., } K_d = \frac{I(1-t) + \frac{(F-5)}{N}}{\frac{(F+5)}{N}}$$

Where,

I = Annual Interest charge

t = Tax rate

n = Number of years

F = Redeemable value of the debt at the time of maturity

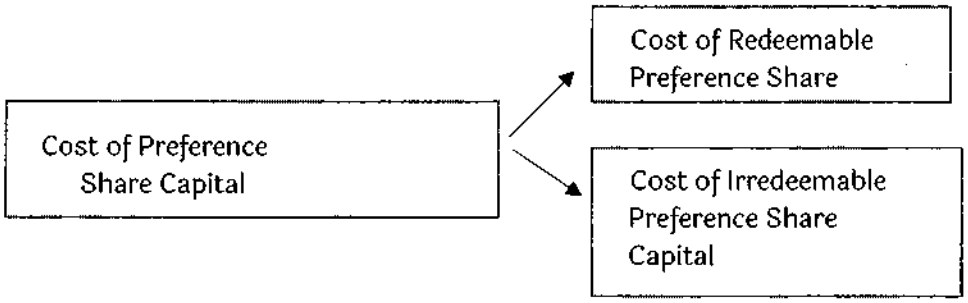
S = Net sale proceeds from the issue of debt (face value-expenses)

QUESTION 10

A company is considering raising funds of ₹100 Lakhs by one of the two alternative methods, viz. 14% Institutional Term loan and 13% Non-convertible debentures. The term loan option would attract no major incidental cost. The Debentures would be issued at a discount of 2.5% and would involve cost of issue of ₹1 lakh. Advice the company as to the better option based on Effective Cost of Capital. Assume Tax rate of 50%.

B. Cost of Preference Capital (kp)

The preference shares are those shares which carry the right to receive dividend at a fixed %age before any dividend is paid on equity shares. The dividend payable to the preference shareholders are to be treated as the cost of preference share capital. The payment of dividend to the preference shareholders are not charged as expenses but treated as appropriation of after-tax profit. So, dividend paid to preference shareholders does not reduce the tax liability of the firm. Hence, for preference share before tax cost of preference share capital is considered not the after-tax cost. The costs of preference share capital are of two types (a) Cost of Redeemable Preference Share Capital (b) Cost of Irredeemable Preference Share Capital.



Redeemable Preference Share Capital

The preference shares capital which are redeemed after a certain period of times which was mentioned in the terms of issue, are known as redeemable preference shares. The cost of redeemable preference share capital -

Cost of Preference Shares (kp)

$$K_d = \frac{D + \frac{RV-NP}{N}}{\frac{RV+NP}{2}}$$ [when dividend tax is not considered]

$$K_d = \frac{D(1-D_t) + \frac{RV-NP}{N}}{\frac{RV+NP}{2}}$$ [when dividend tax is considered]

Where

k p = Cost of Preference Share Capital

D = Annual Preference Dividend

Dt = Dividend Tax

RV = Redeemable Value

NP = Net Proceeds of the Share

n = No. of Years

Computation of Dividend Tax:		
Tax on Dividend	XXX	
Add: Surcharge (to be calculated on the Tax on Dividend)	XXX	
Add: Education cess (to be calculated on the sum total of Tax on Dividend and Surcharge)'	→	XXX
Add: Secondary and Higher Education cess (to be calculated on the sum total of Tax on Dividend and Surcharge)	XXX	
Dividend Tax (D_t)	XXX →	XXX

When Issue of Preference Share involved Floatation Cost and Redeemable at Premium

QUESTION 11

BP Ltd. issued 60,000 12% Redeemable Preference Share of ₹100 each at a premium of ₹ 5 each, redeemable after 10 years at a premium of ₹ 10 each. The floatation cost of each share is ₹ 3. You are required to calculate cost of preference share capital ignoring dividend tax.

When Dividend Tax is considered –

QUESTION 12 (Homework question)

Y Co. Ltd. issues 10,000 12% preference shares of ₹100 each at a premium @ 10% but redeemable at a premium @ 20% after 5 years. The company pays under writing commission @ 5%. If tax on dividend is 12.5%, surcharge is 2.5% and education cess is 3%, calculate the cost of preference share capital.

Cost of Irredeemable Preference Share Capital

The preference shares capital which are not redeemed before the winding up of the company, are known as irredeemable preference shares. The cost of irredeemable preference share capital –

$$K_P = \frac{D}{NP}$$ [when dividend tax is not considered]

$$K_P = \frac{D(1+D_t)}{NP}$$ [when dividend tax is considered]

Where,

K_p= Cost of preference share capital;

D = Annual preference dividend;

D_t = Dividend tax

NP = Net proceeds of the share;

Note: Issuance of irredeemable preference shares are not allowed as per the Companies Act, 2013, but for the academic knowledge purpose it has been presented here.

When Preference Shares are issued (i) at par, (ii) at 10% premium and (iii) at 10% discount

QUESTION 13

Simond Ltd. issues 10% irredeemable preference share of ₹ 100 each for ₹ 10,00,000. What will be the cost of preference share capital (kp), if preference shares are issued: (i) at par, (ii) at 10% premium and (iii) at 10% discount. Assume that there is no dividend distribution tax.

QUESTION 14

If Honey LTD. is issuing preferred stock at ₹ 100 per share, with a stated dividend of ₹ 12, and a floatation cost of 3% then, what is the cost of preference share?

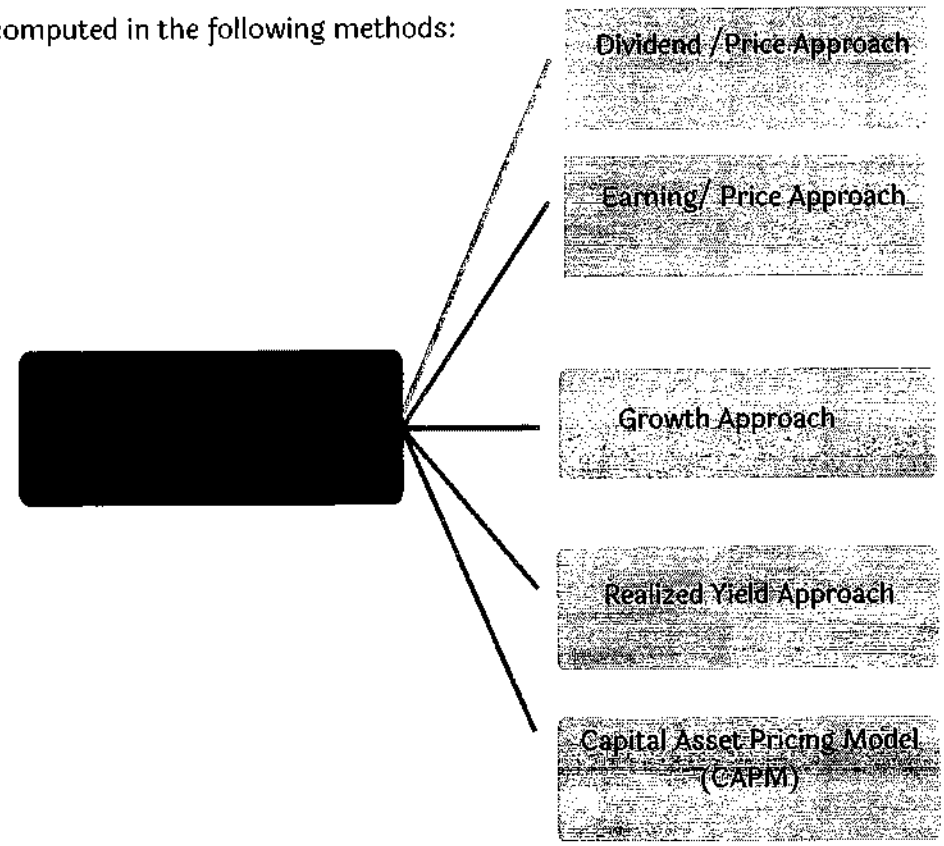
QUESTION 15

A company issued 40,000, 12% Redeemable Preference Share of ₹ 100 each at a premium of ₹ 5 each, redeemable after 10 years at a premium of ₹ 10 each. The floatation cost of each share is ₹2.

C. Cost of Equity Share Capital (ke)

The cost of equity capital is most difficult to compute. Some people argue that the equity capital is cost free as the company is not legally bound to pay the dividends to equity shareholders. But this is not true. Shareholders will invest their funds with the expectation of dividends. The market value of equity share depends in the dividends expected by shareholders. Thus, the required rate of return which equates the present value of the expected dividends with the market value of equity share is the cost of equity capital. The cost of equity capital may be expressed as the minimum rate of return that must be earned on new equity share capital financed investment in order to keep the earnings available to the existing equity shareholders of the firm unchanged.

It may be computed in the following methods:



1. Dividend Yield/Price Approach

According to this approach the cost of equity capital (ke) is defined as the discount rate that equates the present value of all expected future dividends per share with the net proceeds of the sale (or the current market price) of a share. This method is based on the assumption that the market price per share is the present value of its future dividends. According to this method, there is a direct relation between market value of equity shares and future dividends. Another assumption of this approach is that future dividend is constant means there is zero growth in dividend. This method can be used in constant and variable growth situations and also in no-growth companies for estimation of cost of equity. This approach is based on the following assumptions-

Assumptions:

(a) Market values of the shares are directly related to the future dividends on the shares.

(b) Future dividend per share is expected to be constant and the company is expected to earn at least this yield over a period of time.

Limitations:

There are certain limitations in this approach. The limitations are:

(a) This method does not consider any growth rate i.e. future dividend assumed to be constant. But practically, shareholders used to expect that the return on their equity investment would grow over time.

(b) It does not include the effect of future earnings or retained earnings.

(c) This approach can lead to ignore the capital appreciation of value of share.

$$K_e = \frac{D}{P_0}$$

Where,

Ke = Cost of equity share capital

D = Expected divined per share

P_0= Current market price per share

When it is expected that dividend to be received at a uniform rate over the years –

QUESTION 16 (Homework Sum)

MNC Ltd. paid dividend per share of ₹ 4 and the current market price of equity share is ₹20. Calculate the cost of equity share capital ke.

QUESTION 17

AB Ltd. issued shares of ₹ 100 each at a premium of 10%. The issue involved underwriting commission of 5%. The rate of dividend expected by the shareholders is 12%. Determine the cost of equity capital (ke).

2. Earnings Price Approach

According to this approach, the cost of equity share capital is determined by dividing the earnings per share by the current market price per share. The cost of equity share is determined on the basis of earning per share. Earnings per share is calculated by dividing the earnings available to equity shareholder by the number of equity shares. Again, earnings available to equity share holder are computed after giving the preference dividend to the Preference shareholders. When firm has no need of debt capital in its capital structure, firm uses this method to determine the cost of equity share capital. This method depends on the assumption that even if the firm is not distributing it's earning as dividend, means the earning is kept as the retained earnings. These retained earnings will lead to future growth of the earnings and as a result the future market price of the share will increase.

$$K_e = \frac{E}{P}$$

K_e = Cost of equity share capital

E = Earnings per share

P = Current market price per share

QUESTION 18

The earnings available to the shareholders amount to ₹ 40,000. Firm is represented by 10,000 equity shares and the current market price of equity share is ₹ 25. Calculate the cost of equity share capital.

QUESTION 19

Mamon Ltd. is expected to earn ₹ 30 per share. Company follows fixed pay-out ratio of 40%. The market price of its share is ₹200. Find the cost of existing equity if dividend tax of 15 % is imposed on the distributed earnings when:

(a) current level of dividend amount is maintained.

(b) dividend to the shareholders is reduced by the extent of dividend tax.

2. Dividend Growth Approach or Gordon's Model

Every equity shareholder expects dividend to increase year after year and not to remain constant. In this case the expected growth in dividend is taken into consideration for computation of cost of equity. The growth in expected dividend in future may be either at a uniform normal rate or it may vary. Therefore, the dividend growth approach takes into account expected dividend under different growth assumptions. This approach is based on certain assumptions.

Assumptions

(a) The current market price of share depends on future expected dividend.

(b) The initial dividend D_0 is greater than 0.

(c) The dividend payout ratio is constant.

$$K_e = \frac{D_1}{P} + g$$

Where,

K_e = Cost of equity share capital

D_1 = Next expected divined = $[D_0 (1 + g)]$

P_0 = Current market price per share

g = Constant growth rate of dividend.

$$K_e = \frac{D_1}{P_0 - F} + g$$

Where,

F = Flotation cost

When dividend are expected to grow at a uniform rate in each year –

QUESTION 20 (Homework Sum)

XYZ Company's share is currently quoted in the market at ₹ 20. The company pays a dividend of ₹ 2 per share and the investors expect a growth rate of 5% per year. You are required to calculate (a) cost of equity capital of the company and (b) the market price per share if the anticipated growth rate dividend is 7%.

QUESTION 21

Using Dividend Growth Model, calculate cost of equity (ke) in the following case:

Equity share capital (shares of ₹10 each)	₹ 2,00,000
Earnings for 2021	₹ 60,000
Current market price per share	₹ 180

Dividends per share:	(₹)
2018	7
2019	8
2020	10
2021	11

3. Gordon's Growth Model

According to this method, a growing stream of future dividends arises from a growing level of investment by the firm in profitable projects, and it will, therefore, be this rate of investment which will partially determine the growth rate. This model is based on the following assumptions:

(a) The firm is an all-equity firm.

(b) Only source of additional investment is retained earnings.

(c) Every year firm re-invested a constant portion of retained earnings.

(d) Retained earnings produce a constant of annual return

It can be calculated as below:

Growth (g) = b × r

Where

g = Future dividend growth rate

b = Constant portion of retained earnings each year*

r = Average rate of return fund invested

*Proportion of earnings available to equity shareholders which is not distributed as dividend.

$$b = \frac{\text{Net Profit (after dividend paid)}}{\text{Net Profit}}$$

$$r = \frac{\text{Net Profit}}{\text{Book value of capital employed}} \quad u$$

4. Realized Yield Approach

It is the easy method for calculating cost of equity capital. Under this method, cost of equity is calculated on the

basis of return actually realized by the investor in a company on their equity capital.

ke= PV*f* × D

Where,

ke = Cost of equity capital

PV*f* = Present value of discount factor

D = Dividend per share.

5. Capital Assets Pricing Model (CAPM) Approach

The Capital Asset Pricing Model (CAPM) was developed by William F. Sharpe and John Linter in the 1960s. This model is useful for measuring the cost of equity capital of the firm, it shows the relationship between the unavoidable risk and expected return from a security. The model is based on the following assumptions:

(a) The capital markets are highly efficient.

(b) No investor is large enough to affect the market.

(c) All investors have the same expectations about the risk and return.

(d) There are negligible restrictions on investment.

(e) There are two types of investment opportunities i.e. risk-free security and market portfolio of common stock.

According to CAPM,

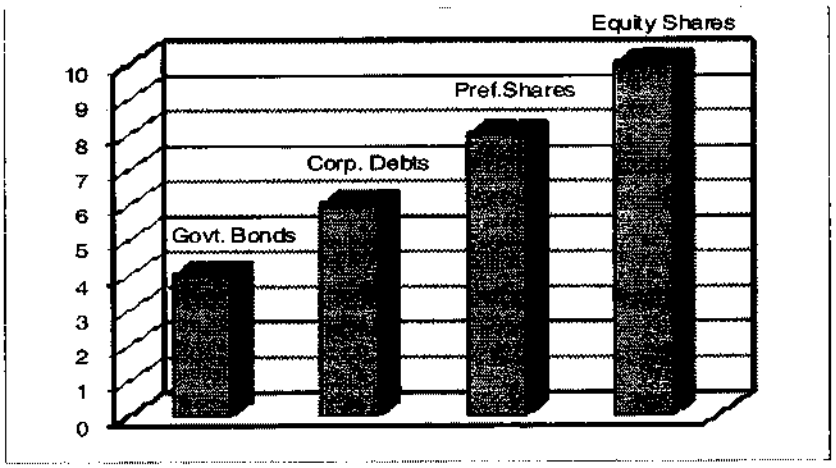
ke= Rf+ β (Rm- Rf)

Where, ke = Expected rate of return to the investors, or cost of equity capital

Rf = Risk free rate of return

Rm= Market rate of return

β = Beta coefficient by which the market risk is determined



Therefore, Required rate of return = Risk free rate + Risk premium.

QUESTION 22:

A company has paid dividend of ₹ 1 per share (of face value of ₹ 10 each) last year and it is expected to grow @ 10% next year. Calculate the cost of equity if the market price of share is ₹ 55.

QUESTION 23:

Moon's Company's Equity share is quoted in the market at ₹ 25 per share currently. The company pays a dividend of ₹ 2 per share and the investor's market expects a growth rate of 6% per year. You are required to:

a) Calculate the company's Cost of Equity Capital.

b) If the Anticipated Growth Rate is 8% p.a., calculate the indicated Market price per share.

c) If the company issues 10% Debentures of face value of ₹ 100 each and realizes ₹ 96 per Debenture while the debenture are redeemable after 12 years at a premium of 12 %, what will be the cost of debentures? (Tax = 50%)

QUESTION 24:

Gopu Ltd has an EPS of ₹ 9 per share. Its Dividend payout ratio is 40%. Its Earning and Dividends are expected at 5% per annum. Find out the cost of Equity Capital under various approaches, if its Market Price is ₹ 36 per share.

