GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY, DELHI

BACHELOR OF BUSINESS ADMINISTRATION (BBA)

**BBA (B&I) - 204: FINANCIAL MANAGEMENT**

**Unit I** **Lectures:-16**

Financial Management: Meaning, Scope, Objectives of Financial Management, Profit Vs. Wealth Maximization. Financial Management and other Areas of Management, Liquidity Vs Profitability, Methods of Financial Management, Organization of Finance Function.

Concept in Valuation: Time Value of Money, Valuation Concepts, Valuation of Securities viz., Debentures, Preference shares and Equity Shares.

Sources of Financing: Classification of Sources of Finance, Security Financing, Loan Financing, Project Financing, Loan Syndication- Book Building, New Financial Institutions and Instruments(in brief)viz. Depositories, Factoring, Venture Capital, Credit Rating, Commercial Paper, Certificate of Deposit, Stock Invest, Global Depository Receipts.

**Unit II** **Lectures:-12**

Capital Structure: Meaning, Capital Structure and Financial Structure, Patterns of Capital Structure, Optimum Capital Structure, Capital Structure Theories, Factors Determining Capital Structure, Capital Structure Practices in India.

Cost of Capital: Concept, Importance, Classification and Determination of Cost of Capital.

Leverages: Concept, Types of leverages and their significance.

**Unit III** **Lectures:-12**

Capital Budgeting: Concept, Importance and Appraisal Methods: Pay Back Period, DCF Techniques, Accounting Rate of Return, Capital Rationing, Concept of Risk, Incorporation of Risk Factor, General Techniques: Risk Adjusted Discount Return, Certainty Equivalent Coefficient and Quantitative Techniques: Sensitivity Analysis, Probability assignment, Standard Deviation, Coefficient of Variation, Decision Tree.

**Unit IV** **Lectures:-12**

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# (Unit – I)

## FINANCIAL MANAGEMENT

### Meaning

Financial Management means planning, organizing, directing and controlling the financial activities such as procurement and utilization of funds of the enterprise.

According to **Dr. S. N. Maheshwari**,

"Financial management is concerned with raising financial resources and their effective utilization towards achieving the organizational goals."

Thus, financial management means:

- To collect finance for the company at a low cost and
- To use this collected finance for earning maximum profits.

It is clear that financial management is that specialized activity which is responsible for obtaining and affectively utilizing the funds for the efficient functioning of the business and, therefore, it includes financial planning, financial administration and financial control.

### Finance Functions

Finance functions can be divided into three major decisions, which the firm must make, namely investment decision, finance decision, and dividend decision. Each of these decisions must be considered in relation to the objective of the firm: an optimal combination of the three decisions will maximize the value of the share to its shareholders -

**Investment Decision**

One of the most important finance functions is to intelligently allocate capital to long term assets. This activity is also known as *capital budgeting*. It is important to allocate capital in those long term assets so as to get maximum yield in future. Following are the two aspects of investment decision -

a. Evaluation of new investment in terms of profitability.
b. Comparison of cut off rate against new investment and prevailing investment.

Since the future is uncertain therefore there are difficulties in calculation of expected return. Along with uncertainty comes the risk factor which has to be taken into consideration. Therefore while considering investment proposal it is important to take into consideration both expected return and the risk involved.

Investment decision not only involves allocating capital to long term assets but also involves decisions of using funds which are obtained by selling those assets which become less profitable and less productive.

**Financial Decision**

Financial decision is yet another important function which a financial manger must perform. It is important to make wise decisions about when, where and how should a business acquire funds. Funds can be acquired through many ways and channels. *Broadly speaking a correct ratio of an equity and debt has to be maintained.* This mix of equity capital and debt is known as a firm's *capital structure*.

A firm tends to benefit most when the market value of a company's share maximizes this not only is a sign of growth for the firm but also maximizes shareholders wealth. On the other hand the use of debt affects the risk and return of a shareholder. It is more risky though it may increase the return on equity funds. A sound financial structure is said to be one which aims at maximizing shareholders return with minimum risk. In such a scenario the market value of the firm will maximize and hence an optimum capital structure would be achieved.

**Dividend Decision**

Earning profit or a positive return is a common aim of all the businesses. But the key function a financial manger performs in case of profitability is to decide whether to distribute all the profits to the shareholder or retain all the profits or distribute part of the profits to the shareholder and retain the other half in the business. It's the financial manager's responsibility to decide an optimum dividend policy which maximizes the market value of the firm. Hence an optimum dividend payout ratio is calculated.

## Objectives of Financial Management

The financial management is generally concerned with procurement, allocation and control of financial resources of a concern. The objectives can be-

1. To ensure regular and adequate supply of funds to the concern.
2. To ensure adequate returns to the shareholders which will depend upon the earning capacity, market price of the share, expectations of the shareholders?
3. To ensure optimum funds utilization. Once the funds are procured, they should be utilized in maximum possible way at least cost.
4. To ensure safety on investment, i.e., funds should be invested in safe ventures so that adequate rate of return can be achieved.
5. To plan a sound capital structure-There should be sound and fair composition of capital so that a balance is maintained between debt and equity capital.

## Functions of Financial Management

1. **Estimation of Financial requirements:** A finance manager has to make estimation with regards to capital requirements of the company. This will depend upon expected costs and profits and future programmes and policies of a concern. Estimations have to be made in an adequate manner which increases earning capacity of enterprise.
2. **Determination of capital composition:** Once the estimation have been made, the capital structure have to be decided. This involves short- term and long- term debt equity analysis. This will depend upon the proportion of equity capital a company is possessing and additional funds which have to be raised from outside parties.
3. **Choice of sources of funds:** For additional funds to be procured, a company has many choices like-
   a. Issue of shares and debentures
   b. Loans to be taken from banks and financial institutions
   c. Public deposits to be drawn like in form of bonds.
4. **Investment of funds:** The finance manager has to decide to allocate funds into profitable ventures so that there is safety on investment and regular returns is possible. It can be –

**a)** Capital Budgeting Decision – It is related to selection of long-term assets in which investments will be made by the company. Investment decisions are related to future and involve risk, that's why these should be evaluated in terms of expected risk and return.

**b)** Working Capital decision – It is concerned with management of current assets. It is an important function of financial manager since short –term survival of the firm is a pre-requisite for long term success.

5. **Disposal of surplus:** The net profits decision has to be made by the finance manager. This can be done in two ways:
   a. Dividend declaration - It includes identifying the rate of dividends and other benefits like bonus.
   b. Retained profits - The volume has to be decided which will depend upon expansion, innovational, diversification plans of the company.
6. **Management of cash:** Finance manager has to make decisions with regards to cash management. Cash is required for many purposes like payment of wages and salaries, payment of electricity and water bills, payment to creditors, meeting current liabilities, maintenance of enough stock, purchase of raw materials, etc.
7. **Financial controls:** The finance manager has not only to plan, procure and utilize the funds but he also has to exercise control over finances. This can be done through many techniques like ratio analysis, financial forecasting, cost and profit control, etc.