QUESTION 25:

Sherni Ltd is a large company with several thousand shareholders. An investors buys 100 shares of the company at the beginning of the year at a market price of ₹ 225. The par value of each share is ₹ 10. During the year, the company pays a dividend at 25%. The price of the share at the end of the year is ₹ 267.50. Calculate the total return on the investment. Suppose the investor sells the shares ta end of the year, what would be the cash inflows at the end of the year.

QUESTION 26:

Calculate the Cost of Equity Capital of H Ltd whose Risk-Free Return equals 10%. The firm's beta is 1.75 and the Return on the Market Portfolio is 15%.

QUESTION 27 (homework sum)

From the following information, determine the cost of equity capital using the CAPM approach.

a. Required rate of return on risk-free security, 8%.

b. Required rate of return on market portfolio of investment is 13%.

c. The firm's beta is 1.6.

QUESTION 28 (homework sum)

The beta coefficient of Target Ltd. is 1.4. The company has been maintaining 8 % rate of growth in dividends and earning. The last dividend paid was ₹4 per share. The return on government securities is 10 % while the return on market portfolio is 15 %. The current market price of one share of Target Ltd. is ₹ 36.

(a) What will be the equilibrium price per share of Target Ltd?

(b) Would you advise for purchasing the share?

QUESTION 29 (homework sum)

Calculate the cost of equity capital of Mamon Ltd., whose risk free rate of return equals 10%. The firm's beta equals 1.75 and the return on the market portfolio equals to 15%.

QUESTION 30 (homework sum)

If the risk-free rate of return and the market rate of return of an investment are 14% and 18% respectively, calculate the cost of equity share capital if (a) β=1, (b) β= 2/3 and (c) β=5/4.

QUESTION 31 (homework sum)

From the following information in respect of a company, you are required to calculate the cost of equity using CAPM approach:

(a) Risk-free rate of return 12%

(b) Expected market price of equity shares at the year end is ₹ 1,400

(c) Initial price of investment in equity shares of the company is ₹ 1,200

(d) Beta risk factor of the company is 0.70

(e) Expected dividend at the year end is ₹ 140

D. Cost of Retained Earnings (kr)

Retained earnings, as a source of finance for investment proposals, differ from other sources like debt, preference shares and equities. The use of debt is associated with a contractual obligation to pay a fixed rate of interest to the suppliers of funds and, often, repayment of principal at some predetermined date. An almost similar kind of stipulation applies to the use of preference shares also. In the case of ordinary shares, although there is no provision for any predetermined payment to the shareholders, yet a certain expected rate of dividend provides a starting point for the computation of cost of equity capital. That retained earnings do not involve any formal arrangement to become a source of funds is obvious. In other words, there is no obligation, formal or implied, on a firm to pay a return on retained earnings. Apparently, retained earnings may appear to carry no cost since they represent funds which have not been raised from outside. The contention that retained earnings are free of cost, however, is not correct. On the contrary, they do involve cost like any other source. The alternative use of retained earnings is based on 'external-yield criterion'. In brief, the cost of retained earnings represents an opportunity cost in terms of the return on their investment in another enterprise by the firm whose cost of retained earnings is being considered. The opportunity cost given by the external-yield criterion which can be consistently applied can be said to measure the kr which is likely to be equal to the ke. Therefore, ke should be used as kr but the latter would lower than the former due to differences in flotation cost and due to dividend payment tax.

The part of the distributable profit which is set aside without distributing among the shareholders in order to strengthen the financial position of the business is called retained earnings. Though these funds do not cost anything there is an opportunity cost involved. The opportunity cost of retained earnings is simply the dividend foregone by the shareholders. The two methods for measuring this cost is as follows:

(a) It assumes that the shareholders would have invested the dividend on receipt. So, the cost of equity is to be adjusted by the marginal tax rate and the applicable commission, brokerage, etc. The formula for calculating
kr would be
$kr = ke\ (1-t)\ (1-C)$
Where, ke = Cost of equity
t = Marginal tax rate
C = Commission, brokerage, etc

(b) The second method assumes the retained earnings as the investment of existing shareholders in the firm itself. So, the retained earnings may be treated at par with the equity share capital. This is known as the external yield criterion. The cost of retained earnings may be measured in the same way as that of equity share capital.

QUESTION 32

A firm's ke (return available to shareholders) is 10%, the average tax rate of shareholders is 30% and it is expected that 2% is brokerage cost that shareholder will have to pay while investing their dividends in alternative securities. What is the cost of retained earnings?

QUESTION 33

AKS Ltd. retains ₹10,00,000 out of its current earnings. The expected rate of return to the shareholders, if they had invested the funds elsewhere is 10%. The brokerage is 2% and the shareholders come in 30% tax bracket. Calculate the cost of retained earnings.

(II) Weighted Average Cost of Capital (WACC)

The term cost of capital is used to denote composite or weighted average or overall cost of capital. Once the component costs have been calculated, they are multiplied by the proportions of the respective source of capital to obtain the weighted average cost of capital (WACC). Here, weighted average concept is used not the simple average. The simple average cost of capital is not appropriate to use because firms hardly use various sources of funds equally in the capital structure. It is also important to remember that the weighted average after tax costs of the individual component of capital is to be taken not the before tax weighted average cost.The main reason behind the computation of overall cost of capital is to use this rate as the decision criterion in capital budgeting or investment decision. Generally, it may be stated that this cost of capital is taken to be the cut-off rate for determining the profitability of proposed projects.
Steps taken for calculation of WACC

Step-1: Compute the specific cost of each source of capital.
Step-2: Calculate the proportion (or %) of each source of capital to the total capital (weight)
Step-3: Multiply the cost of each source by its proportion in the capital structure.
Step-4: Add the weighted component cost to get the WACC.

This is noted that the weighted average cost of capital may change due to (i) change in the cost of each component or (ii) change in the relative important of each companies i.e. the change in proportion or weight or (iii) change in both. The crucial part of the exercise is the decision regarding appropriate weights and the related aspects. We first illustrate the relevant aspects of the choice of the weights. This is followed by the mechanics of computation of k_0 which is relatively simple.

- **Book Value Weight**

Under this method, weight are computed by taking relative proportions of various sources of capital to the capital structure of the firm. The main advantage of book value weight is that book values are readily available from the published annual accounts or other records. The other advantage is that it depicts the real situation of the firm.

The main advantage of this weight are stated below:

(a) Book value weight is easier to calculate as the book values of various source of finance are readily available from the published annual report of the company.
(b) A firm set capital structure target on the basis of book value rather than market value. Therefore, computation of overall cost of capital on the basis of book value weight provides real situation of the firm
(c) Computation of debt-equity ratio for the purpose of analysing the capital structure also depends on the book values.
(d) If the securities of the company are not listed in the stock exchange, then it is not possible to make available the market value of the sources of finance, or even if is available is not reliable. In such a situation there is no other alternative, rather tp use book value weights for the purpose of computation of weighted average cost of capital.

The main disadvantages of this weight are stated below:

(a) There is no relationship in between book value weight and the market value of various sources of finance.
(b) Management cannot take decision relating to capital budgeting, financing etc. on the basis of book value weight.
(d) Computation of weighted average cost of capital on the basis of book value weight is in conflict with the concept of cost of capital because the latter is computed by considering the market value of various sources of finance.

QUESTION 34:

The following details are provided by the Global Limited:

Particulars	Amount
	(₹)
Equity Share Capital	65,00,000
12% Preference Share Capital	12,00,000
15% Redeemable Debentures	20,00,000
10% Convertible Debenture	8,00,000

The cost of equity capital for the company is 16.30% and Income Tax rate for the company is 30%. You are required to calculate the Weighted Average Cost of Capital (WACC) of the company.

QUESTION 35:

Sabki Limited has obtained funds from the following sources, the specific cost are also given against them:

Particulars	Amount (₹)	Cost of Capital
Equity Share Capital	30,00,000	15%
Preference Shares	8,00,000	8%
Retained earnings	12,00,000	11%
Debentures	10,00,000	9% (before Tax)

You are required to calculate weighted average cost of capital. Assume that Corporate tax rate is 30 percent

QUESTION 36:

The capital structure of All in one Ltd is – Equity Capital ₹ 5 Lakhs, Reserve and Surplus ₹ 2 Lakhs and Debentures ₹ 3 Lakhs. The Cost of Capital before tax are – (a) Equity – 18% and (b) Debentured – 10%. You are required to compute the Weighted Average Cost of Capital, assuming a tax rate of 35%.

QUESTION 37:

Bahubali Ltd. has furnished the following information:

Earning per share(ESP)	₹4
Dividend payout ratio	25%
Market price per share	₹40
Rate of tax	30%
Growth rate of dividend	8%

The company wants to raise additional capital of ₹ 10 lakhs including debt of ₹ 4 lakhs. The cost of debt (before tax) is 10% upto ₹ 2 lakhs and 15% beyond that. Compute the after tax cost of equity and debt and the weighted average cost of capital.

QUESTION 38:

Humari Limited has in issue 5,00,000 ₹ 1 ordinary shares whose current ex-dividend market price is ₹1.50 per share. The company has just paid a dividend of 27 paise per share, and dividends are expected to continue at this level for sometime. If the company has no debt capital, what is the weighted average cost of capital?

- **Market Value Weight**

Under this method, the proportion of market values of various sources of capital are assigned as weight in computing the WACC. Book value weight may be operationally convenient but market value is theoretically more consistent sound and better indicatory of firm's capital structure. The desirable practice is to employ market weight to compute the firm's cost of capital as it aims to maximize the value of the firm.

The main advantage of using market value weights are stated below:-

(a) Costs of specific sources are computed on the basis of their respective market value. Now, if the market values of various source of finance are used as weights in computing the weighted average cost of capital, then a consistency in the approach is maintained.

(b) Use of market value weights are in consistent with the objective of maximization of value of the firm.

(c) Use of market value of various source of finance which constitute the capital structure of the firm will reflect the current cost of capital. Therefore, it will provide a better picture of the firm's cost of capital.

But there are some practical difficulties for using market value weights which are stated below:-

(a) Market value of the securities may change frequently. This will in turn change the overall cost of capital which will make the decision criterion for investment somewhat difficult.

(b) Market value of all sources of finance is not readily available like book value, particularly the market value of retained earnings.

QUESTION 39:

Maheshwari Ltd. has the following capital structure on October 31, 2015:

Particulars	Amount (₹)
Equity Share Capital (2,00,000 shares of ₹ 10 each)	20,00,000
Reserves and Surplus	20,00,000
12% Preference Shares	10,00,000
9% Debentures	30,00,000
Total	80,00,000

The market price of equity share is ₹ 30. It is expected that the company will pay next year a dividend of ₹ 3 per share, which will grow at 7% forever. Assume 40% income tax rate.

You are required to compute weighted average cost of capital using market value weights.

QUESTION 40:

The capital structure of Super Ltd. is as under:

9%Debenture	₹2,75,000
11%Preferenceshares	₹ 2,25,000
Equity shares (face value: ₹ 10pershare)	₹5,00,000
	₹ 10,00,000

Additional information:

a) ₹ 100 per debenture redeemable at par has 2% floatation cost and 10 years of maturity. The market price per debenture is ₹105.

b) ₹ 100 per preference share redeemable at par has 3% floatation cost and 10 years of maturity. The market price per preference share is ₹106.

c) Equity share has ₹ 4 floatation cost and market price per share of ₹ 24. The next year expected dividend is ₹ 2 per share with annual growth of 5%. The firm has a practice of paying all earnings in the form of dividends.

d) Corporate Income-tax rate is 35%.

Required : Calculate Weighted Average Cost of Capital (WACC) using market value weights.

QUESTION 41:

Reshu Limited wishes to raise additional finance of ₹ 10 lakhs for meeting its investment plans. It has ₹ 2,10,000 in the form of retained earnings available for investment purposes. Further details are as following:

(1)	Debt / equity mix	30% / 70%
(2)	Cost of debt - Upto ₹ 1,80,000	10% (before tax)
	- Beyond ₹ 1,80,000	16% (before tax)
(3)	Earnings per share	₹ 4
(4)	Dividend pay out	50% of earnings
(5)	Expected growth rate in dividend	10%
(6)	Current market price per share	₹ 44
(7)	Tax rate	50%

You are required:

(a) To determine the pattern for raising the additional finance.

(b) To determine the post-tax average cost of additional debt.

(c) To determine the cost of retained earnings and cost of equity, and overall weighted average after tax cost of additional finance

(d) To determine the cost of retained earnings and cost of equity, and
(e) overall weighted average after tax cost of additional finance

QUESTION 42:

The following is the capital structure of a Company

Source of capital	Book value (₹)	Market value (₹)
Equity shares @ ₹ 100 each	80,00,000	1,60,00,000
9%Cumulative preference shares @ ₹ 100 each	20,00,000	24,00,000
11% Debentures	60,00,000	66,00,000
Retained earnings	40,00,000	Nil
Total	2,00,00,000	2,50,00,00

The current market price of the company's equity share is ₹ 200. For the last year the company had paid equity dividend at 25 per cent and its dividend is likely to grow 5 per cent every year. The corporate tax rate is 30 per cent and shareholders personal income tax rate is 20 per cent.

You are required to calculate:

(a) Cost of capital for each source of capital.
(b) Weighted average cost of capital on the basis of book value weights.
(c) Weighted average cost of capital on the basis of market value weights

QUESTION 43:

Jaismin Ltd. has the following book value capital structure:

Equity Capital (in shares of ₹ 10 each, fully paid up-at par)	₹ 15 crores
11% Preference Capital (in shares of ₹ 100 each, fully paid up-at par)	₹ 1 Crores
Retained Earnings	₹ 20 crores
13.5% Debentures (of ₹ 100each)	₹ 10 crores
15%TermLoans	₹ 12.5 crores

The next expected dividend one equity shares per share is ₹3.60; the dividend per share is expected to grow at the rate of 7%. The market price per share is ₹40.

Preference stock, redeemable after ten years, is currently selling at ₹ 75 per share.
Debentures, redeemable after six years, are selling at ₹ 80 per debenture.

The Income tax rate for the company is 40%.

i. Required: Calculate the current weighted average cost of capital using:
   a. book value proportions; and
   b. market value proportions.

ii. Define the weighted marginal cost of capital schedule for the company, if it raises ₹ 10 crores next year, given the following information:
   a. the amount will be raised by equity and debt in equal proportions;
   b. the company expects to retain ₹ 1.5 crores earnings next year;
   c. the additional issue of equity shares will result in the net price per share being fixed at ₹32;
   d. the debt capital raised by way of term loans will cost 15% for the first ₹ 2.5 crores and 16% for the next ₹ 2.5crores.

QUESTION 44:

Pokemon Limited has the following book value capital structure:

Equity Share Capital (150 million shares, ₹ 10 par)	₹ 1,500 million
Reserves and Surplus	₹ 2,250 million
10.5% Preference Share Capital (1 million shares, ₹ 100 par)	₹ 100 million
9.5% Debentures (1.5 million debentures, ₹ 1,000 par)	₹ 1,500 million
8.5% Term Loans from Financial Institutions	₹ 500 million

The debentures of ABC Limited are redeemable after three years and are quoting at ₹ 981.05 per debenture. The applicable income tax rate for the company is 35%.The current market price per equity share is ₹ 60. The prevailing default-risk free interest rate on 10- year GOI Treasury Bonds is 5.5%. The average market risk premium is 8%. The beta of the company is 1.1875. The preferred stock of the company is redeemable after 5 years is currently selling at ₹ 98.15 per preference share.

Required:

i) Calculate weighted average cost of capital of the company using market value weights.

ii) Define the marginal cost of capital schedule for the firm if it raises ₹ 750 million for a new project. The firm plans to have a debt of 20% of the newly raised capital. The beta of new project is 1.4375. The debt capital will be raised through term loans, it will carry interest rate of 9.5% for the first ₹ 100 million and 10% for the next ₹ 50million.

QUESTION 45:

Pub G Ltd. has the following book-value capital structure as on March 31,2015.

Equity share capital (2,00,000 shares)	40,00,000
11.5% Preference shares	10,00,000
10% Debentures	30,00,000
	80,00,000

The equity shares of the company are sold for ₹ 20. It is expected that the company will pay next year a dividend of ₹ 2 per equity share, which is expected to grow by 5% p.a. forever. Assume a 35% corporate tax rate.

Required:

i) Compute weighted average cost of capital (WACC) of the company based on the existing capital structure.

ii) Compute the new WACC, if the company raises an additional ₹ 20 lakhs debt by issuing 12% debentures. This would result in increasing the expected equity dividend to ₹ 2.40 and leave the growth rate unchanged, but the price of equity share will fall to ₹ 16 per share.

QUESTION 46 (Homework sum)

AKS Ltd. has the following capital structure on October 31, 2021:

Source of Capital	₹
Equity Share Capital (1,00,000 shares of ₹10 each)	10,00,000
Reserve & Surplus	10,00,000
12% Preference Shares	5,00,000
9% Debentures	15,00,000

The market price of equity share is ₹ 50. It is expected that the company will pay next year a dividend of ₹ 5 per share, which will grow at 7% forever. Assume 30% income tax rate. You are required to compute weighted average cost of capital using market value weights.

QUESTION 47 (Homework sum)

Asianol Ltd. has the following Capital Structure: ₹	(in Lakhs)
Equity Share Capital (10 lakhs shares)	100
12% Preference Share Capital (10,000 shares)	10
Retained Earnings	120
14% Debentures (70,000 Debentures)	70
14 % Term Loan	100
	400

The market price per equity share is ₹ 25. The next expected dividend per share is ₹ 2 and is expected to grow at 8%. The preference shares are redeemable after 7 years at per and are currently quoted at ₹ 75 per share. Debentures are redeemable after 6 years at per and their current market quotation is ₹90 per debenture. The tax rate applicable to the firm is 50%.

Marginal Cost of Capital

Marginal cost of capital may be defined as the cost of raising additional rupee of capital. The weighted average cost of new or incremental capital is also known as marginal cost of capital. The marginal cost of capital is derived when are calculate the weighted average cost of capital by using marginal weight.

This concept is used in capital budgeting decision. It is used as cut-off rate for any investment. To calculate the marginal cost of capital, the intended financing proportion should be applied as weight to marginal component cost. When a firm raises funds in proportional manner and the components cost remains unchanged, there ask be no difference between average cost of capital of the total funds and the marginal cost of capital.

QUESTION 48

The following is the capital structure of ABC Ltd. as on 31.12.2021

Source of Capital	₹
Equity Share Capital (5,000 shares of ₹100 each)	5,00,000
10% Preference Shares (of ₹100 each)	2,00,000
12% Debentures	3,00,000
	10,00,000

The market price of the company's share is ₹ 110 and it is expected that a dividend of ₹ 10 per share would be declared for the year 2021. The dividend growth rate is 6%:

(i) If the company is in the 40% tax bracket, compute the weighted average cost of capital.

(ii) Assuming that in order to finance an expansion plan, the company intends to borrow a fund of ₹5 lakhs bearing 14% rate of interest, what will be the company's revised weighted average cost of capital? This financing decision is expected to increase dividend form ₹10 to ₹12 per share. However, the market price of equity share is expected to decline form ₹ 110 to ₹105 per share.

QUESTION 49

XYZ Ltd. has the following book value capital structure:

Equity Capital (in share of ₹ 10 each, fully paid up at par)	₹ 30 crore
10% Preference Capital (in shares of ₹ 100 each, fully paid up at par)	₹ 2 crore
Retained Earnings	₹ 40 crore
14% Debentures (of ₹ 100 each)	₹ 20 crore
15% Term Loans	₹ 25 crore

The next expected dividend on equity shares per share is ₹ 3.60; the dividend per share is expected to grow at the rate of 5%. The market price per share is ₹30.

Preference stock, redeemable after six years, are selling at ₹ 80 per debenture.

The income tax rate for the company is 30%.

(i) Required to calculate the current weighted average cost of capital using:

(a) Book value proportions; and

(b) Market value proportions

(ii) Determine the weighted marginal cost of capital schedule for the company, if it raises ₹20 crores next year, given the following information:

(a) The amount will be raised by equity and debt in equal proportions;

(b) The company expects to retain ₹ 3 crores earning next year;

(c) The additional issue of equity shares will result in the net price per share being fixed at ₹25

(d) The debt capital raised by way of term loans will cost 15% for the first ₹5 crores and 16% for the next 5 crores.

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CHAPTER 5- CAPITAL STRUCTURE AND STACKING

• MEANING OF CAPITAL STRUCTURE

A firm needs funds for long-term requirements and working capital. These funds are collected through different sources both short-term and long term. The long-term funds required by a firm are mobilized through owner's funds (equity share, preference shares and retained earnings) and long-term debt (debentures and bonds). A mix of various long-term sources of funds employed by a firm is called capital structure.

According to Gerestenberg, 'capital structure of a company refers to the composition or make-up of its capitalization and it includes all long-term capital resources, viz, loans, bonds, shares and reserves'. Thus, capital structure is made with debt and equity securities and refers to permanent financing of a firm.

Financial Manager has to plan the appropriate mix of different securities in total capitalization in such a way as to minimize the cost of capital and maximize the earnings per share to the equity shareholders.

There may be four fundamental patterns of capital structure as follows:

(a) Equity capital only (including Reserves and Surplus)

(b) Equity and preference capital

(c) Equity, preference and long-term debt i.e. debentures, bonds and loans from financial institutions etc.

(d) Equity and long-term debt.

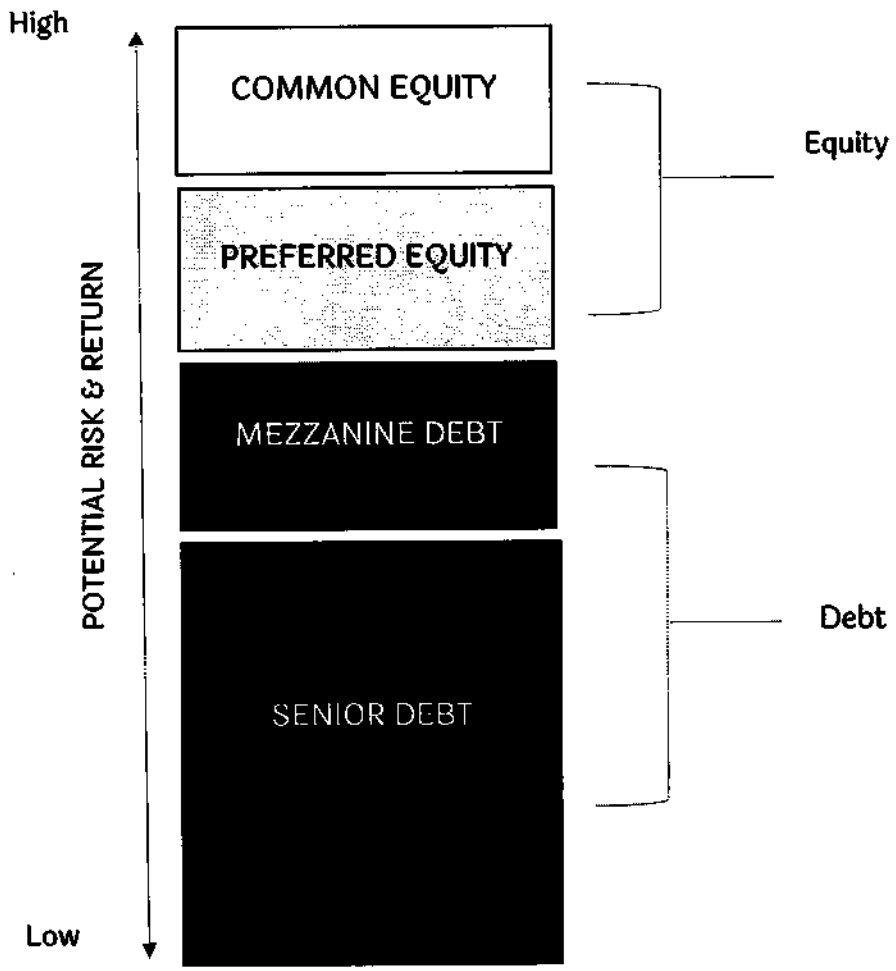
Some authors use capital structure and financial structure interchangeably. But both are different concepts. Financial structure refers to the way in which the total assets of a firm are financed. In other words, financial structure refers to the entire liabilities side of the Balance Sheet. But capital structure represents only long-term sources of funds and excludes all short-term debt and current liabilities. Thus, financial structure is a broader one and capital structure is only part of it.

On the other hand, the capital stack is one of the most important concepts for investors interested in evaluating real estate risk and projected rate of return. Understanding the capital stack to assess trade-offs can protect your investment from undue risk, or insufficient gains.

• MEANING OF CAPITAL STACKING

In simple terms, the capital stack refers to the layers of capital. The capital stack represents the underlying financial structure of a commercial real estate deal. Often, the capital stack is presented as a graphic that shows the different types of capital in a deal stacked above each other, like a cake with many layers. The capital stack is typically comprised of four sections in the following order: common equity, preferred equity, mezzanine debt, and senior debt. Although common equity is listed first in the stack, it holds the lowest priority, meaning common equity lenders are paid last.

The graphical presentation of capital stack is –



Senior Debt

Senior debt is the bedrock of the capital stack, which typically takes up the most significant portion of the stack. It is also the least risky position, as it's first in line to get paid back in the event of a default or bankruptcy. As an investor, you should consider a senior debt investment if you want the least amount of risk.

Senior debt is generally secured by a mortgage or deed to the property, which will serve as collateral for the loan. It's low risk because, in a worst-case scenario of asset underperformance, you can initiate a foreclosure process to recover your full capital investment before any other participant. Its low-risk nature also delivers the lowest potential return to investors, which is a low fixed interest rate.

Mezzanine Debt

Mezzanine debt, sometimes called junior debt, is next in line to get paid out. This debt is often financed by investors rather than a bank. Because this debt is only paid back after all the senior debt has been paid back, it holds more risk than the senior debt. To compensate for this risk, investors earn a higher interest rate than the senior debt, meaning they have a higher potential return.

Mezzanine debt is often critical to the success of a transaction because senior debt holders will typically only lend up to 50% - 60% of a project in some cases, and unless the equity holders can come up with the remaining, then mezzanine debt is necessary. Sometimes mezzanine debt can be called "bridge financing" because it bridges that gap between the senior debt and equity.

Equity Financing

As mentioned before, equity investors buy shares of ownership of the property. These shares will go up and down in value relative to the property valuation. If the property appreciates, the value of the shares will go up. If the property sells at a higher valuation than initially purchased, the investors will profit. But even in the equity stack, not all shares are created equal.

Common Equity

Last in line for payouts are common equity holders. Being a common equity investor means being an owner of the deal. Common equity has the highest return potential, but it's also the riskiest because holders can only be paid after all debt holders, and preferred equity investors have received their returns.

However, in exchange for being last in line, common equity investors will receive all the profit upon the property sale. In the event of the property appreciates significantly in value, they stand to earn the most substantial return.

Unlike the other stacks, there is also no cap on your potential profit or a fixed term for expected returns.

Preferred Equity

After all the debts been paid off, preferred equity shares are next in the payback line. Preferred equity often acts as a hybrid between equity and debt. While technically equity shares, they also often have a payout schedule similar to mezzanine debt (but paid back after the mezzanine debt is paid back in full). Unlike debt, these shares are not backed by any collateral, which means they hold significant risk in the event of a bankruptcy. While investors hold significant risk here, they are rewarded with an even higher interest rate than the mezzanine debt and a preference to be paid back before the common equity.

Features of an Appropriate Capital Structure

A capital structure will be considered to be appropriate if it possesses following features:

(a) Profitability: The capital structure of the company should be most profitable. The most profitable capital structure is one that tends to minimize cost of financing and maximize earnings per equity share.

(b) Solvency: The pattern of capital structure should be so devised as to ensure that the firm does not run the risk of becoming insolvent. Excess use of debt threatens the solvency of the company. The debt content should not, therefore, be such that which increases risk beyond manageable limits.

(c) Flexibility: The capital structure should be flexible to meet the requirements of changing conditions. Moreover, it should also be possible for the company to provide funds whenever needed to finance its profitable activities.

(d) Conservatism: The capital structure should be conservative in the sense that the debt content in the total capital structure does not exceed the limit which the company can bear. In other words, it should be such as is commensurate with the company's ability to generate future cash flows.

(e) Control: The capital structure should be so devised that it involves minimum risk of loss of control of the company.

Determinants of Capital Structure

The following are the factors influencing the capital structure decisions.
The capital structure of a firm depends on a number of factors and these factors are of different Generally, the following factors should be considered while determining the capital structure of a company.

(a) Trading on Equity and EBIT-EPS Analysis

The use of long-term debt and preference share capital, which are fixed income bearing securities, along with equity share capital is called financial leverage or trading on equity. The use of long-term debt capital increases the earnings per share as long as the return on investment is greater than the cost of debt. Preference share capital will also result in increasing EPS. But the leverage effect is more pronounced in case of debt because of two reasons:
(i) Cost of debt is usually lower than the cost of preference share capital.
(ii) The interest paid on debt is tax deductible.
Because of its effects on the earnings per share, financial leverage is one of the important considerations in planning the capital structure of a company. The companies with high level of Earnings Before Interest and Taxes (EBIT) can make profitable use of the high degree of leverage to increase the return on the shareholders equity. The EBIT-EPS analysis is one important tool in the hands of the financial manager to get an insight into the firms' capital structure planning. He can analyse the possible fluctuations in EBIT and their impact on EPS under different financing plans. Under favourable conditions, financial leverage increases EPS, however it can also increase financial risk to shareholders. Therefore, the firm should employ debt to such an extent that financial risk does not spoil the leverage effect.

(b) Growth and Stability of Sales

This is another important factor which influences the capital structure of a firm. Stability of sales ensures stable earnings, so that the firm will not face any difficulty in meeting its fixed commitments of interest payment and repayment of debt. So, the firm can raise a higher level of debt. In the same way, the rate of growth in sales also affects the capital structure decision. Usually, greater the rate of growth of sales, greater can be the use of the debt in the financing of a firm. On the other hand, the firm should be very careful in employing debt capital if its sales are highly fluctuating and declining.

(c) Cost of capital

Cost of capital is another important factor that should be kept in mind while designing the capital structure of a firm. The capital structure should be designed in such a way that the firm's overall cost of capital is the minimum. Cost of capital is the minimum return expected by its suppliers. Of all the sources of capital, equity capital is the costliest as the equity shareholders bear the highest risk. On the other hand, debt capital is the cheapest source because the interest is paid on it by the firm whether it makes profits or not. Moreover, interest on debt capital is tax deductible which makes it further cheaper.

Preference share capital is also cheaper than equity capital as the dividends is paid at a fixed rate on preference shares. So, the overall cost of capital depends on the proportion in which the capital is mobilized from different sources of finance. Hence, capital structure should be designed carefully so that overall cost of capital is minimized.

(d) Control

Sometimes, the designing of capital structure of a firm is influenced by the desire of the existing management to retain the control over the firm. Whenever additional funds are required, the management of the firm wants to raise the funds without any loss of control over the firm. If equity shares are issued for raising funds, the control of the existing shareholders is diluted. Because of this, they may raise the funds by issuing fixed charge bearing debt and preference share capital, as preference shareholders and debt holders do not have any voting right. The Debt financing is advisable from the point of view of control. But over-dependence on debt capital may result in heavy burden of interest and fixed charges and may lead to liquidation of the company.

(e) Flexibility

Flexibility means the firm's ability to adapt its capital structure to the needs of the changing conditions. Capital structure should flexible enough to raise additional funds whenever required, without much delay and cost. The capital structure of the firm must be designed in such a way that it is possible to substitute one form of financing for another to economise the use of funds. Preference shares and debentures offer the highest flexibility in the capital structure, as they can be redeemed at the discretion of the firm.

(f) Marketability and Timing

Capital market conditions may change from time to time. Sometimes there may be depression and at over times there may be boom condition in the market. The firm should decide whether to go for equity issue or debt capital by taking market sentiments into consideration. In the case of depressed conditions in the share market, the firm should not issue equity shares but go for

debt capital. On the other hand, under boom conditions, it becomes easy for the firm to mobilise funds by issuing equity shares.

The internal conditions of a firm may also determine the marketability of securities. For example, a highly levered firm may find it difficult to raise additional debt. In the same way, a firm may find it very difficult to mobilise funds by issuing any kind of security in the market merely because of its small size.

(g) Floatation Costs:

Floatation costs are not a very significant factor in the determination of capital structure. These costs are incurred when the funds are raised externally. They include cost of the issue of prospectus, brokerage, commissions, etc. Generally, the cost of floatation for debt is less than for equity. So, there may be a temptation for debt capital. There will be no floatation cost for retained earnings. As is said earlier, floatation costs are not a significant factor except for small companies. Floatation costs can be an important consideration in deciding the size of the issue of securities, because these costs as a percentage of funds raised will decline with the size of the issue. Hence, greater the size of the issue, more will be the savings in terms of floatation costs. However, a large issue affects the firm's financial flexibility.

(h) Purpose of Financing

The purpose for which funds are raised should also be considered while determining the sources of capital structure. If funds are raised for productive purpose, debt capital is appropriate as the interest can be paid out of profits generated from the investment. But, if it is for unproductive purpose, equity should be preferred.

(i) Legal Requirements

The various guidelines issued by the Government from time to time regarding the issue of shares and debentures should be kept in mind while determining the capital structure of a firm. These legal restrictions are very significant as they give a framework within which capital structure decisions should be made.