## Scope of Financial Management

1. **Traditional Approach**

   The traditional approach to the scope of financial management refers to its subject matter in the academic literature in the initial stages of its evolution as a separate branch of study. According to this approach, the scope of financial management is confined to *raising of funds*. Hence, the scope of finance was treated by traditional approach in narrow sense of *procurement of funds by corporate enterprise* to meet their financial needs. Since the main emphasis of finance function at that period was on procurement of funds, the subject was called corporation finance till mid-1950's and covered discussion on financial instruments,

institutions and practices through which funds are obtained. Further, as the problem of raising funds is more intensely felt at certain episodic events such as merger, liquidation, consolidation, reorganization and so on. These are the broad features of subject matter of corporation finance, which has no concern with the decisions of allocating firm's funds.

But the scope of finance function in the traditional approach has now been discarded as it suffers from serious **criticisms** -

- ***Outsider-looking*** - The emphasis in the traditional approach is on procurement of funds by the corporate enterprises, which was woven around the viewpoint of suppliers of funds such as investors, financial institutions, investment bankers, etc, i.e. outsiders. It implies that the traditional approach was the outsider-looking-in approach.
- ***Confined to Episodic events*** - The second criticism leveled against this traditional approach was that the scope of financial management was confined only to the episodic events such as mergers, acquisition, reorganizations, consolation, etc.
- ***Focus on Long-term problems*** - Another serious lacuna in the traditional approach was that the focus was on the long-term financial problems thus ignoring the importance of the working capital management. Thus, this approach has failed to consider the routine managerial problems relating to finance of the firm.

During the initial stages of development, financial management was dominated by the traditional approach as is evident from the finance books of early days. It over emphasized long-term financing lacked in analytical content and placed heavy emphasis on descriptive material. Thus, the traditional approach omits the discussion on the important aspects like cost of the capital, optimum capital structure, valuation of firm, etc.

2. **Modern Approach**

***After the 1950's***, a number of economic and environmental factors, such as the technological innovations, industrialization, intense competition, interference of government, growth of population, necessitated efficient ***and effective utilization of financial resources***. The emphasis shifted from episodic financing to the managerial financial problems, from raising of funds to efficient and effective use of funds. Thus, the broader view of the modern

approach of the finance function is the *wise use of funds*. Since the financial decisions have a great impact on all other business activities, the financial manager should be concerned about determining the size and nature of the technology, setting the direction and growth of the business, shaping the profitability, amount of risk taking, selecting the asset mix, determination of optimum capital structure, etc. The new approach is thus an analytical way of viewing the financial problems of a firm.

According to the new approach, the financial management is concerned with the solution of the major areas relating to the financial operations of a firm, viz., investment, and financing and dividend decisions. The modern financial manager has to take financial decisions in the most rational way. These decisions have to be made in such a way that the funds of the firm are used optimally.

## Profit Maximization v/s Wealth Maximization

It is clear from the above discussion that the modern approach to financial management is to give answers for three questions: where to invest and in what amount; how to raise; and when to pay dividends. It is generally agreed that the financial objective of the firm should be the maximization of owners' economic welfare. However, there is a disagreement as to how the economic welfare of the owners can be maximized. The two well known and widely discussed criteria in this respect are:

1) **Profit Maximization**

According to this concept, actions that increase the firm's profit are undertaken while those that decrease profit are avoided. The profit can be maximized either by increasing output for a given set of scarce input or by reducing the cost of production for a given output. The modern economics states that the profit maximization is nothing but a criterion for economic efficiency as profits provide a yardstick by which economic performances can be judged under condition of perfect competition. Besides, under perfect competition, profit maximization behavior by firms leads to an efficient allocation of resources with maximum social welfare. Since, the capital is a scarce material; the financial manager should use these capital funds in the most efficient manner for achieving the profit maximization. It is,

therefore, argued that profitability maximization should serve as the basic criterion for the ultimate financial management decisions.

The profit maximization criterion has been ***criticized*** on the following grounds:

- ***Vagueness*** - One practical difficulty with profit maximization criterion is that the term profit is vague and ambiguous as it is amenable to different interpretations, like, profit before tax or after tax, total profit or rate of return, etc. If profit maximization is taken to be the objective, the problem arises, which of these variants of profit to be maximized?
- ***Ignores the timing of benefits*** - A more important technical objection to profit maximization is that it ignores the differences in the time pattern of the cash inflows from investment proposals. In other words, it does not recognize the distinction between the returns in different periods of time and treat them at a par which is not true in real world as the benefits in earlier years should be valued more than the benefits received in the subsequent years.
- ***Ignores risk*** – It ignores the degree of certainty/ risk with which benefits can be obtained. As a matter of fact, the more certain the expected return, the higher the quality of the benefits. Conversely, the more uncertain the expected returns, the lower the quality of benefits, which implies risk to the investors. Generally, the investors want to avoid risk.

Therefore, from the above discussion, it clear that the profit maximization concept is inappropriate to a firm from the point of view of financial decisions, i.e. investment, finance and dividend policies. It is not only vague and ambiguous but also it does not recognize the two basic aspects, i.e., risk and time value of money.

**2) Wealth Maximization**

The most widely accepted objective of the firm is to maximize the value of the firm for its owners. The wealth maximization goal states that *the management should seek to maximize the present value of the expected returns* of the firm. The present value of future benefits is calculated by using its discount rate (cost of capital) that reflects both time and risk. The discount rate is the rate that reflects the time and risk preferences of the suppliers of capital.

The next feature of wealth maximization criterion is that it takes; both the quantity and quality dimensions of benefits along with the time value of money. Other things being equal, income with certainty are valued more than the uncertain ones. Similarly, the benefits received in earlier period should be valued more than the benefits received in later period.

It is quite clear that the wealth maximization is, no doubt, superior to the profit maximization objective. The wealth maximization objective involves a comparison of present value of future benefits to the cash outflow. If the activity results in positive net present value, i.e. the present value of future stream of cash flows exceed the present value of outflows, reflecting both time and risk, it can be said to create wealth.

The objective of wealth maximization can also be explicitly defined by short-cut method symbolically as under:

$$W = \frac{A_1}{1+k} + \frac{A_2}{(1+k)^2} + \cdots\cdots + \frac{A_n}{(1+k)^n} - C_o$$

$$= \sum_{t=1}^{n} \frac{At}{(1+k)^t} - C_o$$

Where, A1, A2 ... A represent the stream of benefits (cash inflows) expected to occur on the investment project;

Co = cost of the project

k = the discount factor / capitalization rate

W = the net wealth of the firm (the difference between the present value of stream of expected benefits and the present value of cash outflow).