- **Collateral**

Collateral term is very much related and relevant for determining of capital structure as well as capital stacking. The term collateral refers to an asset that a lender accepts as security for a loan. Collateral may take the form of real estate or other kinds of assets, depending on the purpose of the loan. The collateral acts as a form of protection for the lender. That means, if the borrower defaults on their loan payments, the lender can seize the collateral asset and sell it to recoup some or all of its losses.

- **Covenant (Financial and Non-financial), Negative Covenants and Cross Default**

In legal and financial terminology, a covenant is a promise in an indenture, or any other formal debt agreement, that certain activities will or will not be carried out or that certain thresholds will be met. Covenants in finance most often relate to terms in a financial contract, such as a loan document or bond issue stating the limits at which the borrower can further lend. Covenants are often put in place by lenders to protect themselves from borrowers
defaulting on their obligations due to financial actions detrimental to themselves or the business. Covenants are most often represented in terms of financial ratios that must be maintained, such as a maximum debt-to-asset ratio or other such ratios. Covenants can cover everything from minimum dividend payments to levels that must be maintained in working capital to key employees remaining with the firm.

Financial Vs. Non-Financial Covenants

Comparing financial and non-financial covenants in a loan agreement helps us to better understand how agreements are formulated and the way they are executed across various industries. Covenants are a type of promise that exists in contract law and are a part of many borrowing agreements throughout corporate and personal finance.

Financial Covenants

Financial covenants are aspects of an agreement (generally loans) that limit or provide restrictions on how a company or individual operates their finances. A financial covenant can stipulate how much debt a company can take on or even how stringent financial ratios must be maintained as a part of such an agreement. Financial covenants, by their very definition, revolve around the financial aspects of an agreement or contract.

Non-Financial Covenants

Non-financial covenants also serve the purpose of a safety net to the lender. They are usually undertaken by a lender as a measure to prevent the risks related to money-lending activities. Non-financial covenants come with many of the complementary aspects to an agreement that do not discuss finances. They are a critical part of financial agreements that help guide the terms of a contract, as well as provide barriers for one or either party to operate between. It helps to ensure the faithful execution of the contract that occurs in good faith by the two signing parties.

Positive Covenants

A positive covenant is a clause in a loan contract that requires a borrower to perform specific actions. Examples of positive covenants include requirements to maintain adequate levels of insurance, requirements to furnish audited financial statements to the lender, compliance with applicable laws, and maintenance of proper accounting books and credit rating, if applicable. Positive covenant is also known as affirmative covenant.

A violation of a positive covenant ordinarily results in outright default. Certain loan contracts may contain clauses that provide a borrower with a grace period to remedy the violation. If not corrected, creditors are entitled to announce default and demand immediate repayment of principal and any accrued interest.

Negative Covenants

Negative covenants are put in place to make borrowers refrain from certain actions that could result in the deterioration of their credit standing and ability to repay existing debt. The most common forms of negative covenants are financial ratios that a borrower must maintain as of the date of the financial statements. For instance, most loan agreements require a ratio of total debt to a certain measure of earnings not to exceed a maximum amount, which ensures that a company does not burden itself with more debt than it can afford to service.

Another common negative covenant is an interest coverage ratio, which says that Earnings Before Interest and Taxes (EBIT) must be greater in proportion to interest payments by a certain number of times. The ratio puts a check on a borrower to make sure that he generates enough earnings to afford paying interest.

Cross Default

Cross default is a clause added to certain loans or bonds that stipulate that a default event triggered in one instance will carry over to another. Cross default is a provision in a bond indenture or loan agreement that puts a borrower in default if the borrower defaults on another obligation. For example, a cross-default clause in a loan agreement may say that a person automatically defaults on his car loan if he defaults on his mortgage. The cross default provision exists to protect the interest of lenders, who desire to have equal rights to a borrower's assets in case of default on one of the loan contracts. Cross-default is caused by an event of default of a borrower on another loan. Default typically occurs when a borrower fails to pay interest or principal on time, or when he violates one of the negative or affirmative covenants.

A negative covenant requires a borrower to refrain from certain activities, such as having indebtedness to profits above certain levels or profits insufficient to cover interest payment. Affirmative covenants obligate the borrower to perform certain actions, such as furnishing audited financial statements on a timely basis or maintaining certain types of business insurance.

If a borrower defaults on one of his loans by violating covenants or not paying principal or interest on time, a cross-default clause in another loan document triggers an event of default as well. Typically, cross-default provisions allow a borrower to remedy or waive the event of default on an unrelated contract before declaring a cross-default.

- **Capital Stacking and Risk Analysis**

In simple terms, the capital stack represents the underlying capital structure. When looking at large investments, an important component to review is the 'capital stack.' The capital stack is the organization and hierarchy of all the capital contributed to the financing of a deal. Each part of the stack represents a different slice of the investment, and your position in the stack will determine where and when you are entitled to payouts and returns on your investment.

A simple way to imagine a capital stack is to think of it as a pyramid. This pyramid (as given in previous section) represents all the amounts invested into a deal. As we know, imagine that this pyramid is broken down into levels, and each level is a different source of capital used to finance the project - both debt and equity.

Capital stack may be used as an instrument to mitigate the risk in investment. There are two key considerations with any investment: risk and return. In terms of risk, investors always need to consider what the outcome will be if things do not go according to the plan. Capital stack will help investors in this situation. However, understanding where you fall in the capital stack is essential toward recognizing the full risk and reward potential of an investment. There will always be a trade-off in return potential in exchange for getting paid back sooner. Investing is all about risk mitigation. Understanding the risk tolerance and the time horizon

for earning returns will help to determine whether or not a specific opportunity is a right fit for your portfolio. The capital stack helps in this matter to investors.

The capital stack generally tells the order of priority of payout with respect to other positions within the capital stack. Starting at the bottom of the capital stack, the senior debt will be paid out first, then the mezzanine debt, then the preferred equity and finally the common equity. If the real estate investment doesn't perform as projected, there may not be enough money to repay all money invested along with returns. The bottom layers will be repaid first, and the top layers will incur losses before anyone else. Thus, your position in the capital stack directly relates to your risk. If you happen to be towards the top of a capital stack, you will inherently have more risk than the lower layers. If you are in the bottom of the capital stack, your investment will be safer relative to the other higher positions in the capital stack.

- **Senior and Junior Debt Management**

Debt management is a way to get debt under control through financial planning and budgeting. The goal of a debt management plan is to use these strategies to help you lower your current debt and move toward eliminating it completely. The main objective of debt management is to ensure that the organisation's financing needs and its payment obligations are met at the lowest possible cost over the medium to long run, consistent with a prudent degree of risk.

However, senior debt and junior debt (subordinated debt or mezzanine debt), both are long-term liabilities or noncurrent liabilities of the company. They are an important source of finance in debt financing. There are times when the Cost of Equity exceeds the cost of debt, in such a situation preference shifts from equity to debt. Senior Debt and Junior Debt is important tool for debt financing. They help the company in both, in the short as well as long term. Though their ultimate objective to gather resources are almost the same, they have different characteristics altogether. They both act as a source of finance for the issuing company, but they both carry different levels of risk, interest rate, repayment priority, and may attract different kinds of investors or lenders, etc.

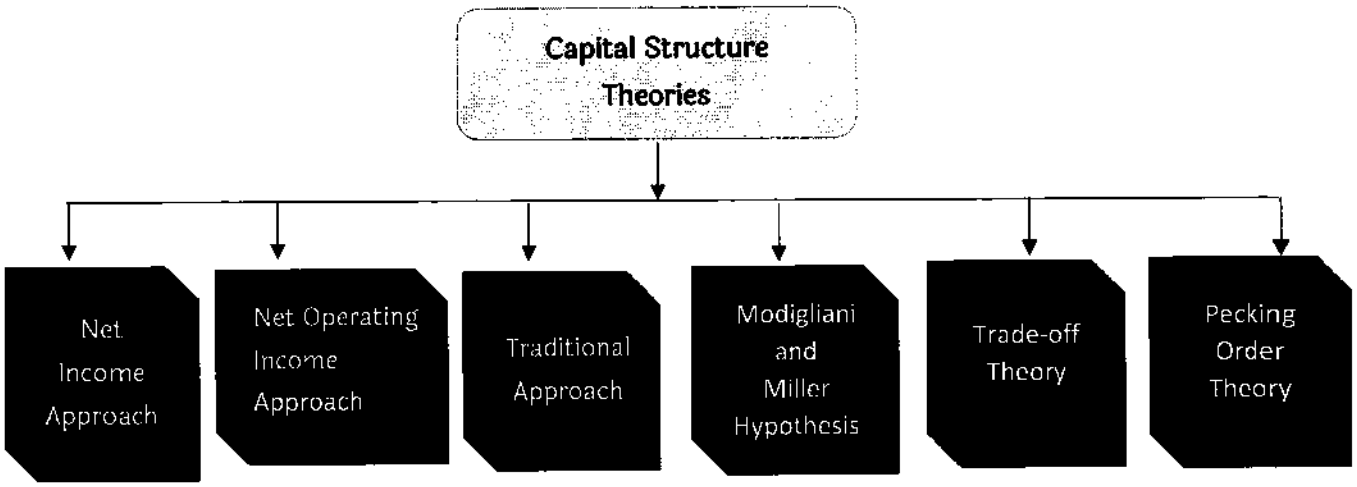
Senior debt is often secured. Secured debt is debt secured by the assets or other collateral of a company and can include liens and claims on certain assets. When a company files for bankruptcy, the issuers of senior debt, typically bondholders or banks are having the best chance of being repaid. Next in line are junior debt holders, preferred stockholders, and common stockholders. In some cases, these parties are paid by selling collateral that has been held for debt repayment.

Senior debt and subordinated debt are long-term sources of debt finance serving different purposes. It would be absolutely wrong to say, one debt is more important than the other. So, both kinds of debt are equally important and should be managed properly for any organisation.

- **Capital Structure Theories**

The existence of an optimum capital structure is not accepted by all. There are two extreme views or schools of thought regarding the existence of an optimum capital structure. As per one view, capital structure influences the value of the firm and cost of capital and hence there exists an optimum relevance and hence there exists an optimum capital structure. On the other hand, the other school of thought advocates that capital structure has no relevance and it does not influence the value of the firm and cost of capital. Reflecting these views, different theories of capital structure have been developed. The main contributors to the theories are David Durand, Ezra Solomon, Modigliani and Miller.

The important theories of capital structure are:



Assumptions underlying the theories:

In order to have a clear understanding of these theories and the relationship between capital structure and value of the firm or cost of capital, the following assumptions are made:

(a) Firms employ only debt and equity.

(b) The total assets of the firm are given.

(c) The firm's total financing remains constant. The degree of leverage can be changed by selling debt to repurchase shares or selling shares to retire debt.

(d) The firm has 100% payout ratio, i.e., it pays 100% of its earnings as dividends.

(e) The operating earnings (EBIT) of the firm are not expected to grow.

(f) The business risk is assumed to be constant and independent of capital structure and financial risk.

(g) Investors have the same subjective probability distribution of expected future operating earnings for a given firm.

(f) There are no corporate and personal taxes. This assumption it relaxed later.

In analysing the capital structure theories, the following basic definitions are used:

S = Market value of common shares

D = Market value of debt

V = Market value of the firm = S + D

NOI = X = Expected net operating income, i.e., Earnings Before Interest and Taxes (EBIT)

NI = NOI - Interest = Net Income or shareholder's earnings.

- **Net Income Approach**

This approach was identified by David Durand. According to this approach, capital structure has relevance, and a firm can increase the value of the firm and minimise the overall cost of capital by employing debt capital in its capital structure. According to this theory, greater the debt capital employed, lower shall be the overall cost of capital and more shall be the value of the firm.

This theory is subject to the following assumptions:

(a) The cost of debt is less than cost of equity.

(b) The risk perception of investors is not affected by the use of debt. As a result, the equity capitalisation rate (ke) and the debt - capitalisation rate (kd) don't change with leverage.

(c) There are no corporate taxes.

According to the above assumptions, cost of debt is cheaper than cost of equity and they remain constant irrespective of the degree of leverage. If more debt capital is used because of its relative cheapness, the overall cost of capital declines and the value of the firm increases.

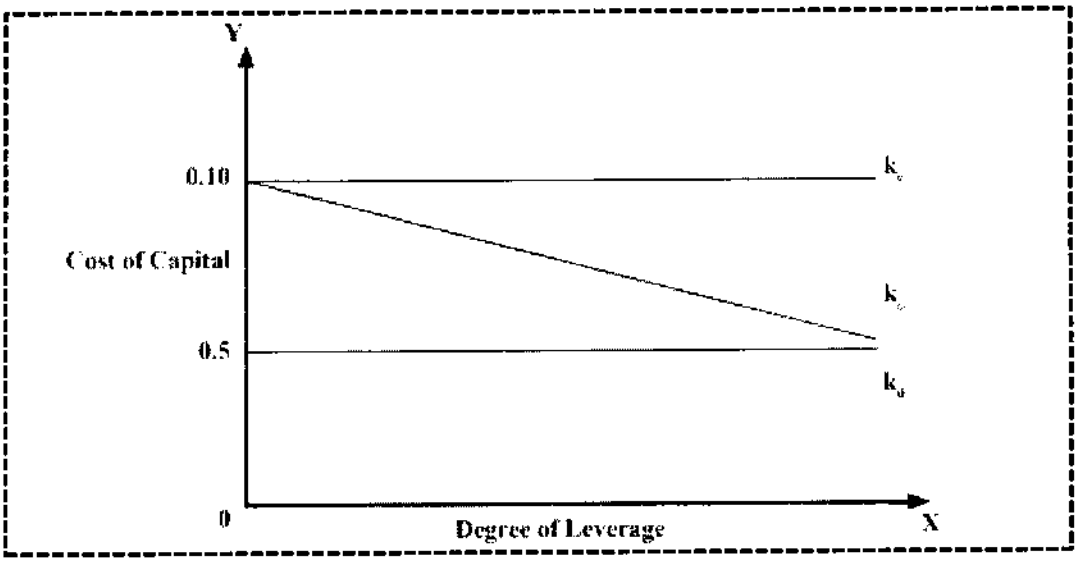
According to this approach:

V = S + D

S = Market Value of Equity = NI / ke

D = Market Value of Debt

ko = Overall Cost of Capital = EBIT/ V



It is evident from the above diagram that when degree of leverage is zero (i.e., no debt capital employed), overall cost of capital is equal to cost of equity (ko = ke). If debt capital is employed further and further which is relatively cheap when compared to cost of equity, the overall cost of capital declines, and it becomes equal to cost of debt (kd)when leverage is one (i.e., the firm is fully debt financed). Thus, according to this theory, the firm's capital structure will be optimum, when degree of leverage is one.

- **Net Operating Income Approach**

This net operating income (NOI) approach is also suggested by David Durand. This represents another extreme view that capital structure and value of the firm are irrelevant. This capital structure of the firm does not influence cost of capital and value of the firm. The value of the firm (V) is determined as follows:

$V = S+D = NOI/K_0$

K_0 The overall cost of capital and depends on the business risk of the firm. It is not affected by financing mix.

The critical assumptions of this theory are:

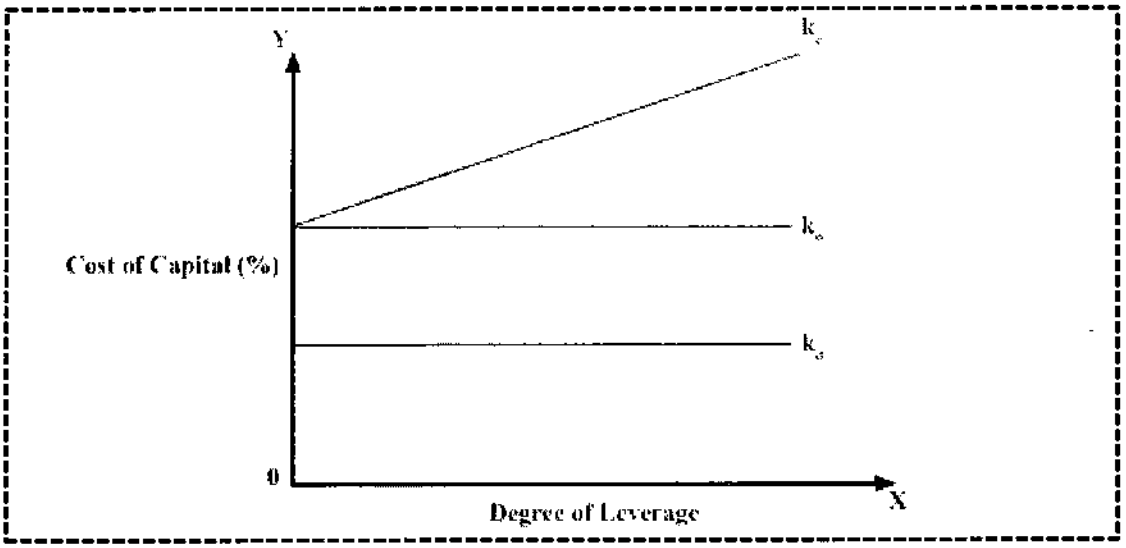
(a) The market capitalises the value of the firm as a whole. Thus, the split between debt and equity is not important.

(b) The business risk remains constant at every level of debt – equity mix.

(c) There are no corporate taxes.

(d) The debt capitalisation rate (kd) is constant.

According to this theory, the use of less costly debt increases the risk to equity shareholders. This causes the equity capitalisation rate (ke) to increase. As a result, the low-cost advantage of debt is exactly offset by the increase in the equity capitalisation rate. Thus, the overall capitalisation rate (ko) remains constant and consequently the value of the firm does not change.



The above diagram shows that ko and kd are constant and ke increases with leverage continuously. The increase in cost of equity (ke) exactly offsets the advantage of low-cost debt, so that overall cost of capital (ko) remains constant, at every degree of leverage. It implies that every capital structure is optimum and there is no unique optimum capital structure.

- **Net Operating Income Approach**

This approach, which is also known as intermediate approach, has been popularised by Ezra Solomon. It is a compromise between the two extremes of Net Income Approach and Net Operating Income Approach. According to this approach, cost of capital can be reduced or the value of the firm can be increased with a judicious mix of debt and equity. This theory says that cost of capital declines with increase in debt capital up to a reasonable level, and later it increases.with a further rise in debt capital. The way in which the overall cost of capital reacts to changes in capital structure can be divided into three stages under traditional position.

Stage I

In this stage, the cost of equity (ke) and the cost of debt (kd) are constant and cost of debt is less than cost of equity. The employment of debt capital up to a reasonable level will cause the overall cost of capital to decline due to the low-cost advantage of debt.

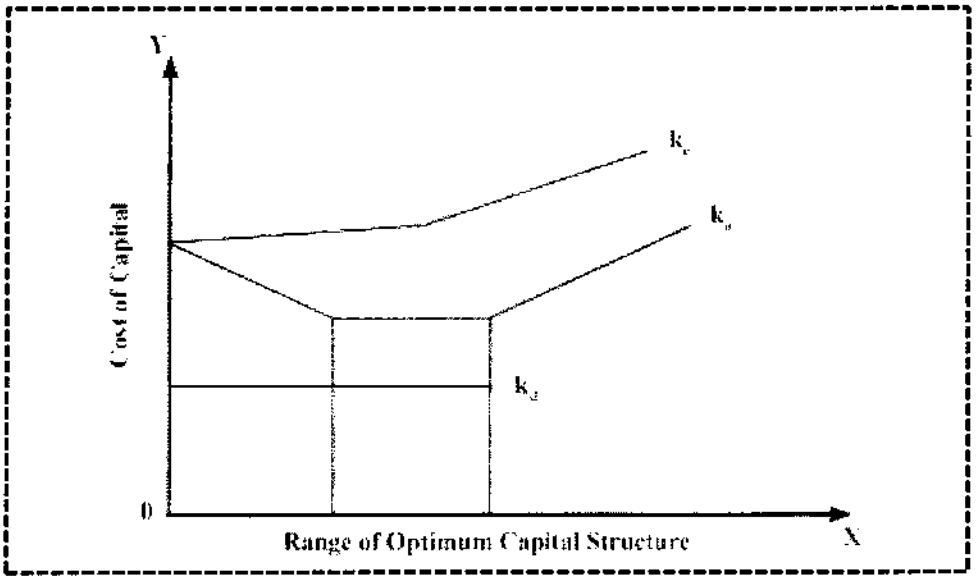
Stage II

Once the firm has reached a reasonable level of leverage, a further increase in debt will have no effect on the value of the firm and the cost of capital. This is because of the fact that a further rise in debt. Capital increases the risk to equity shareholders which leads to a rise in equity capitalisation rate (ke).

This rise in cost of equity exactly offsets the low–cost advantage of debt capital so that the overall cost of capital remains constant.

Stage III

If the firm increases debt capital further and further beyond reasonable level, it will cause an increase in risk to both equity shareholders and debt holders, because of which both cost of equity and cost of debt start rising in this stage. This will in turn to cause an increase in overall cost of capital. If the overall effect of all the three stages is taken, it is evident that cost of capital declines and the value of the firm increases with a rise in debt capital up to a certain reasonable level. If debt capital is further increased beyond this level, the overall cost of capital (ko) tends to rise and as a result the value of the firm will decline.



It is seen from above graph that the overall cost of capital declines with an increase in leverage up to point L and it increases with rise in the leverage after point L1. Hence, the optimum capital structure lies in between L and L1.

- **Modigliani – Miller (M-M) Hypothesis**

The Modigliani – Miller hypothesis is identical with the Net Operating Income Approach. Modigliani and Miller argued that, in the absence of taxes the cost of capital and the value of the firm are not affected by the changes in capital structure. In other words, capital structure decisions are irrelevant and value of the firm is independent of debt–mix.

Basic Propositions:

M-M Hypothesis can be explained in terms of two propositions of Modigliani and Miller. They are:

(a) The overall cost of capital (ko) and the value of the firm are independent of the capital structure. The total market value of the firm is given by capitalising the expected net operating income by the rate appropriate for that risk class.

(b) The financial risk increases with more debt content in the capital structure. As a result cost of equity (ke) increases in a manner to offset exactly the low – cost advantage of debt. Hence, overall cost of capital remains the same.

Assumptions of the M-M Approach:

(a) There is a perfect capital market. Capital markets are perfect when–

(i) Investors are free to buy and sell securities,

(ii) They can borrow funds without restriction at the same terms as the firms do,

(iii) They behave rationally,

(iv) They are well informed, and

(v) There are no transaction costs.

(b) Firms can be classified into homogeneous risk classes. All the firms in the same risk class will have the same degree of financial risk.

(c) All investors have the same expectation of a firm's net operating income (EBIT).

(d) The dividend payout ratio is 100%, which means there are no retained earnings.

(e) There are no corporate taxes. This assumption has been removed later.

Proposition I

According to Modigliani–Miller, for the firms in the same risk class, the total market value is independent of capital structure and is determined by capitalising net operating income by the rate appropriate to that risk class. Proposition I can be expressed as follows:

$V = S+D = X/k_e = NOI/k_o$

Where, V = The market value of the firm

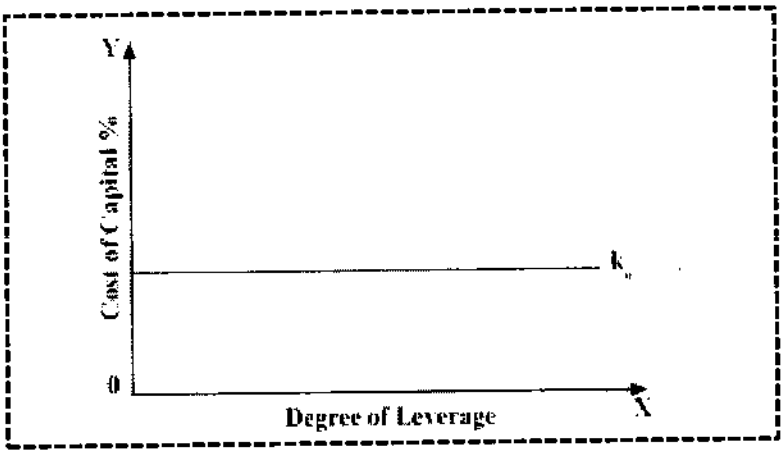
S = The market value of equity

D = The market value of debt

According the Proposition I the average cost of capital is not affected by degree of leverage and is determined as follows:

$k = X/V$

According to M –M, the average cost of capital is constant as shown in the following figure.



Arbitrage Process

According to Modigliani–Miller Hypothesis, two firms identical in all respects except their capital structure, cannot have different market values or different cost of capital. In case, these firms have different market values, the arbitrage will take place and equilibrium in market values is restored in no time. Arbitrage process refers to switching of investment from one firm to

another. When market values are different, the investors will try to take advantage of it by selling their securities with high market price and buying the securities with low market price. The use of debt by the investors is known as personal leverage or homemade leverage.

Reverse Working of Arbitrage Process

Arbitrage process also works in the reverse direction. Leverage has neither advantage nor disadvantage.

If an unlevered firm (with no debt capital) has higher market value than a levered firm (with debt capital) arbitrage process works in reverse direction. Investors will try to switch their investments from unlevered firm to levered firm so that equilibrium is established in no time.

Thus, Modigliani–Miller proved in terms of their proposition I that the value of the firm is not affected by debt equity mix.

Proposition II

Modigliani–Miller's proposition II defines cost of equity. According to them, for any firm in a given risk class, the cost of equity is equal to the constant average cost of capital (ko) plus a premium for the financial risk, which is equal to debt – equity ratio times the spread between average cost and cost of debt.

Thus, cost of equity is:

$Ke = ko + (ko - kd) \times D/S$

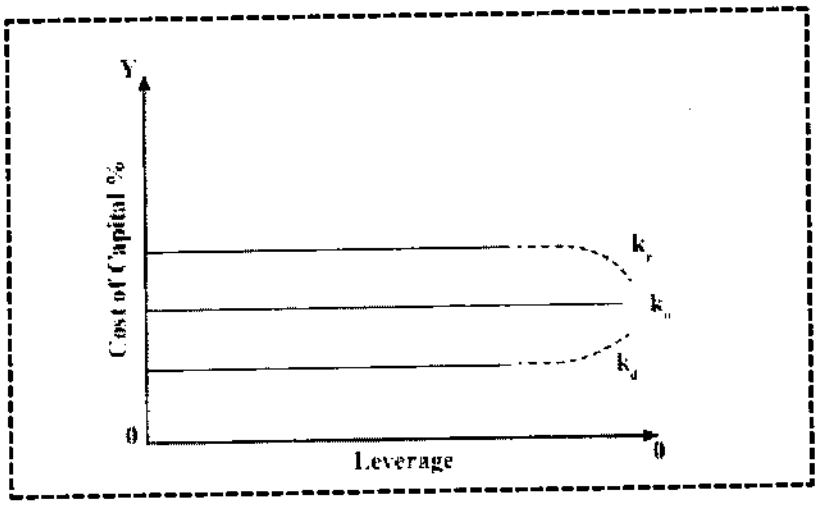
Where, ke = Cost of equity; ko = Average cost of capital

D/S = Debt – Equity ratio; kd = Cost of debt

Modigliani–Miller argue that ko will not increase with the increase in the leverage, because the low – cost advantage of debt capital will be exactly offset by the increase in the cost of equity as caused by increased risk to equity shareholders. The crucial part of the Modigliani–Miller Thesis is that an excessive use of leverage will increase the risk to the debt holders which results in an increase in cost of debt (kd). However, this will not lead to a rise in ko. Modigliani–Miller maintain that in such a case ke will increase at a decreasing rate or even it may decline.

This is because of the reason that at an increased leverage, the increased risk will be shared by the debt holders.

Hence ko remain constant. This is illustrated in the figure given below:



Criticism on M–M Hypothesis

The arbitrage process is the behavioural and operational foundation for M–M Hypothesis. But this process fails the desired equilibrium because of the following limitations.

(i) Rates of interest are not the same for the individuals and firms. The firms generally have a higher credit standing because of which they can borrow funds at a lower rate of interest as compared to individuals.

(ii) Home – Made leverage is not a perfect substitute for corporate leverage. If the firm borrows, the risk to the shareholder is limited to his shareholding in that company. But if he borrows personally, the liability will be extended to his personal property also. Hence, the assumption that personal or home – made leverage is a perfect substitute for corporate leverage is not valid.

(iii) The assumption that transaction costs do not exist is not valid because these costs are necessarily involved in buying and selling securities.

(iv) The working of arbitrage is affected by institutional restrictions, because the institutional investors are not allowed to practice home – made leverage.

(v) The major limitation of Modigliani–Miller hypothesis is the existence of corporate taxes. Since the interest charges are tax deductible; a levered firm will have a lower cost of debt due to tax advantage when taxes exist.

M – M Hypothesis Corporate Taxes

Modigliani and Miller (M–M) later recognised the importance of the existence of corporate taxes. Accordingly, they agreed that the value of the firm will increase or the cost of capital will decrease with the use of debt due to tax deductibility of interest charges. Thus, the optimum capital structure can be achieved by maximising debt component in the capital structure.

According to this approach, value of a firm can be calculated as follows:

$$\text{Value of Unlevered firm (Vu)} = \frac{\text{EBIT} \times (1-t)}{K_e}$$

Where, EBIT = Earnings Before Interest and Taxes
Ko = Overall cost of capital
D = Value of debt capital
t = Tax rate
Value of levered firm (Vl) = Value of Unlevered firm + Debt (tax rate)

- **Trade-off Theory**

When a firm is unable to meet its obligations, it results in financial distress that can lead to bankruptcy. When a firm experiences financial distress several things can happen such as:

(i) The legal and administrative costs associated with bankruptcy proceedings are quite high.

(ii) Bankruptcy cases often take years to settle and during this period machineries and equipments rust, buildings deteriorate, inventories become obsolete, so on and so forth. If assets are sold under distress conditions, they may fetch a price that is significantly less than their economic value.

(iii) Employees, customers, suppliers, distributors, investors, and other stakeholders dilute their commitment to the firm and this has an adverse impact on sales, operating costs, and financing costs.

A major contributor to financial distress is debt. The greater the level of debt and the larger the debt servicing burden associated with it, the higher the probability of financial distress.

The trade-off theory of capital structure is the idea that a company chooses how much debt finance and how much equity finance to use by balancing the costs and benefits. The trade-off theory of capital structure postulates that managers attempt to balance the benefits of interest tax shields against the present value of the possible costs of financial distress.

According to the trade-off theory, every firm has an optimal debt-equity ratio that maximises its value. The optimal debt-equity ratio of a profitable firm that has stable, tangible assets would be higher than the optimal debt-equity ratio of an unprofitable firm with risky, intangible assets. A profitable firm can avail of tax shield associated with debt fully. Further, when assets are stable and tangible, financial distress costs and agency costs tend to be lower.

How well does the trade-off theory explain corporate financing behaviour? It explains reasonably well some industry differences in capital structures. For example, power companies and refineries use more debt as their assets are tangible and safe. Software companies, on the other hand, borrow less because their assets are mostly intangible and somewhat risky. The trade-off theory, however, cannot explain why some profitable companies depend so little on debt. Some companies having highly profitable, use very little debt. They pay large amounts by way of income tax which they can possibly save to some extent by using debt without causing any concern about their solvency.

- **Pecking Order Theory**

The pecking order theory has emerged as alternative theory to the trade-off theory. Rather than introducing corporate taxes and financial distress into the M-M framework. The pecking order theory states that internal financing is preferred over external financing, and if external finance is required, firms should issue debt first and equity as a last resort. Moreover, the pecking order seems to explain why profitable firms have low debt ratios:
This happens not because they have low target debt ratios, but because they do not need to obtain external financing. Thus, unlike the trade-off theory the pecking order theory is capable of explaining differences in capital structures within industries.
This leads to the following pecking order in the financing decision:

1. Retained Earnings
2. Non-convertible Debt
3. Preference Shares
4. Hybrid Securities like Convertible Debentures
5. Equity

The significant implications of the pecking-order theory are as follows:

(b) Relatively Less Use of Debt by Profitable Firms: Profitable firms having large internal cash accruals at their disposal to meet their investment requirements, tend to use less amount of debt as external financing requirement not because they have low target debt-ratios, but because of preference for internally-generated funds. This against the tenets of finance theory.

(c) Need to Build-up Cash Reserves: Corporates would need to have reserves in the form of cash and marketable securities so that they are readily available to finance investment projects.

(d) Tax-shield on Interest is Secondary: In the pecking-order theory, the tax-shield on interest is regarded as the secondary consideration and relegated to the second place in designing capital structure.

QUESTION 1:

The following data relates to four Firms –

Firm	A	B	C	D
EBIT	₹ 2,00,000	₹ 3,00,000	₹ 5,00,000	₹ 6,00,000
Interest	₹ 20,000	₹ 60,000	₹ 2,00,000	₹ 2,40,000
Equity Capitalization Rate	12%	16%	15%	18%

Assuming that there are no taxes and Interest rate on debt is 10%, Determine the value and WACC of each firm using the Net Income Approach. What happens if firm A borrows ₹ 2,00,000 at 10% to repay Equity Capital?

QUESTION 2: (Homework Sum)

The expected annual net operating income of a company (EBIT) is ₹50,000. The company has ₹2,00,000, 10% debentures. The equity capitalisation rate (ke) of the company is 12.5%. Find the value of the firm and overall cost of capital under Net Income approach.

QUESTION 3: (Homework Sum)

Assuming no taxes and given the Earnings Before Interest and Taxes (EBIT), interest (I) at 10% and equity capitalisation rate (ke) below, calculate the total market value of each firm under Net Income approach:

Firms	EBIT	I	ke
	(₹)	(₹)	
X	2,00,000	20,000	12.%
Y	3,00,000	60,000	16.%
Z	5,00,000	2,00,000	15.%
W	6,00,000	2,40,000	18.%

Also determine the Weight Average Cost of Capital (WACC) for each firm.