It is abundantly clear from the above discussion that the wealth maximization criterion recognizes the time value of money and also tackles the risk, which is ascertained by the uncertainty of the expected benefits. That is why, it is rightly said that maximization of wealth is more useful than minimization of profits as a statement of the objective of most business firms.

## Liquidity v/s Profitability

The liquidity decision is concerned with the management of the current assets, which is a pre-requisite to long-term success of any business firm. The main objective of the current assets

management is the trade - off between profitability and liquidity. There is a trade-off between liquidity and profitability; gaining more of one ordinarily means giving up some of the other.

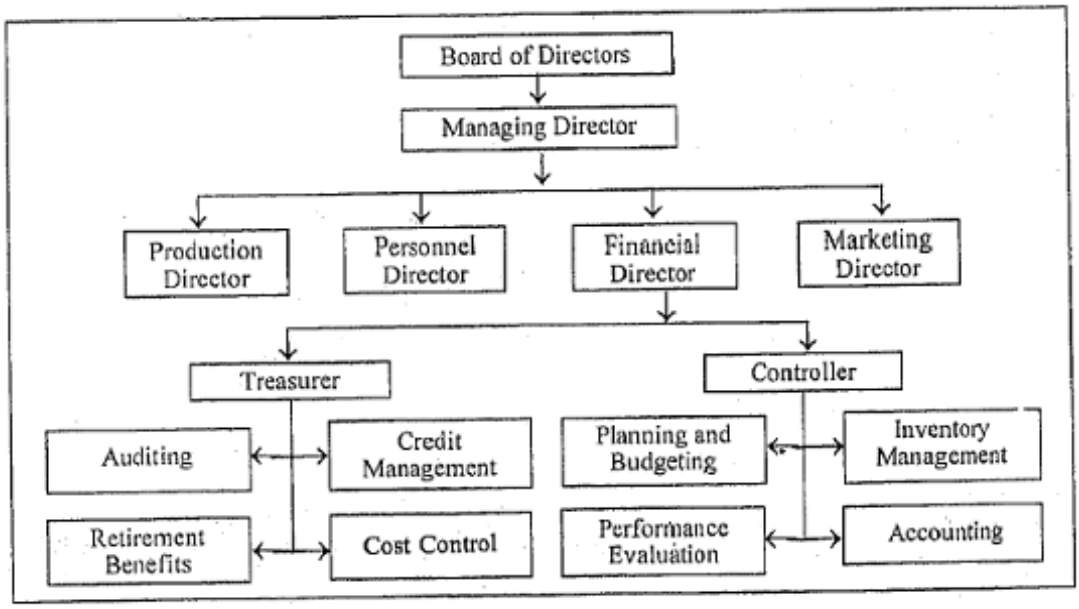
***Liquidity:*** Having enough money in the form of cash, or near-cash assets, to meet your financial obligations. Alternatively, how easily assets can be converted into cash.

***Profitability:*** A measure of amount by which a company's revenues exceed its relevant expenses.

There is a conflict between these two concepts. If a firm does not have adequate working capital, it may become illiquid and consequently fail to meet its current obligations thus inviting the risk of bankruptcy. On the contrary, if the current assets are too large, the profitability is adversely affected. Hence, the key strategy and the main consideration in ensuring a trade-off between profitability and liquidity is the major objective of the liquidity decision. Thus, the liquidity decision should obtain the basic two ingredients, i.e. overview of working capital management and the efficient allocation of funds on the individual current assets.

## Organization of Finance Function

Since the finance function is a major functional area, the ultimate responsibility for carrying out the financial management functions lies with the top management: Board of directors / Managing director / chief executive / committee of the Board. However, the exact nature of the organization of the finance function differs from firm to firm depending upon the factors such as size of the firm, nature of the business, ability of the financial executive etc. Similarly, the designation of the chief executive of the finance department also differs widely in case of different firms. In some cases, they are known as finance managers while in others as vice-president (Finance), or Director (Finance), or financial controller etc.




Under the chief executive, there are controllers, treasurers, who will be looking after the sub functions viz., accounting and control; and financing activities in the firm. The functions of treasurer includes obtaining finance; maintaining relations with investors, banks, etc., short-term financing, cash management, credit administration while the controller is related to the functions like financial accounting; internal audit; taxation, management accounting and control, budgeting, planning and control, economic appraisal, etc.

## Finance and Related Disciplines

There is an inseparable relationship between finance on the one hand and other related disciplines and subjects on the other. It draws heavily on related disciplines and fields of study. The most important of these are accounting and economics, but the subjects like marketing, production, quantitative methods, etc. also have an impact on the finance field -

- **Finance and Accounting**

The relationship between finance and accounting has two dimensions:

a. They are closely related to the extent that accounting is an important input in financial decision making;
b. There are certain differences between them.

Accounting is a necessary input into finance function. It generates information through financial statements. The data contained in these statements assists the financial managers in assessing the past performance and future directions of the firm. Thus, accounting and finance are functionally inseparable.

The key differences between finance and accounting are as under:

a. ***Treatment of funds:*** The measurement of funds in accounting is based on the accrual concept. For instance, revenue is recognized at the point of sale and not on collection of credit. Similarly, expenses are recognized when they are incurred but not at the time of actual payment of these expenses. Whereas in case of finance the treatment of funds is based on cash flows. That means here the revenue is recognized only when actually received or actually paid in cash.

b. ***Decision Making:*** The purpose of accounting is collection and presentation of financial data. The financial manager uses these data for financial decision-making. It does not mean that accountants never make decisions or financial managers never prepare data. But the primary focus of accountants is collection and presentation of data while the financial manager's major responsibility relates to financial planning, controlling and decision-making. Thus, the role of finance begins, where the accounting ends.

- **Economics and Finance**

The development of the theory of finance began in the 1920s as an offshoot of the study of the theory of the firm in economic theory. The financial manager uses microeconomics when developing decision models that are likely to lead to the most efficient and successful modes of operation within the firm. Further, the marginal cost and revenue concepts are used in making the investment decisions, managing working capital, etc in the finance field.

- **Finance and Production**

Finance and production are also functionally related. Any changes in production process may necessitate additional funds which the financial managers must evaluate and finance. Thus, the production processes, capacity of the firm are closely related to finance.

- **Finance and Marketing**

Marketing and finance are functionally related. New product development, sales promotion plans new channels of distribution; advertising campaign etc. in the area of marketing will require additional funds and have an impact on the expected cash flows of the business firm. Thus, the financial manager must be familiar with the basic concept of ideas of marketing.