QUESTION 4:

Munni Ltd is expecting an EBIT of ₹ 4 Lakhs for F.Y. 2015- 16. Presently the company is financed entirely by Equity Share Capital of ₹ 20 Lakhs with equity capitalization rate of 16%. The company is contemplating to redeem a part of the capital by introducing Debt Financing. The company has two options to raise Debt to the extent of 30% or 50% of the total fund.

It is expected that for debt financing upto 30%, the rate of Interest will be 10% and equity Capitalization rate will increase to 17%. If the company opts for 50% debt, then the interest rate will be 12% and Equity Capitalization rate will be 20%.

You are require to compute the Value of the Company and its overall Cost of Capital under different options, and also state which is the best option

QUESTION 5:

One – Third of total market value of Pokemon limited consists of loan stock, which has a cost of 10%. Another company, Pub-G Limited is identical in every respect to Pokemon limited, except that its capital structure in all - equity, and its cost of equity is 16%. equity is 16%. According to Modigliani and miller, if we ignored taxation and tax relief on debt capital, what would be the cost of equity of Pokemon limited?

QUESTION 6:

Honeymoon Ltd.'s operating income (before interest and tax) is ₹ 9,00,000. The firm's cost of debt is 10 per cent and currently firm employs ₹ 30,00,000 of debt. The overall cost of capital of firm is 12 percent.

Required: Calculate cost of equity.

QUESTION 7:

Sheela Ltd adopts constant - WACC approach, and believes that its cost of Debt and overall cost of capital is at 9% and 12% respectively. If the ratio of the market value of debt to the market value of equity is 0.8, what rate of return do equity shareholders earn? Assume that there are no taxes.

QUESTION 8:

Jumanji Ltd and Elephant Ltd are identical in every respect except capital structure. Jumanji Ltd does not employ Debts in its Capital structure whereas Elephant Ltd employs 12%Debentures amounting to ₹20,00,000.

The following additional information is given –
i) Income Tax rate is30%
ii) EBIT ₹5,00,000
iii) The Equity Capitalization rate of Jumanji Ltd is20%
iv) All assumptions of Modigliani - miller approach are met.
Calculate-
a) Value of both the companies
b) Weighted Average Cost of Capital of both the companies.

QUESTION 9:

Big boss Ltd. is an all equity financed company with a market value of ₹ 25,00,000 and cost of equity (Ke) 21%. The company wants to buyback equity shares worth ₹ 5,00,000 by issuing and raising 15% perpetual debt of the same amount. Rate of tax may be taken as 30%. After the capital restructuring and applying MM Model (with taxes), you are required to calculate:
(i) Market value of Big Boss Ltd.
(ii) Cost of Equity (Ke)
(iii) Weighted average cost of capital (using market weights) and comment on it.

QUESTION 10:

The data relating to two companies Sina Ltd and Tina Ltd, belonging to the same risk class, are as under –

Particulars	S Ltd	T Ltd
Number of Equity Shares	90,000	1,50,000
Market price per share	₹ 1.20	₹ 1.00
6% Debentures	₹ 60,000	NIL
Profit Before Interest	₹ 18,000	₹ 18,000

There are no taxes. Vina is an Investor holding 10% stake in Sina Ltd. What is the benefit / loss to Vina, if she switches her holding to Tina Ltd? When will this arbitrage process end?

QUESTION 11:

Pareshan Ltd is presently financed entirely by equity shares. The current Market value is ₹ 6,00,000. A Dividend of ₹ 1,20,000 has just been paid. This level of dividend is expected to generate Net cash receipts of ₹ 1,05,000 per annum indefinitely. The project would be financed by issuing ₹ 5,00,000 debentures at 18% Interest Rate. Ignoring tax consideration (a) Calculate the value of Equity shares & the gain made by shareholders, if the cost of equity rises to21.6%

b) Prove that the weighted Average Cost of Capital is not affected by gearing.

- **EBIT-EPS Analysis**

The EBIT-EPS analysis is carried out to assess the impact of different financial proposals on the value (EPS) of the company. Since the basic aim of financial management is to maximise the wealth of shareholders, the EBITEPS analysis is crucial in maximising the wealth of the company.

The financial proposal having the highest EPS is considered for the execution. The different financial proposals may be the use of, only equity, combination of equity and debt, combination of equity and preferential capital, or any combination of equity, debt and preferential capital. EBIT-EPS analysis shows the impact of financial leverage on the EPS of the company under different financial proposals.

QUESTION 12:

Maheshmati Co. has a capital structure of 30% Debt and 70% Equity. The company is considering various proposals costing less than ₹ 30 Lakhs. The company does not want to disturb its present capital structure. Assume Tax rate is 50%. The cost of raising the Debt and Equity are as follows-

	Project cost	Cost of Debt	Cost of equity
Upto	₹5 Lakhs	9%	13.00%
Above	₹ 5 Lakhs and upto ₹ 20 Lakhs	10%	14.00%
Above	₹ 20 Lakhs and upto ₹ 40 Lakhs	11%	15.00%
Above	₹ 40 Lakhs and upto ₹ 1 Crore	12%	15.55%

Compute the projects A and B, Whose fund requirements are ₹ 8 Lakhs and ₹ 22 Lakhs respectively.

(a) If the projects are expected to yields after tax return of 12%, determine which projects are acceptable.

(b) Also if ROCE = 11%, determine under what conditions the project would be acceptable.

QUESTION 13:

A Company earns a profit of ₹3,00,000 per annum after meeting its Interest liability of ₹1,20,000 on 12% debentures. The Tax rate is 50%.The number of Equity Shares of ₹10 each are 80,000 and the retained earnings amount to ₹ 12,00,000.

The company proposes to take up an expansion scheme for which a sum of ₹ 4,00,000 is required. It is anticipated that after expansion, the company will be able to achieve the same return on investment as at present. The funds required for expansion can be raised either through debt at the rate of 12% or by issuing Equity Shares at par.

Required:

Compute the Earnings per Share (EPS), if:

(i) The additional funds were raised as debt

(ii) The additional funds were raised by issue of equity shares.

Advise the company as to which source of finance is preferable.

QUESTION 14:

Bahubali limited requires ₹ 50,00,000 for a new plant. This plant is expected to yield earnings before interest and taxes of ₹ 10,00,000. While deciding about the financial plan, the company considers the objective of maximizing Earnings per share.

It has 3 alternatives to finance the project – by raising Debt of ₹ 5,00,000 or ₹ 20,00,000 or ₹ 30,00,000 and the balance in each case, by issuing equity shares.

The company's share is currently selling at ₹ 150, but it is expected to decline to ₹ 125 in case the funds are borrowed in excess of ₹ 20,00,000.

The funds can be borrowed at the rate of 9%upto ₹ 5,00,000, at 14% over ₹ 5,00,000 and upto ₹ 20,00,000 and at 19% over ₹ 20,00,000. The tax rate applicable to the company is 40%. Which form of financing should the company choose? Show EPS amount upto two decimal points.

QUESTION 15:

Calculate the level of earnings before interest and tax (EBIT) at which the EPS indifference point between the following financing alternatives will occur.

i) Equity share capital of ₹ 6,00,000 and 12% debentures of ₹4,00,000.

Or

ii) Equity share capital of ₹ 4,00,000, 14% preference share capital of ₹ 2,00,000 and 12% debentures of ₹4,00,000.

Assume the corporate tax rate is 35% and par value of equity share is ₹ 10 in each case.

QUESTION 16:

Kamini Limited requires funds amounting to ₹ 80 lakh for its new project. To raise the funds, the company has following two alternatives:

(i) To issue Equity Shares of ₹ 100 each (at par) amounting to ₹ 60 lakh and borrow the balance amount at the interest of 12% p.a. or

(ii) To issue Equity Shares of ₹ 100 each (at par) and 12% Debentures in equal proportion.

The Income-tax rate is30%.

Find out the point of indifference between the available two modes of financing and state which option will be beneficial in different situations.

QUESTION 17:

Karishma Ltd. is considering the following two alternative financing plans:

Particulars	Plan – I (₹)	Plan – II (₹)
Equity shares of ₹ 10 each	4,00,000	4,00,000
12% Debentures	2,00,000	-
Preference Shares of ₹ 100 each	-	2,00,000
	6,00,000	6,00,000

The indifference point between the plans is ₹2,40,000. Corporate tax rate is 30%. Calculate the rate of dividend on preference shares.

QUESTION 18:

The management of Honey Company Ltd. wants to raise its funds from market to meet out the financial demands of its long-term projects. The company has various combinations of proposals to raise its funds. You are given the following proposals of the company:

Proposal	Equity shares (%)	Debts (%)	Preference Shares (%)
P	100	-	-
Q	50	50	-
R	50	-	50

i) Cost of debt and preference shares is 10%each.
ii) Tax rate –50%
iii) Equity shares of the face value of ₹ 10 each will be issued at a premium of ₹ 10 per share.
iv) Total investment to be raised ₹40,00,000.
v) Expected earnings before interest and tax ₹18,00,000.
vi) Total investment to be raised ₹40,00,000.
From the above proposals the management wants to take advice from you for appropriate plan after computing the following:

- Earnings per share
- Financial break-even-point
- Compute the EBIT range among the plans for indifference. Also indicate if any of the plans dominate.

QUESTION 19:

Shona Ltd wants to raise ₹ 5,00,000 as additional capital. It has two mutually exclusive financial plans. The current EBIT is ₹ 17,00,000 which is likely to remain unchanged. Tax rate 50%. Other relevant information is –

Present capital structure	
Equity shares of ₹ 10 each	30,00,000
and 10% bonds	₹ 20,00,000
Current EBIT	₹17,00,000
Current EPS	₹2.50
Current Market Price	₹ 25 per share

Financial Plan I	20,000 Equity Shares at ₹ 25 per share.
Financial Plan II	12% Debentures of ₹5,00,000

What is the Indifference level of EBIT? Identify the Financial Break-Even Levels. Which alternative

QUESTION 20:

A new project is under consideration in Zip Ltd., which requires a capital investment of ₹ 4.50 crores. Interest on term loan is 12% and Corporate Tax rate is 50%. If the Debt Equity ratio insisted by the financing agencies is 2 : 1, calculate the point of indifference for the project.

QUESTION 21:

Mona Limited is setting up a project with a capital outlay of ₹ 60,00,000. It has two alternatives in financing the project cost.

Alternative-I : 100% equity finance by issuing equity shares of ₹ 10 each

Alternative-II : Debt-equity ratio 2:1 (issuing equity shares of ₹ 10 each)

The rate of interest payable on the debts is 18% p.a. The corporate tax rate is 40%.

Calculate the indifference point between the two alternative methods of financing.

QUESTION 22:

Chota Bheem Limited presently has ₹ 36,00,000 in debt outstanding bearing an interest rate of 10 per cent. It wishes to finance a ₹ 40,00,000 expansion programme and is considering three alternatives: additional debt at 12 per cent interest, preference shares with an 11 per cent dividend, and the issue of equity shares at ₹ 16 per share. The company presently has 8,00,000 shares outstanding and is in a 40 per cent tax bracket.

a) If earnings before interest and taxes are presently ₹15,00,000, what would bearings per share for the three alternatives, assuming no immediate increase in profitability?

b) Develop an indifference chart for these alternatives. What are the approximate indifference points? To check one of these points, what is the indifference point mathematically between debt and common?

c) Which alternative do you prefer? How much would EBIT need to increase before the next alternative would be best?

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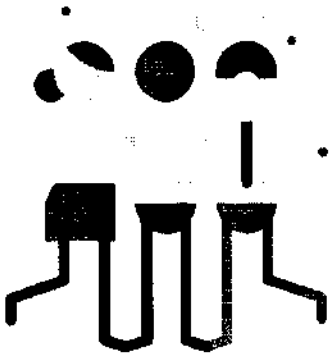

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CHAPTER 6 - DIVIDEND DECISIONS

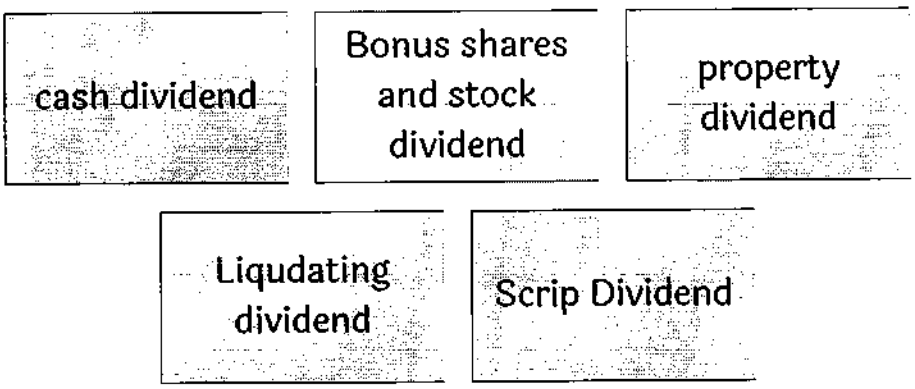
• Definition of Dividend

The term dividend refers to that portion of profit (after tax) or earnings or retained earnings which is distributed among the owners/shareholders of the firm. In other words, dividend is that part of the net earnings of a corporation that is distributed toits stockholders. It is a payment made to the equity shareholders for their investment in the company.

Dividend is a reward to equity shareholders for their investment in the company. It is a basic right of equity shareholders to get dividend from the earnings of a company.

• Types of Dividends

There are different types of dividends. Classifications of dividends are based on the category in which they are paid. Following are the different types of dividends:



Types of Dividends

(a) Cash Dividend

It is the most common form. The shareholders receive cash for each share. The board of directors announces the dividend payment on the date of declaration.

(b) Bonus Shares or Stock Dividend

Bonus share is also called the stock dividend. A company may have low operating cash but still want to keep the investors happy, issues such dividends. In other way, a stock dividend is simply the payment of additional shares of common stock to shareholders. It represents nothing more than a book-keeping shift within the shareholders' equity account on the firm's balance sheet. A shareholder's proportional ownership in the firm remains unchanged. Accounting authorities make a distinction between small-percentage stock dividends and large-percentage stock dividends.

(c) Property Dividend

The company makes the payment in the form of assets under the property dividend. The asset could be any of this equipment, inventory, vehicle, or any other asset. The asset's value has to be restated at the fair value while issuing this.

(d) Scrip Dividend

It is a promissory note to pay the shareholders later. This type is used when the company does not have sufficient funds for such issuance.

(e) Liquidating Dividend

When the company returns the original capital contributed by the equity shareholders as a dividend, it is termed a liquidating dividend. It is often seen as a sign of closing down the company.

- **Dividend Policy**

Dividend policy determines the ultimate distribution of the firm's earnings between retention(i.e., reinvestment) and cash dividend payments of shareholders. It is the practice that management follows in making dividend payout decisions, or in other words, the size and pattern of cash distributions over the time to shareholders.

In other words, dividend policy is the firm's plan of action to be followed when dividend decisions are made. It is the decision about how much of earnings to pay out as dividends versus retaining and reinvesting earnings in the firm.

Dividend policy must be evaluated in light of the objective of the firm namely, to choose a policy that will maximize the value of the firm to its shareholders. The dividend policy of a company reflects how prudent its financial management is. The future prospects, expansion, diversification mergers are affecting by dividing policies and for a healthy and buoyant capital market, both dividends and retained earnings are important factors.

- **Measures of Dividend Policy**

Dividend Payout: It measures the percentage of earnings the company pays in dividends = Dividends / Earnings.

Dividend Yield: It measures the return that an investor can make from dividends alone = Dividends / Stock Price.

Earnings Yield: It measures how earnings are reflected in the share price = Earnings/Stock Price.

Why a dividend policy is important?

Once a company makes a profit, it must decide on what to do with those profits. They could continue to retain the profits within the company, or they could pay out the profits to the owners of the firm in the form of dividends. The dividend policy decision involves two questions:

(i) What fraction of earnings should be paid out, on average, over time?

(ii) What type of dividend policy should the firm follow? (i.e., issues such as whether it should maintain steady dividend policy or a policy increasing dividend growth rate etc.)

However, the dividend policy of a company determines what proportion of earnings is distributed to the shareholders by way of dividends, and what proportion is ploughed back for reinvestment purposes. Since the main objective of financial management is to maximize the market value of equity shares, one key area of study is the relationship between the dividend policy and market price of equity shares. In this regard dividend policy assumes significance.

- **Determinants of Dividend Policy**

Many factors determine the dividend policy of a company. The factors determining the dividend policy are discussed below:

(a) Dividend Payout ratio: A certain share of earnings to be distributed as dividend has to be worked out. This involves the decision to pay out or to retain. The payment of dividends results in the reduction of cash and, therefore, depletion of assets. In order to maintain the desired level of assets as well as to finance the investment opportunities, the company has to decide upon the payout ratio. D/P ratio should be determined with two bold objectives – maximising the wealth of the firms' owners and providing sufficient funds to finance growth.