- **Finance and Quantitative Methods**

Financial management and Quantitative methods are closely related such as linear programming, probability, discounting techniques, present value techniques etc. are useful in analyzing complex financial management problems. Thus, the financial manager should be familiar with the tools of quantitative methods. In other way, the quantitative methods are indirectly related to the day-to-day decision making by financial managers.

- **Finance and Costing**

Cost efficiency is a major advantage to a firm, and will contribute towards its competitiveness, sustainability and profitability. A finance manager has to understand, plan and manage cost, through appropriate tools and techniques including budgeting and activity based costing.

# Time Value of Money

Money has time value. Money that you hold today is worth more because you can invest it and earn interest. *A rupee today is more valuable than a year hence*. It is on this concept "the time value of money" is based. The recognition of the time value of money and risk is extremely vital in financial decision making.

Most financial decisions such as the purchase of assets or procurement of funds, affect the firm's cash flows in different time periods. For example, if a fixed asset is purchased, it will require an immediate cash outlay and will generate cash flows during many future periods. Cash flows become logically comparable when they are appropriately adjusted for their differences in timing and risk. The recognition of the time value of money and risk is extremely vital in financial decision- making. If the timing and risk of cash flows is not considered, the firm may make decisions which may allow it to miss its objective of maximizing the owner's welfare. The welfare of owners would be maximized when ***Net Present Value*** is created from making a financial decision. It is thus, time value concept which is important for financial decisions. It can be used to compare investment alternatives and to solve problems involving loans, mortgages, leases, savings, and annuities.

For instance, you can invest your dollar for one year at a 6% annual interest rate and accumulate $1.06 at the end of the year. You can say that the **future value** of the dollar is $1.06 given a 6% **interest rate** and a one-year **period**. It follows that the **present value** of the $1.06 you expect to receive in one year is only $1.

## Reasons for Time Value of Money

Money has time value because of the following reasons:

1. **Risk and Uncertainty:** Future is always uncertain and risky. Outflow of cash is in our control as payments to parties are made by us. There is no certainty for future cash inflows. Cash inflows are dependent out on our Creditor, Bank etc. As an individual or firm is not certain about future cash receipts, it prefers receiving cash now.

2. **Inflation:** In an inflationary economy, the money received today, has more purchasing power than the money to be received in future. In other words, a rupee today represents a greater real purchasing power than a rupee a year hence.

3. **Consumption:** Individuals generally prefer current consumption to future consumption.

4. **Investment opportunities:** An investor can profitably employ a rupee received today, to give him a higher value to be received tomorrow or after a certain period of time.

Thus, the fundamental principle behind the concept of time value of money is that, a sum of money received today, is worth more than if the same is received after a certain period of time. For example, if an individual is given an alternative either to receive 10,000 now or after one year, he will prefer 10,000 now.

## Techniques of Time Value of Money

There are two techniques for adjusting time value of money. They are:

1. Compounding Techniques/Future Value Techniques

2. Discounting/Present Value Techniques

The value of money at a future date with a given interest rate is called future value. Similarly, the worth of money today that is receivable or payable at a future date is called Present Value.

## 1. Compounding Techniques/Future Value Technique

In this concept, the interest earned on the initial principal amount becomes a part of the principal at the end of the compounding period.

***For example:*** Suppose you invest 1000 for three years in a saving account that pays 10 per cent interest per year. If you reinvest your interest income, your investment will grow as follows -

| | | |
|---|---|---|
| First year: | Principal at the beginning | 1,000 |
| | Interest for the year (1,000 × 0.10) | 100 |
| | Principal at the end | 1,100 |
| Second year: | Principal at the end (1100 + 10%) | 1210 |
| Third year: | Principal at the end (1210 + 10%) | 1331 |

This process of compounding will continue for an indefinite time period.

- **Compound/ Future Value of a Single Amount (Lump sum) -**

A generalized procedure for calculating the future value of a single amount compounded annually is as follows:

***Formula:*** $FVn = PV (1 + r)^{n}$

Where, FVn = Future value of the initial flow n year hence

PV = Initial cash flow

r = Annual rate of Interest

n = number of years

By taking into consideration, the above example, we get the same result.

$FVn = PV (1 + r)^{n}$

$= 1,000 (1.10)^{3} = 1331/-$

To solve future value problems, compound value interest factor (CVIF) table i.e. Table A-1 can be used. The table shows the future value factor for certain combinations of periods and interest rates. To simplify calculations, this expression has been evaluated for various combinations of 'r' and 'n'.

***Illustration 1:*** If you deposit 55,650 in a bank which is paying a 12 per cent rate of interest on a ten-year time deposit, how much would the deposit grow at the end of ten years?

***Solution:*** $FV^{n} = PV (1 + r)^{n}$ or $FV^{n} = PV$ (CVIF 12%, 10 yrs)

$FV^{n} = 55650 (1.12)^{10}$ (Using Table A-1)

$= 55650 \times 3.106 = 172848.90$

- **Multiple Compounding Periods -**

Interest can be compounded monthly, quarterly and half-yearly. If compounding is quarterly, annual interest rate is to be divided by 4 and the number of years is to be multiplied by 4. Similarly, if monthly compounding is to be made, annual interest rate is to be divided by 12 and number of years is to be multiplied by 12.

***Formula:*** $FV^{n} = PV (1+ r/m)^{m*n}$

Where, FVn = Future value after 'n' years

PV = Cash flow today

r = Interest rate per annum

m = Number of times compounding is done during a year

- **Compound Value of an Annuity –**

Sometimes, a person may desire to deposit annually a sum of money that is known as annuity. The compound value of an annuity can be calculated through compound value Table A-2.

Compound Value = Annuity amount * Compound Value Annuity Factor (CVAF)

***Illustration 2:*** A person invests Rs. 5000 every year at the same time at an interest rate of 10% Calculate the sum of money he will receive after 5 years?

***Solution:*** Annuity amount = 5000/-

Compound Value = 5000 * (FVAF 10%, 5 years)

CVAF (10%, 5 years)= 6.105

Compound Value = 5000 * 6.105 = Rs 30525/-

## 2. Present Value Technique

Present Value describes the process of determining what a cash flow to be received in the future is worth in today's dollars. Therefore, the Present Value of a future cash flow represents the amount of money today which, if invested at a particular interest rate, will grow to the amount of the future cash flow at that time in the future. The process of finding present values is called discounting and the interest rate used to calculate present values is called the discount rate.

***For Example***, The Present Value of $100 to be received one year from now is $90.91 if the discount rate is 10% compounded annually.

The following equation can be used to find the Present Value of a Cash Flow stream.

$$PV = \sum_{t=0}^{n} \frac{CF_t}{(1+r)^t}$$

Where, PV = the Present Value of the Cash Flow Stream,

$CF_t$ = the cash flow which occurs at the end of year t,

r = the discount rate,

t = the year, which ranges from zero to n, and

n = the last year in which a cash flow occurs.

Or, It can be calculated by using present value of Rs.1 table i.e. Table A-3.

- **Present Value of Semi Annual/ Quarterly/ Monthly Cash Flows -**

A person may select monthly, quarterly and half-yearly discounting. If discounting is done quarterly, annual interest rate is to be divided by 4 and the number of years is to be multiplied by 4. Similarly, if monthly discounting is to be made, annual interest rate is to be divided by 12 and number of years is to be multiplied by 12.

***Formula:*** $PV = FV / (1+ r/m)^{m*n}$

Where, FV = Future value after 'n' years

PV = Present Value

r = Interest rate per annum

m = Number of times discounting is done per year

- **Present Value of an Annuity**

The Present Value of an Annuity is equal to the sum of the present values of the annuity payments. This can be found in one step through the use of the following equation:

$$PVA = PMT\left[\frac{1-(1+r)^{-t}}{r}\right]$$

Where, PVA = Present Value of the Annuity

PMT = Annuity Payment

r = Interest or Discount Rate

t = Number of Years (also the Number of Annuity Payments)

OR

It can be calculated by using present value of an annuity table i.e. Table A-4. It is similar to compound value of an annuity the only difference is Table A-4 is used instead of Table A-2.

PV = Annuity Amount * PVAF (Rate, No. of years)

***Illustration 3:*** Using same data given in Illustration 2, Calculate the Present value of annuity.

***Solution:*** Annuity amount = 5000/-

Present value = 5000 * PVAF (10%, 5 years)

PVAF (10%, 5 years) = 3.791

Present value = 5000 * 3.791 = Rs. 18955/-

## Valuation of Securities

### A. Debentures/Bonds -

Debentures are financial instruments usually issued by companies and government to raise their capital to finance their business without forfeiting control of company ownership. In other

words, debentures are simply loans taken by the companies to raise short to medium term loan needed for expenses or for expansions and do not provide the ownership in the company. A debenture is a debt instrument, just like a fixed deposit (FD), usually issued by a company. You invest a sum, and the company pays you a fixed rate of interest for the pre-defined period. After the period gets over, you get back your principal amount. However, these types of bonds are not secured by physical asset or collateral. These are unsecured loans as company is not bound to return the principal amount on the maturity and are backed only by the general credit worthiness and reputation of the issuer.

**Valuation of Bonds/Debentures:**

Basically, the value of a bond is the present value of all the future interest payments and the maturity value, discounted at the required return on bond commensurate with the prevailing interest rate and risk.

$$\text{Bond value} = \frac{\text{Interest}_1}{(1+r)^1} + \frac{\text{Interest}_2}{(1+r)^2} + \ldots\ldots\ldots + \frac{(\text{Interest}_n + \text{Maturity value})}{(1+r)^n}$$

Where, Interest 1 to n = Interests in periods 1 to n.

Unless otherwise mentioned, maturity value of the bond is face value.

When the required rate of return is equal to the coupon rate, the bond value equals the par value.

When the required rate of return is more than the coupon rate, the bond value would be less than its par value. The bond in this case would sell at a discount.

When the required rate of return is less than the coupon rate, the bond value would be more than its par value. The bond in this case would sell at a premium.

***Example:*** Let us assume the face value of the bond is $1,000 (maturity value $1,000). The bond has a 10% coupon rate payable semi-annually and the yield to maturity (return) is 9%. The bond matures in 5 years period from now. What is the value of the bond?

***Solution:*** Interest 1 till 10 = $50 per semi-annual period. ($100 annually)

n=10 because 5 years x 2 payments per period.

Yield to maturity = 9%, therefore, semi-annual YTM =9/2 = 4.5% or 0.045

$$\text{Bond value} = \frac{\$50}{(1+.045)^1} + \frac{\$50}{(1+.045)^2} + \ldots\ldots\ldots\ldots + \frac{(\$50+\$1000)}{(1+.045)^{10}}$$

i.e. Bond price = $1,040 (rounded)

## B. Preference Shares -

Preference Shares are issued by corporations or companies with the primary aim of generating funds. A preference share usually carries a fixed stated rate of dividend. The dividend is payable only upon availability of profits. In case of cumulative preference shares, arrears of dividends can be accumulated and in the year of profits common stock holders can be paid dividend only upon settlement of all the arrears of cumulative preference dividends.

Preference share holders have preference right over payment of dividend and settlement of principal amount upon liquidation, over common share holders. A preference share can be irredeemable or redeemable. Redeemable preference shares have a fixed maturity date and irredeemable preference shares have perpetual life with only dividend payments periodically upon profit availability. Preference shares can also be cumulative and non-cumulative.

**Valuation of Preference Shares:**

Basically, the value of a redeemable preference share is the present value of all the future expected dividend payments and the maturity value, discounted at the required return on preference shares.

Redeemable Preference share value =

$$= \frac{\text{Dividend}_1}{(1+r)^1} + \frac{\text{Dividend}_2}{(1+r)^2} + \ldots\ldots + \frac{(\text{Dividend}_n + \text{Maturity value})}{(1+r)^n}$$

Where, Dividend 1 to n = Dividends in periods 1 to n.

The value of an irredeemable preference share can be expressed as follows:

$$\text{Irredeemable Preference share value} = \frac{\text{Dividend}}{\text{Required return on Preference share}}$$

***Example:*** Let us assume the face value of the preference share is $500 and the stated dividend rate is 12%. The shares are redeemable after 5 years period. Calculate the value of preference shares if the required rate of return is 13%.

***Solution:*** Annual dividend = $500 x 12% = $60

Redeemable Preference share value =

$$= \frac{\$60_1}{(1+.13)^1} + \frac{\$60_2}{(1+.13)^2} + \ldots\ldots\ldots + \frac{(\$60_5 + \$500)}{(1+.13)^5}$$

Solving for the above equation, we get the value of the preference shares as $482 (rounded).

## C. Common Stock/Equity -

A share of common stock represents an ownership position in the firm. Typically, the owners are entitled to vote on important matters regarding the firm, to vote on the membership of the board of directors, and (often) to receive dividends. In the event of liquidation of the firm, the common shareholders will receive a pro-rata share of the assets remaining after the creditors and preferred stockholders have been paid off.

**Valuation of Common Stock/Equity:**

Just like with bonds, the first step in valuing common stocks is to determine the cash flows. For a stock, there are two types of cash flows -

- Dividend payments
- The future selling price

The value of an ordinary share is equal to the present value of all the expected future dividends over an infinite period. Symbolically, it can be expressed as:

$$P_0 = \frac{D_1}{(1+r)^1} + \frac{D_2}{(1+r)^2} + \ldots\ldots\ldots\ldots \frac{D_\infty}{(1+r)^\infty}$$

Where, P0 = Current value of common share

D1 = Dividend expected at the end of Year 1

r = required rate of return on share

Again, finding present values of these cash flows & adding them together will give us the value.