(b) Stability of Dividends: Generally, investors favour a stable dividend policy. The policy should be consistent and there should be a certain minimum dividend that should be paid regularly. The liability can take any form, namely, constant dividend per share; stable D/P ratio and constant dividend per share plus something extra. Because this entails – the investor's desire for current income, it contains the information content about the profitability or efficient working of the company; creating interest for institutional investor's etc.

(c) Legal, contractual and internal constraints and restriction: Legal and Contractual requirements have to be followed. All requirements of Companies Act, SEBI guidelines, capital impairment guidelines, net profit and insolvency etc., have to be kept in mind while declaring dividend. For example, insolvent firm is prohibited from paying dividends; before paying dividend, accumulated losses have to be set off, however, the dividends can be paid out of current or previous years' profit. Also, there may be some contractual requirements which are to be honoured. Maintenance of certain debt equity ratio may be such requirements. In addition, there may be certain internal constraints which are unique to the firm concerned. There may be growth prospects, financial requirements, availability of funds, earning stability and control etc.

(d) Owner's considerations: This may include the tax status of shareholders, their opportunities for investment dilution of ownership etc.

(e) Capital market conditions and inflation: Capital market conditions and rate of inflation also play a dominant role in determining the dividend policy. The extent to which a firm has access to capital market, also affects the dividend policy. A firm having easy access to capital market will follow liberal dividend policy as compared to the firm having limited access. Sometime dividends are paid to keep the firms 'eligible' for certain things in the capital market. In inflation, rising prices eat into the value of money of investors which they are receiving as dividends. Good companies will try to compensate for rate of inflation by paying higher dividends. Replacement decision of the companies also affects the dividend policy.

- **Dividend Decision Models**

The company's Board of Directors makes dividend decisions. They are faced with the decision to pay out dividends or to reinvest the cash into new projects. The dividend policy decision is a trade-off between retaining earnings v/s paying out cash dividends.

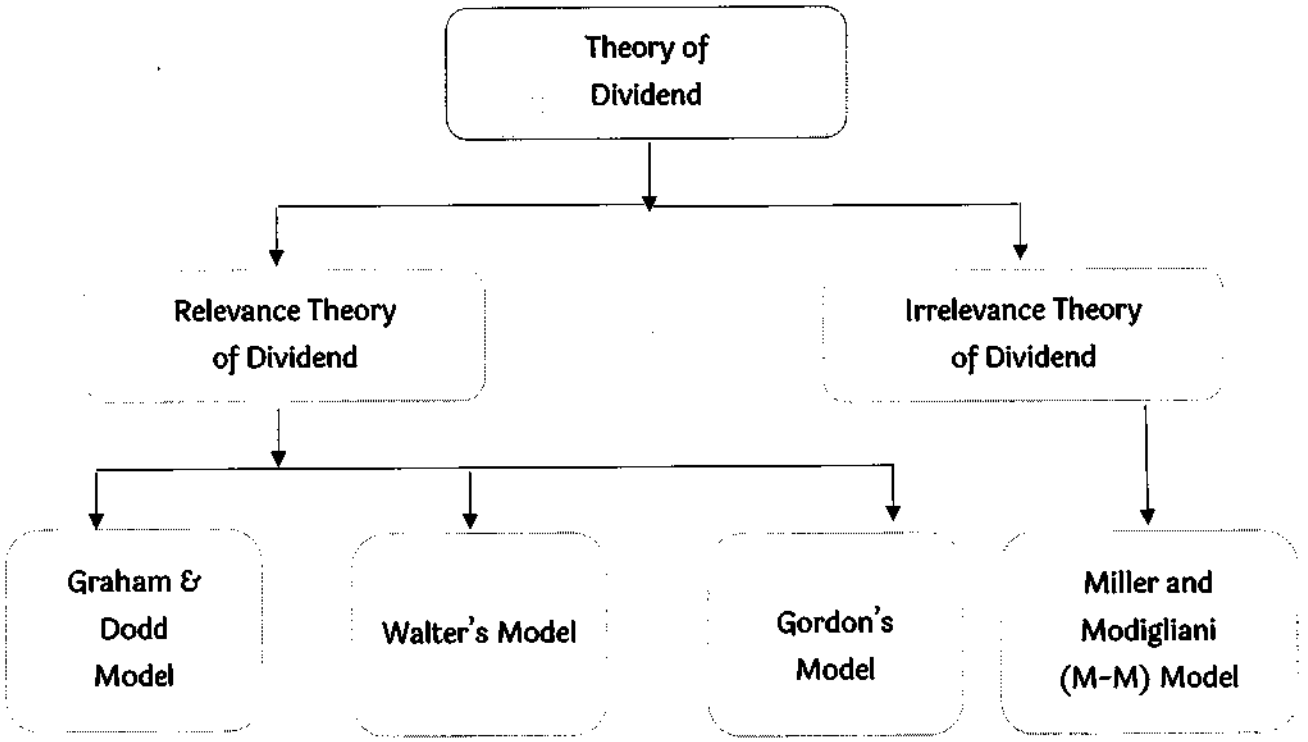
Dividend policies must always consider two basic objectives:

1. Maximizing owners' wealth
2. Providing sufficient financing

While determining a firm's dividend policy, management must find a balance between current income for stockholders (dividends) and future growth of the company (retained earnings).

1. Walter's model
2. Gordon's model
3. Modigliani and Miller's hypothesis

In further analysis, we can explain this classification as follows –



1. <u>Dividend Relevance Theory</u>

The relevance theory of dividend argues that dividend decision affects the market value of the firm and therefore dividend matters. This theory suggests that investors are generally risk averse and would rather have dividends today ("bird-in-the-hand") than possible share appreciation and dividends tomorrow. The relevance theory of dividend proposes that dividend policy affect the share price. Therefore, according to this theory, optimal dividend policy should be determined which will ensure maximization of the wealth of the shareholders. Dividend relevance theory holds the belief that dividends have effect on a company's stock price. A dividend is typically a cash payment made from a company's profit to its shareholders as a reward for investing in the company. Relating to this theory, three models are discussed below:

Graham and Dodd Model (Traditional Model)

According to this model founded by Graham and Dodd, the market price of the shares will increase when a company declares a dividend rather than when it does not. Base of their arguments was that investors are rational and under conditions of uncertainty they turn risk averse. In this model weight attached to dividends is four times of weight attached to retained earnings.

Quantitatively,

$P = m (D + A/Q)$

Where:

P is the market price per share

m is a multiplier

D is the dividend per share

E is the earnings per share

Critics argue that Graham and Dodd provided weight subjectively and did not derive them from any empirical analysis.

Walter's Model

According to this model founded by James E. Walter, the dividend policy of a company has an impact on the share valuation, i.e., dividends are relevant. The key argument is support of the relevance proposition of Walter's model is the relationship between the return on a firm's investment (its internal rate of return) 'r' and its cost of capital (i.e. the required rate of return) 'k'. If the return on investments exceeds the cost of capital, the firm should retain the earnings, whereas it should distribute the earnings to the shareholders in cash the required rate of return exceeds the expected return on the firm's investments. The rationale is that if r>k, the firm is able to earn more than what the shareholders could by reinvesting, if the earnings are paid to them. The implication of r<k is that shareholders can earn a higher return by reinvesting elsewhere.

Quantitatively,

$$P = \frac{\left(D + \frac{r}{k}(E - D)\right)}{K}$$

Where:

P = The prevailing market price of a share

D = Dividend per share

E = Earnings per share

r = The internal rate of return on the investments and

k = Cost of capital.

Assumptions of the model:

(a) All financing is done through retained earnings; external sources of funds like debt or new equity capital are not used.

(b) With addition investments undertaken, the firm's business risk does not change. It implies that 'r' and 'k' are constant.

(c) There is no charge in the key variable namely EPS and DPS. The values 'D' and E may be changed in the model to determine results, but, any given value of 'E' and 'D' are assumed to remain constant in determining a given value.

(d) The firm has a perpetual (very long) life. The impact of dividend payment on the share price is studied by comparing the rate of return with the cost of capital.

(i) When r > k, the price per share increases as the pay-out ratio decreases (optional pay-out ratio is nil)

(ii) When r = k, the price per share does not vary with the changes in the pay-out ratio (optimal pay-out ratio does not exist)

(iii) When r<k, the price per share increases as the pay-out ratio increases (optimal pay-out ratio is 100%)

Limitations of the model:

Following are the limitations of the model:

(a) Walter's model assumes that the firm's investments are financed exclusively by retained earnings, no external financing is used. The model would be applicable to all equity firms.

(b) The model assumes that 'r' is constant. This is not a realistic assumption. When increased investments are made by the firm, 'r' also changes.

(c) As, 'k' is constant, the model ignores the effect of risk on the value of the firm.

Company	Condition of r vs Ke	Correlation between Size of Dividend and Market Price of share	Optimum dividend payout ratio
Growth	r > Ke	Negative	Zero
Constant	r = Ke	No correlation	Every payout ratio is optimum
Decline	r < Ke	Positive	100%

QUESTION 1.

Mini & co earns ₹ 6 per share having capitalization rate of 10 per cent and has a return on investment at the rate of 20 per cent according to Walter's model what should be the price per share at 30 per cent dividend payout ratio is this the optimum payout ratio as per walter?

QUESTION 2.

The following information pertains to Sonu ltd.

Earnings of the company	₹ 5,00,000
Dividend payout ratio	60%
No. of shares outstanding rate	1,00,000
Equity capitalization rate	12%
Rate of return on investment	15%

1. What would be the market value per share as per walter s model?
2. what is the optimum dividend payout ratio according to walters model and the market value of company s share at the payout ratio?

QUESTION 3.

The earnings per share of a company is ₹ 10 and the rate of capitalization applicable to it is 10 per cent the company has three options of paying dividend i.e. 1) 50%, 2) 75% and 3) 100% . calculate the market price of the share as per walter s model if it can earn a return of a) 15, b) 10, c) 5

QUESTION 4.

The following figures are collected from the annual repot Chilli ltd.

Particulars	Amount
Net profit	30lakhs
Outstanding 12% preference shares	100lakhs
No .of equity shares	3lakhs
Return on investment	20%

What should be the approximate dividend pay-out ratio so as to keep ₹42 by using Walter's model?

QUESTION 5.

Minion ltd was started a year back with equity capital of 40 lakhs .the other details are as under.

Particulars	Amount
Earnings of the company	₹4,00,000
Price earnings ratio	12.5
Dividend paid	₹3,20,000
Number of share	40,00

Find the current market price of the share use Walter's model.

Find whether the company s d/p ratio is optimal, use Walter's formula.

QUESTION 6.

The following information is supplied to you;

Particulars	Amount (₹)
Total earnings	2,00,000
No. of equity shares (of ₹ 100 each)	20,000
Dividend paid	1,50,000
Price/earnings ratio	12,5

1) Ascertain whether the company is the following an capital dividend policy.
2) Find out what should be the P/E ratio at which the dividend policy will have no effect on the value of the share.
3) Will your decision change, if the P/E ratio is 8 instead of 12.5?

QUESTION 7.

Gopu & co earns ₹ 8 per share having capitalization rate of 10 per cent and has a return on investment at the at rate of 20 per cent and has a return on investment at the rate of 20per cent. According to Walter's model, what should be the price per share at 25 per cent dividend pay-out ratio? in this the optimum pay-out ratio as per Walter's model?

QUESTION 8.

Reshu ltd has an internal rate of return @20% it has declared dividend @18% on its equity shares having face value of ₹10 each. the payout ratio is 36% and price earning ratio is 7.25 find the cost of equity according to Walter's model and hence determine the limiting value of its shares in case the payout ratio is varied as per the said model.

QUESTION 9. (Homework Sum)

X Ltd. earns ₹ 6 per share having capitalisation rate @10% and has a return on investment at the rate of 20%. According to Walter's Model, what should be the price per share at 30% dividend pay-out ratio? Is this the optimum pay-out ratio as per Walter Model?

QUESTION 10.

From the following data calculate the value of an equity share of each of the following three companies according to Walter's Model when dividend pay-out ratio is (i) Nil, (ii) 25%, (iii) 50%, (iv) 75% and (v) 100%.

	Name of the Companies		
	X Ltd.	Y Ltd.	Z Ltd.
Internal Rate of Return (r)	15%	5%	10%
Cost of Capital (K)	10%	10%	10%
Earning per share (E)	₹10	₹10	₹10

What conclusion do you draw?

QUESTION 11.

The following information regarding the equity share of English ltd is given.

Market price	₹58.33
Dividend per share	₹ 5
Multiplier	7

According to the Graham & Dodd approach to the dividend policy, compute the EPS

Gordon's Model

According to this model founded by Myron Gordon, the dividend policy of the company has an impact on share valuation i.e., dividends are relevant. Myron J Gordon (1962) said that "... investors prefer the early resolution of uncertainty and are willing to pay a higher price of the shares that offer the greater current dividends."

Gordon suggested -

(i) The higher the earnings retention rate, the greater the required future return from investments to compensate for risk.

(ii) The risk attitude of investors will ensure that r will rise for each successive year in the future to reflect growth uncertainty.

The model is based on the following assumptions:

(a) All equity firm: The firm is an all equity firm.

(b) No external financing: No external financing is used and only retained earnings would be used to finance any expansion.

(c) Constant return: The internal rate of return, 'r', of the firm is constant. This ignores the diminishing marginal efficiency of investment.

(d) Constant cost of capital: The appropriate discount rate, k for the firm remains constant.

(e) Perpetual earnings: The firm and its stream of earnings are perpetual.

(f) No taxes: Corporate taxes do not exist.

(g) Constant retention: The retention ratio, b, once decided upon is constant.

(h) Cost of capital greater than growth rate: The discount rate is greater than the growth, k>g.

Quantitatively,

$$P = \left(\frac{Y(1-b)}{k-br} \right)$$

Where,

P is the price per share

Y is the earnings per share

b is the retention ratio

1-b is the payout ratio

br is the growth rate

r is the return on investment

k is the rate of return required by shareholders (also called capitalization rate)

On comparing r and k, the relationship between market price and the pay-out ratio is exactly the same as compared to the Walter model.

QUESTION 12.

From the following data calculate the value of an Equity Share of each of the following three companies according to the Gordon's Model when dividend payout ratio is (i) 25%, (ii) 50%, and (iii) 100%.

	Name of the Companies		
	X Ltd.	Y Ltd.	Z Ltd.
Internal Rate of Return (r)	12%	8%	10%
Cost of Capital (K)	10%	10%	10%
Earning per share (E)	₹12	₹12	₹12

What conclusion do you draw?

QUESTION 13.

The following information is collected from the annual reports of Honey ltd.

Profit before tax	₹ 2.50 core
Tax rate	40 percent
Retention ratio	40 percent
Number of outstanding shares	50,00,000
Equity capitalization rate	12 percent
Rate of return on investment	15 percent

What should be the market price per share according to Gordon's policy?

QUESTION 14.

Mr. Chilli is contemplating purchase of 1.000 equity shares of a company. His expectation of return is 10% before tax by way of dividend with an annual growth of 5% the company last dividend was ₹ 2 per share even as he is contemplating Mr a suddenly finds due to a budget announcement dividends have been exempted from tax in the hands of the recipients. But the imposition of dividend distribution tax on the company is likely to lead to a fall in dividend of 20 paise per share as marginal tax rate is 30% required.

Calculate what should be Mr. as estimates of the price per share before and after the budget announcement?

QUESTION 15.

A firm had been paid dividend at ₹ 2 per share last year. the estimated growth of the dividends from the company is estimated to be 5% p a determine the estimated market price of the equity share if the estimated growth rate of dividends 1) rise to 8% and 2) falls to 3%. Also find out the present market price of the share give that the required rate of return of the equity investors is 15.5%

2. Dividend Irrelevance Theory

Dividend irrelevance theory holds the belief that dividends do not have any effect on a company's stock price. A dividend is typically a cash payment made from a company's profits to its shareholders as a reward for investing in the company. In this case, one school of thought argues that the dividends have no impact on the share price or market value of the firm. Here, we shall discuss mainly Miller–Modigliani (M-M) Model and some other models –

Miller and Modigliani (M-M) Model / Dividend Irrelevancy Model

This theory was proposed by Franco Modigliani and Merton Miller (M-M) in 1961 who argued that the value of the firm is determined by the basic earnings power, the firm's risk and not by the distribution of earnings. Miller–Modigliani (M-M) provide the most comprehensive argument for the irrelevance of dividends. They assert that, given the investment decision of the firm, the dividend payout ratio is a mere detail and that it does not affect the wealth of shareholders. M-M argue that the value of the firm is determined solely by the earnings power of the firm's assets or its investment policy, and that the manner in which the earnings stream is split between dividends and retained earnings do not affect this value.

M-M hypothesis is based on the following assumptions:

(a) M-M assuming perfect capital markets in which all investors are rational; information is freely available to everyone equally; there are no transaction costs; securities are finitely divisible; no investor is large enough to influence the market price of securities; there are no floatation costs.