**Methods of Valuation of Share –**

There are two method of valuation of shares –

1. **Net Assets Method:** Under this method, value of share is equal to net assets. So, we first calculate net assets.

   Net assets = Total tangible assets – total liabilities (Including pref. share capital) + Goodwill

   Value of Share = Net Assets / No. of Shares

The following points should be considered while valuing of shares according to this method:

* Goodwill must be properly valued

* The fictitious assets such as preliminary expenses, discount on issue of shares and debentures, accumulated losses etc. should be eliminated.

* The fixed assets should be taken at their realizable value.

* Provision for bad debts, depreciation etc. must be considered.

* All unrecorded assets and liabilities (if any) should be considered.

* Floating assets should be taken at market value.

* The external liabilities such as sundry creditors, bills payable, loan, debentures etc. should be deducted from the value of assets for the determination of net value.

The net value of assets, determined so has to be divided by number of equity shares for finding out the value of share.

***Example:*** Suppose total tangible assets are RS. 100000, Goodwill Rs. 10000, pref. share capital Rs. 20000, other liabilities = RS. 40000, Equity shares capital is Rs. 60000 of 10000 shares. Calculate the value of shares?

***Solution:*** Net Asset = 100000 – 20000 - 40000 + 10000 = 50000

Value of Shares = 50000 / 10000 = Rs. 5

2. **Earning Capacity Method:** Under this method, value of share is equal to the proportion of expected earning and normal earning of paid up value of shares.

Value of Share = Expected earning rate / Normal earning rate X Paid up Value of Shares

Where, Expected Earning Rate = Expected profit / total equity share capital X 100

Expected profit = Average annual profit – taxation – reserve – pref. dividend

***For example:*** Calculate the value of share with earning capacity method, if company has issued 10000 shares @ 10 each and fully paid up. Suppose average profit is Rs 20000 and taxation is 2000, reserve is Rs. 500 and pref. share dividend is Rs. 600. Normal rate of earning is 10 % of total profit before tax.

***Solution:*** Expected profit = 20000 -2000-500-600 = 16900

Expected profit rate = 16900 / 100000 X 100 = 16.9 %

Value of Share = 16.9 / 10 X 10 = Rs. 16.90

3. **Dividend Growth Model:** The value of a company whose dividend is growing at a perpetual constant rate is shown by the following function, where g is the constant growth rate the company's dividends are expected to experience for the duration of the investment.

$$\text{Constant Growth}: \quad P_0 = \frac{\text{Div}}{r - g}$$

4. **Capital Asset Pricing Model:** It is used to take decisions in conditions of risk and uncertainty. The CAPM model provides a solution to this problem by finding out beta risk. The CAPM model is as follows –

$$\mathbf{K_e = R_f + \beta\ (R_m - R_f).}$$

# Unit - 2

# CAPITAL BUDGETING

## INTRODUCTION

A firm incurs two types of expenses i.e.

**Revenue expenditure** – The benefits of which are supposed to be exhausted within the year concerned and their planning and control is done through various functional departments.

**Capital expenditure** – The benefits of which are expected to be received over long period a series of years in future like building, plant, machinery or to undertake a program on -

- Research and development of a product
- Diversification in to a new product line
- Replacement of a machine
- Expansion in production capacity
- Promotional campaign

Capital expenditure involves investment of substantial funds for longer period and the benefits of such investment are in the form of increasing revenues or decreasing costs. Wrong decision under this head may affect future earnings, employment capacity, quantity and quality of production. Hence, long term planning and right decision to incur or not to incur such expenditure is a crucial responsibility of management. The techniques used by management to carry out this responsibility is known as capital budgeting.

**Definitions**

According to Milton "*Capital budgeting involves planning of expenditure for assets and return from them which will be realized in future time period".*

According to I. M. Pandey, "*Capital budgeting refers to the process of generating, evaluating, selecting, and follow up of capital expenditure alternatives."*

## NATURE / FEATURES OF CAPITAL BUDGETING DECISIONS

(1) **Long term effect** - Such decisions have long term effect on future profitability and influence pace of firm's growth. A good decision may bring good returns and wrong decision may endanger very survival of firm.

(2) **High degree of risk** - decision is based on estimated return. Changes in taste, fashion, research and technological advancement leads to greater risk in such decisions.

(3) **Huge funds** – large amount/funds are required and sparing huge funds is problem and hence decision to be taken after proper care/analysis

(4) **Irreversible decision** – Reverting back from a decision is very difficult as sale of high value asset would be a problem.

(5) **Most difficult decision** – decision is based on future estimates/uncertainty. Future events are affected by economic, political and technological changes taking place.

(6) **Impact on firms future competitive strengths** – These decisions determine future profit/ cost and hence affect the competitive strengths of firm.

(7) **Impact on cost structure** – Due to this vital decision, firm commits itself to fixed costs such as supervision, insurance, rent, interest etc. If investment does not generate anticipated profit, future profitability would be affected.

## OBJECTIVES OF CAPITAL BUDGETING

(1) **Share holder's wealth maximization**. In tune with objectives of financial management, its aim is selecting those projects that maximize shareholders wealth. The decision should avoid over/under investment in fixed assets.

(2) **Evaluation of proposed capital expenditure** – Capital budgeting helps in evaluating expenditure to be incurred on various assets to measure validity of each expenditure

(3) **Controlling costs** - by evaluating expenditure costs can be controlled.

(4) **Determining priority** – arranging projects in order of their profitability enabling the management to select most profitable project.

## FACTORS AFFECTING CAPITAL BUDGETING DECISIONS

(1) **Technological changes** – Before taking CBD, management will have to undertake in-depth study of cost of new product /equipment as well productive efficiencies of new as well as old equipment.

(2) **Demand forecast** – Analysis of demand for a long period will have to be undertaken before taking any capital budgeting decision.