(b) There are no taxes and flotation costs and if the taxes are there then there is no difference between the dividends tax and capital gains tax.

(c) The firm's investment policy is independent of the dividend policy. The effect of this assumption is that the new investments out of retained earnings will not change and there will not change in the required rate of return of the firm.

(d) There are no contracting or agency costs.

According to this model, the market price of the share does not depend on the dividend payout, i.e., the dividend policy is irrelevant. This model explains the irrelevance of the dividend policy. When profits are used to declare dividends, then the market price increases. But, at the same time there is a fall in the reserves for reinvestment. Hence for expansion, the company raises additional capital by issuing new shares. Increase in the overall number of shares, will lead to a fall in the market price per share. Hence the shareholders would be indifferent towards the dividend policy.

According to the M-M Model, the **market price of a share after dividend declared** is calculated by applying the following formula:

$$P_0 = \frac{(P_1 + D_1)}{1 + k}$$

Where,

P_0 is the prevailing market price

k is the cost of equity capital

D_1 is the dividend to be received at the end of period one

P_1 is the market price at the end of period one

The **number of shares to be issued for new projects**, in lieu of dividend payments is given by the following formula:

$$m = \frac{I - (E + nD_1)}{P_1}$$

Where,

n – is the number of shares outstanding at the beginning of the period.

m – is number of new shares issued.

I – Total investment amount required for the new project.

E – Earnings of net income of the firm during the period.

Proof:

Let n represent the original number of outstanding shares of the company, 'D' be the dividend distributed to the 'n' shareholders, I be the total investment amount required for the new project, and 'E' be the Earnings (net income) of the firm during the period. And let 'm' represent the number of new shares issued to meet the shortfall in investment issued at a current market price of P1. According to the M-M Model, the market price of a share in the beginning of the period is equal to the present value of dividends paid at the end of the period plus the market price of the share at the end of the period. It is calculated by applying the following formula:

$$P_0 = \frac{(P_1 + D_1)}{1 + k}$$

Where,

P0 is the prevailing market price.

k is the cost of equity capital.

D1 is the dividend to be received at the end of period one.

P1 is the market price at the end of period one.

Assuming no external financing and the current market capitalization of the firm would be calculated as follows:

$$nP_0 = \frac{(nP_1 - nD_1)}{1 + k}$$

n is the number of shares.

Adding and subtracting mP1 on numerator in the RHS of the equation, we have–

$$nP_0 = \frac{(n + m)P_1 - nD_1 - mP_1}{1 + k}$$

Now, mP1

= Amount raised = Investment – [Earnings – Dividends distributed]

= I – [E-nD1]

Substituting in the above equation, we have–

$$nP_0 = \frac{(m + n)P_1 + E - I}{1 + k}$$

As no dividend term appear on the right-hand side of the equation, it is proved that dividends are irrelevant.

Criticisms:

Because of the unrealistic nature of the assumption, M-M's hypothesis lacks practical relevance in the real-world situation. Thus, it is being criticised on the following grounds.

(a) The assumption that taxes do not exist is far from reality.

(b) M-M argue that the internal and external financing are equivalent. This cannot be true if the costs of floating new issues exist.

(c) According to M-M's hypothesis the wealth of a shareholder will be same whether the firm pays dividends or not. But, because of the transactions costs and inconvenience associated with the sale of shares to realise capital gains, shareholders prefer dividends to capital gains.

(d) Even under the condition of certainty it is not correct to assume that the discount rate (k) should be same whether firm uses the external or internal financing.

(e) If investors have desire to diversify their port folios, the discount rate for external and internal financing will be different.

(f) M-M argues that, even if the assumption of perfect certainty is dropped and uncertainty is considered, dividend policy continues to be irrelevant. But according to number of writers, dividends are relevant under conditions of uncertainty.

QUESTION 16.

Mahi ltd. has a capital of ₹ 10,00,000 in equity shares of ₹ 100 each. The shares are currently quoted at per. The company propose to declare a dividend of ₹10 per share at the end of the current financial year. The capitalization rate for the risk class of which the company belongs is 12% what will be the market price of the share at the end of the year if.

1) A dividend is not declared?

2) A dividend is declared?

3) Assuming that the company pays the dividend and has net profits of ₹ 5,00,000 and makes new investment of ₹ 10,00,000 during the period , how many new shares must be issued? Use the mm model?

QUESTION 17.

Elephant ltd, has 8 lakh equity shares outstanding at the beginning of the year. The current market price per share is ₹ 120. The board of directors of the company is contemplating ₹ 6.4 per share as dividend.

the rate of capitalization, appropriate to the risk-class to which the company belongs is, 9.6%

1) based on m-m approach, calculate the market price of the share of the company, when the dividend is-a) declared; and b) not declared.

2) How many new shares are to be issued by the company, if the company desires to found an investment budget of ₹ 3.20crores by the end of the year assuming net income for the year will be ₹ 1.60 crores?

QUESTION 18.

Bheem ltd belongs to a risk class for which the capitalization rate is 10%. It has 25.000 outstanding shares and the current market price is ₹ 100.it expects a new profit of ₹ 2,50,000 for the year and the board is considering dividend of ₹ 5 per share.

Bheem ltd. requires to raise ₹ 5,00,000 for an approved investment expenditure. Show. How the Bheem approach affects the value of Bheem ltd. if dividends are paid or not paid.

QUESTION 19.

Chotu ltd. has 50,000 outstanding shares. The current market price per share is ₹ 100 each.it hopes to make a net income of ₹ 5,00,000 at the end of current year. the company s board is considering a dividend of ₹ 5 per share at the end of current financial year. The company needs to raise ₹ 10,00,000 for an approved investment expenditure the company belongs to a risk class for which the capitalization rate is 10% show how the Chotu approach affects the value of firm if the dividends are paid or not paid.

QUESTION 20. (Homework Sum)

Baba Ltd. belongs to a risk-class for which the appropriate capitalisation rate is 10%. It currently has outstanding 2000 equity shares of ₹100 each. The firm is contemplating the declaration of dividend of ₹8 per share at the end of the current financial year. It expects to have net earnings of ₹20,000 and has a proposal for making new investment of ₹ 24,000. Show that under the Modigliani–Miller assumption, the payment of dividend does not affect the value of the firm.

Residuals Theory of Dividends

The theory is based upon the assumptions that since the external financing has excessive costs and may not be available to the firm. The firm finances its investment by retained earnings or by retaining earnings. The retaining earnings are that portion of profits that is not distributed to the investors. If a firm wishes to avoid issue of shares, then it will have to rely on internally generated funds to finance new positive NPV projects. Dividends can only be paid out of what is left over. This leftover is called a residual and such a dividend policy is called residual dividend approach. When we treat dividend policy as strictly a financing decision, the payment of cash dividends is a passive residual. The amount of dividend pay-out will fluctuate from period to period in keeping with fluctuations in the number of acceptable investment opportunities available to the firm. If these opportunities abound, the percentage of dividend payout is likely to be zero. On the other hand, if the firm is unable to find profitable investment opportunities, dividend payout will be 100%. With a residual dividend policy, the firm's objective is to meet its investment needs and mostly to maintain its desired debt equity ratio before paying dividends.

To illustrate imagine that a firm has ₹ 1,000 in earnings and a debt equity ratio of 0.5. Thus, the firm has 0.5 of debt for every 1.5 of the total value. The firm's capital structure is 1/3 of debt and 2/3 of equity.

The first step in implementing a residual dividend policy is to determine the amount of funds that can be generated without selling new equity. If the firm reinvests the entire ₹ 1,000 and pays no dividend, then equity will increase by ₹ 1,000. To keep the debt equity ratio constant, the firm must borrow ₹ 500.

The second step is to decide whether or not the dividend will be paid. If funds needed are less than the funds generated then a dividend will be paid. The amount of dividend will be the residual after meeting investment needs.

Suppose we require ₹ 900 for a project. Then 1/3 will be contributed by debt (i.e.,₹ 300) and the balance by equity/retained earnings. Thus, the firm would borrow ₹ 300 and fund ₹ 600

from the retained earnings. The residual i.e., ₹1,000 – ₹600 = ₹400 would be distributed as dividend.

It can be further explained by using the table below:

New Investment	Debt portion	Retained	Additional Earnings	Dividends Equity	
1,000	3,000	1,000	1,000	1,000	0
1,000	2,000	667	1,000	333	0
1,000	1,500	500	1,000	0	0
1,000	1,000	333	667	0	333
1,000	500	167	333	0	667
1,000	0	0	0	0	1000

Dividend Discount Model

The dividend discount model is a more conservative variation of discounted cash flows that says a share of stock is worth the present value of its future dividends, rather than its earnings. This model was popularized by John Burr Williams in the theory of investment value. Present earnings, outlook, financial condition, and capitalization should bear upon the price of a stock only as they assist buyers and sellers in estimating future dividends.

The Dividend Discount Model can be applied effectively only when a company is already distributing a significant amount of earnings as dividends. But in theory it applies to all cases, since even retained earnings should eventually turn into dividends. That's because once a company reaches its 'mature' stage it won't need to reinvest in its growth, so, management can begin distributing cash to the shareholders as Williams puts it.

If earnings not paid out as dividends are all successfully reinvested, then these earnings should produce dividends later if not, then they are money lost. In short, a stock is worth only what you can get out of it.

The dividend discount model (DDM) is a widely accepted stock valuation tool found in most introductory finance and investment textbooks. The model calculates the present value of the future dividends that a company is expected to pay to its shareholders It is particularly useful because it allows investors to determine an absolute or "intrinsic" value of a particular company that is not influenced by current stock market conditions. The DDM is also useful because the measurement of future dividends (as opposed to earnings for example) facilitates an "apples-to-apples" comparison of companies across different industries by focusing on the actual cash investors can expect to receive.

There are three alternative dividend discount models that used to determine the intrinsic value of a share of stock:

(a) the constant (or no-growth) dividend model;

(b) the constant growth dividend model; and

(c) the two-stage (or two-phase) dividend growth model.

Constant dividends:

$P = D_1/k_e$

Where,

P = Intrinsic value

D1 = Expected dividend

ke = Appropriate discount factor for the investment

This method is useful for analyzing preferred shares where the dividend is fixed. However, the constant dividend model is limited in that it does not allow for future growth in the dividend payments for growth industries. As a result, the constant growth dividend model may be more useful in examining a firm.

Constant dividend growth:

$P = D_1/(K_e - g)$

Where,

P = Intrinsic value

D1= expected dividend

ke = appropriate discount factor for the investment

g = constant dividend growth rate

The constant dividend growth model is useful for mature industries, where the dividend growth is likely to be steady. Most mature blue-chip stocks may be analysed quickly with the constant dividend growth model. This model has its limitations when considering a firm which is in its growth phase and will move into a mature phase at some time the future. A two-stage growth dividend model may be utilized in such situations. This model allows for adjustment to the assumptions of timing and magnitude of the growth of the firm.

For initial dividend growth & then steady growth:

$$P = \sum_{t=1}^{n}\left[\frac{D_0(1+g_1)^t}{(1+k_e)^t}\right] + \frac{D_0(1+g_2)}{k_e+g_2}\left[\frac{1}{(1+k_e)^t}\right]$$

where:

P = Intrinsic value = PV of dividends + PV of price

D t = Expected dividend

= Appropriate discount factor for the investment

= Initial dividend growth rate

= Steady dividend growth rate.

Linter's Model

Linter's model has two parameters:

i. The target payout ratio,

ii. The spread at which current dividends adjust to the target. John Linter based his model on a series of interviews which he conducted with corporate managers in the mid 1950's.While developing the model, he considers the following assumptions:

1. Firm have a long term dividend payout ratio. They maintain a fixed dividend payout over a long term. Mature companies with stable earnings may have high payouts and growth companies usually have low payouts.
2. Managers are more concerned with changes in dividends than the absolute amounts of dividends. A manager may easily decide to pay a dividend of₹2per share if last year too it was ₹ 2 but paying ₹3 dividend if last year dividend was ₹2 is an important financial management decision.
3. Dividend changes follow changes in long run sustain able earnings.
4. Managers are reluctant to affect dividend changes that may have to be reversed.

Under Linter's model, the current year's dividend is dependent on current year's earnings and last year's dividend.

$$D_1 = D_0 + [(EPS \times \text{Target payout}) - D_0] \times Af$$

Where

D_1 = Dividend in year 1

D_0 = Dividend in year 0 (last year dividend)

EPS = Earnings per share

Af = Adjustment factor or Speed of adjustment.

QUESTION 21.

Give the last years dividend is ₹ 9,80, speed of adjustment= 45%, target payout ratio 60% and EPS for current year ₹ 20.calculate current years dividend.

QUESTION 22.

What will be the dividend per share of Google ltd for the year 2017, given the following information about the company –

EPS of 2017	₹ 3
OPS of 2016	₹ 1.2
Target payout ratio	0.6
Adjustment rate	0.7

Dividend Dates

Declaration date: The date on which board of directors declare dividend is called a declaration date.

Record date: Record date, is that date when the company closes its stock transfer books and makes up a list of the shareholders for payment of dividends.

Ex-dividend date: It is that date notified by the stock exchange, as a date which will entail a buyer of shares, the dividend, if bought before the ex-dividend date. This date sets up the convention of declaring that the right to the dividend remains with the stock until 'x' days prior to the Record date. Thus, whoever buys share on or beyond the ex-dividend date are not entitled to dividend.

Payment date: The date on which the company mails the cheques to the recorded holders. Let us say, settlement of stocks follows 'T+3', which means that, when you buy a stock, it takes three days from the transaction date (T) for the change to be entered into the company's record books. As mentioned, if you are not in the company's recorded books on the date of record, you won't receive the dividend payment. To ensure that you are in the record books, you need to buy stock at least three days before the date of record, which also happens to be the day before the ex-dividend date.

- **Bonus Shares or Stock Dividend**

Because a company's dividends are sometimes not paid regularly, a company may choose to pay dividends in the form of stock. Assume a company declares a 10% stock dividend. What happens is that for every 10 shares of stock a person owns he gets one new share as a dividend. If a corporation has 1,000,000 share of common stock outstanding and declares a 10% stock dividend, the corporation will have 1,100,000 shares of stock outstanding after the stock dividend is paid.

The individual investor maintains his proportionate share and the same total book value in the company. Book value per share will be less. However, his investment in the company remains the same. When a company issues a stock dividend, it retains its accumulated earnings. Therefore, some companies may want to issue a stock dividend to avoid paying out cash. They may want to use the cash elsewhere. Basically, the company is capitalizing their earnings. When the stock dividend is declared a transfer is made from earned capital to contributed or permanent capital.

Advantages:

(a) It preserves the company's liquidity as no cash is used.
(b) The shareholders can liquidate these shares whenever they require.
(c) It is excellent way to bring the paid Capital of the company in line with actual capital employed by the company in the business.
(d) If broadens the capital base and improves the image of the company.
(e) It is inexpensive method of raising the capital by which the cash resources of the company are conserved.
(f) It reduces the market price of the shares, rendering the shares more marketable
(g) It is perceived as an indication by the market that the company financial position is sound.

Disadvantages:

(a) Since the reserves have been used to issue bonus shares, it indicates that future dividend would decline.
(b) Issue of bonus shares involve lengthy legal procedures and approvals.

- **Dividend Decision and Tax Considerations**

Traditional theories might have said that distribution of dividend being from after-tax profits, tax considerations do not matter in the hands of the payer-company. However, with the arrival of Corporate Dividend Tax on the scene in India, the position has changed. Since there is a clear levy of such tax with related surcharges, companies have a consequential cash outflow due to their dividend decisions which has to be dealt with as and when the decision is taken. In the hands of the investors too, the position has changed with total exemption from tax being made available to the receiving-investors. In fact, it can be said that such exemption from tax has made the equity investment and the investment in Mutual Fund Schemes very attractive in the market. Broadly speaking Tax consideration has the following impacts on the dividend decision of a company:

Before introduction of dividend tax:

Earlier, the dividend was taxable in the hands of investor. In this case the shareholders of the company are corporates or individuals who are in higher tax slab, it is preferable to distribute lower dividend or no dividend. Because dividend will be taxable in the hands of the shareholder @ 30% plus surcharges while long-term capital gain is taxable @ 10%. On the other hand, if most of the shareholders are the people who are in no tax zone, then it is preferable to distribute more dividend.

After introduction of dividend tax:

Dividend tax is payable @ 12.5% - surcharge + education cess, which is effectively near to 14% and changed. Now, time to time if the company were to distribute dividend, shareholder will indirectly bear a tax burden of 14% on their income. On the other hand, if the company were to provide return to shareholder in the form of appreciation in market price – by way of Bonus shares – then shareholder will have a reduced tax burden. For securities on which STT is payable, short-term capital gain is taxable @ 10% while long-term capital gain is totally exempt from tax.

Therefore, we can conclude that if the company pays more and more dividend (while it still has reinvestment opportunities) then to get same after-tax return shareholders will expect more before tax return and this will result in lower market price per share.