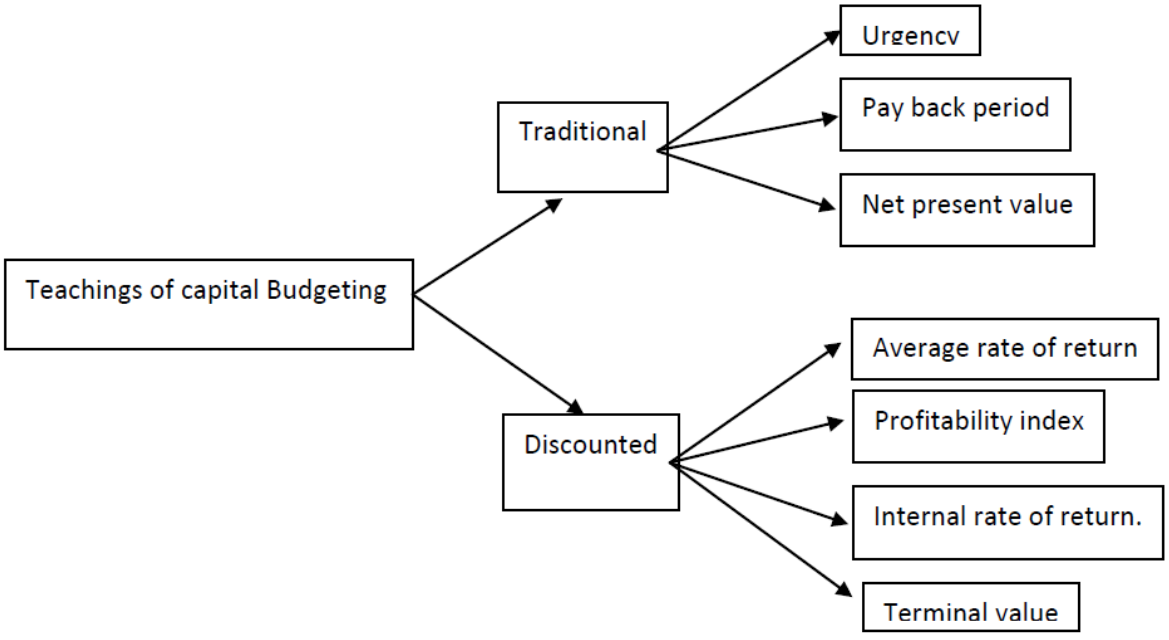
(3) **Competitive strategy** – If a competitor is going for new machinery /equipment of high capacity and cost effective, we may have to follow that.

(4) **Type of management** – If management is innovative, firm may go for new equipments/ investment as compared to conservative management.

(5) **Cash flow** – cash flow statement or cash budget helps a firm in identifying time when a firm can make investment in CBD.

(6) **Other factors**- Like fiscal policy (tax concessions, rebate on investments) political salability, global situation etc.

## TECHNIQUES OF CAPITAL BUDGETING




Capital budgeting decision may be thought of as a cost-benefit analysis. We are asking a very simple question: "If I purchase this fixed asset, will the benefits to the company be greater than

the cost of the asset?" In essence, we are placing the cash inflows and outflows on a scale (similar to the one above) to see which is greater.

A complicating factor is that the inflows and outflows may not be comparable: cash outflows (costs) are typically concentrated at the time of the purchase, while cash inflows (benefits) may be spread over many years. Therefore, before we can place the costs and benefits on the scale, we must make sure that they are comparable. We do this by taking the present value of each, which restates all of the cash flows into "today's dollars." Once all of the cash flows are on a comparable basis, they may be placed onto the scale to see if the benefits exceed the costs.

**The Major Capital Budgeting Techniques**

A variety of measures have evolved over time to analyze capital budgeting requests. The better methods use *time value of money* concepts. Older methods, like the payback period, have the deficiency of not using time value techniques and will eventually fall by the wayside and are replaced in companies by the newer, superior methods of evaluation.

## 1. PAYBACK PERIOD

It **is the length of time that it takes to recover your investment.**

For example, to recover $30,000 at the rate of $10,000 per year would take 3.0 years. Companies that use this method will set some arbitrary payback period for all capital budgeting projects, such as a rule that only projects with a payback period of 2.5 years or less will be accepted. (At a payback period of 3 years in the example above, that project would be rejected.) The payback period method is decreasing in use every year and doesn't deserve extensive coverage here.

## 2. PROFITABILITY INDEX (PI)

It is also known as **profit investment ratio** (PIR), is the ratio of payoff to investment of a proposed project. It is a useful tool for ranking projects because it allows you to quantify the amount of value created per unit of investment. The ratio is calculated as follows-

$$PI = \frac{\text{Present Value of Cash Inflows}}{\text{Present Value of Cash Outflows}}$$

Assuming that the cash flow calculated does not include the investment made in the project, a profitability index of 1 indicates breakeven. Any value lower than 'one' indicates that the project's PV is less than the initial investment. As the value of the profitability index increases, so does the financial attractiveness of the proposed project.

***Rules for selection or rejection of a project:***

If PI > 1 then accept the project

If PI < 1 then reject the project

## 3. ACCOUNTING RATE OF RETURN

It is also known as the **Average rate of return.** ARR is a financial ratio used in capital budgeting. The ratio does not take into account the concept of time value of money. ARR calculates the return, generated from net income of the proposed capital investment. The ARR is a percentage return. Say, if ARR = 7%, then it means that the project is expected to earn seven cents out of each dollar invested.

If the ARR is equal to or greater than the required rate of return, the project is acceptable. If it is less than the desired rate, it should be rejected. When comparing investments, the higher the ARR, the more attractive the investment. Over one-half of large firms calculate ARR when appraising projects.

**ARR = Average Profit / Average Investment**

## 4. NET PRESENT VALUE

Using a minimum rate of return known as the hurdle rate, the *net present value* of an investment is the *present value of the cash inflows* minus the *present value of the cash outflows.* A more common way of expressing this is to say that the net present value (NPV) is the present value of the benefits (PVB) minus the present value of the costs (PVC) NPV = PVB - PVC

| **If the NPV is:** | **Benefits vs. Costs** | **Should we expect to earn at least our minimum rate of return?** | **Accept the investment?** |
|---|---|---|---|
| Positive | Benefits > Costs | Yes, more than | Accept |
| Zero | Benefits = Costs | Exactly equal to | Indifferent |
| Negative | Benefits < Costs | No, less than | Reject |

The purpose of the capital budgeting analysis is to see if the project's benefits are large enough to repay the company for (1) the asset's cost, (2) the cost of financing the project, and (3) a rate of return that adequately compensates the company for the risk found in the cash flow estimates. Therefore, if the NPV is:

- Positive, the benefits are more than large enough to repay the company for (1) the asset's cost, (2) the cost of financing the project, and (3) a rate of return that adequately compensates the company for the risk found in the cash flow estimates.
- Zero, the benefits are barely enough to cover all three but you are at breakeven - no profit and no loss, and therefore you would be indifferent about accepting the project.
- Negative, the benefits are not large enough to cover all three, and therefore the project should be rejected.

## 5. INTERNAL RATE OF RETURN

The *Internal Rate of Return (IRR)* is the rate of return that an investor can expect to earn on the investment. Technically, it is the discount rate that causes the present value of the benefits to equal the present value of the costs. The IRR method is actually the most commonly used method for evaluating capital budgeting proposals. This is probably because the IRR is a very easy number to understand because it can be compared easily to the expected return on other types of investments (savings accounts, bonds, etc.).

If the internal rate of return is greater than the project's minimum rate of return, we would tend to accept the project. The calculation of the IRR, however, cannot be determined using a formula; it must be determined using a trial-and-error technique.

## 6. MODIFIED INTERNAL RATE OF RETURN

The *Modified Internal Rate of Return (MIRR)* is an attempt to overcome the above two deficiencies in the IRR method. The person conducting the analysis can choose whatever rate he or she wants for investing the cash inflows for the remainder of the project's life.

For example, if the analyst chooses to use the hurdle rate for reinvestment purposes, the MIRR technique calculates the present value of the cash outflows (i.e., the PVC), the future value of the

cash inflows, and then solves for the discount rate that will equate the PVC and the future value of the benefits. In this way, the two problems mentioned previously are overcome:

1. The cash inflows are assumed to be reinvested at a reasonable rate chosen by the analyst, and

**2.** There is only one solution to the technique.

## CONTRAST BETWEEN NPV AND IRR

The NPV is better than the IRR. It is superior to the IRR method for at least two reasons:

1. **Reinvestment of Cash Flows:** The NPV method assumes that the project's cash inflows are reinvested to earn the hurdle rate; the IRR assumes that the cash inflows are reinvested to earn the IRR. Of the two, the NPV's assumption is more realistic in most situations since the IRR can be very high on some projects.
2. **Multiple Solutions for the IRR:** It is possible for the IRR to have more than one solution. If cash flows experience a sign change (e.g., positive cash flow in one year, negative in the next), the IRR method will have more than one solution.

When this occurs, we simply don't use IRR method to evaluate the project, since no one value of IRR is theoretically superior to the others. The NPV method does not have this kind of problem.

## PRACTICAL PROBLEMS

**Q.1 Project has the following patterns of cash flows:**

| Year | Cash Flow (Rs. In Lacs) |
|---|---|
| 0 | (10) |
| 1 | 5 |
| 2 | 5 |
| 3 | 3.08 |
| 4 | 1.20 |

What is the IRR of this project?

**Solution:**

To determine the IRR, we have to compare the NPV of the project for different rates of interest until we find that rate of interest at which the NPV of the project is equal to zero.

***Step 1*** Find the average annual net cash flow based on given future net cash inflows. = (5 + 5 + 3.08 + 1.20)/4 = 3.57

***Step 2*** Divide the initial outlay by the average annual net cash inflows i.e. 10/3.57 = 2.801

***Step 3*** From the PVIFA table, it is found that interest rate is nearly equal to 2.801 in 4 years i.e. the duration of the project. In this case the rate of interest will be equal to 15%.

We use 15% as the initial value for starting the hit and trial process and keep trying at successively higher rates of interest until we get an interest rate at which the NPV is zero.

NPV at r = 15% will be equal to: = -10 + (5*.0870) + (5*.756) + (3.08*.658) + (1.2*.572) = 0.84

NPV at r = 16 % will be equal to: = -10 + (5*.862) + (5*.743) + (3.08*.641) + (1.2*.552) = .66

NPV at r = 18% will be equal to: = -10 + (5*.848) + (5*.719) + (3.08*.0609) + (1.2*.516) = .33

NPV at r = 20% will be equal to: = -10 + (5*.833) + (5*.694) + (3.08*.609) + (1.20*.482) = 0

We find that at r= 20%, the NPV is zero and therefore the IRR of the project is 20%.

# OPERATING AND FINANCIAL LEVERAGES

## MEANING OF LEVERAGE

Leverage means the employment of assets or funds for which the firm pays a fixed cost or fixed return. The fixed cost or return may be thought of as the fulcrum of a lever. In mechanics the leverage concept is used for a technique by which more weight is raised with less power. In financial management the leverage is there an account of fixed cost. If any firm is using some part of fixed cost capital than the firm has leverage which can be used for raising profitability and financial strength of firm.

## OPERATING LEVERAGE

Operating leverage is defined as the ability to use fixed operating costs to magnify the effect of changes in sales on its operating profits. If the fixed operating costs are more as compared to variable operating costs, the operating leverage will be high and vice-versa. Thus, the term 'Operating leverage' refers to the sensivity of operating profit to changes in sales.

For example, if the sales increase by say 20% and the operating profit increases by 100% it is a case of high operating leverage.

**Computation of Operating leverage: -**

$$\text{Operating Leverage} = \frac{\text{Contribution}}{\text{Operating Profit}} \quad \text{OR} \quad \frac{\text{Sales} - \text{Variable cost}}{\text{Contribution} - \text{Fixed Cost}}$$

**Degree of Operating Leverage (DOL): -**

The degree of operating leverage may be defined as the percentage change in operating profits resulting from a percentage change in sales

- ***On two levels of sales for comparison:-***

$$\text{Degree of operating leverage (DOL)} = \frac{\text{Percentage change in profits}}{\text{Percentage change in sales}}$$

- ***On one level of sales:-***

$$\text{DOL} = \frac{\text{Contribution}}{}$$

EBIT

When the profits increase with the increase in sales it is called favorable operating leverage.

**Utility of operating leverage: -**

Operating leverage helps in capital structure decisions and play a vital role in formulation of an optimum capital structure. It is most helpful in long term profit planning as it is useful in taking decisions regarding capital expenditure. It is true to say that operating leverage is basically used in taking capital budgeting decisions.

## FINANCIAL LEVERAGE

Financial leverage arises from the presence of fixed financial costs in the income stream of the firm or due to presence of fixed return securities in the capital structure of the company. Fixed cost securities are debentures and preference share.

Thus financial leverage is defined as, *'the firm ability to use fixed financial cost to magnify the effect of changes in earnings before interest and tax (EBIT) on firm's earnings per share (EPS.*

Financial leverage may be ***favorable or unfavorable***. If the earnings made by the use of fixed interest bearing securities is more than their fixed costs. The firm is considered to have 'favorable financial leverage' or trading on equity. If the firm earns less than the cost of borrowed funds, the firm is said to have an 'unfavorable financial leverage'.

**Computation of Financial leverage:-**

$$\text{Financial leverage} = \frac{\text{Earnings before interest and tax}}{\text{Earnings before tax but after interest}} \quad \text{or} \quad \frac{\text{EBIT}}{\text{EBT}}$$

**Degree of Financial leverage (DFL): -**

***(a) On one level of profit:***

$$\text{DFL} = \frac{\text{EBIT /Operating Profit}}{\text{EBT}}$$

***(b) On two level of profit for comparison:***

$$\text{DFL} = \frac{\%\text{Change in EPS}}{\%\text{ Change is EBIT}}$$

## COMBINED LEVERAGE

The combined leverage may be defined as the relationship between contribution and the taxable income; it is the combined effect of both the leverage.

**Computation of Combined leverage: -**

Combined Leverage = Operating Leverage X Financial Leverage.

$$\text{Or} \quad \frac{\text{Contribution}}{\text{EBIT}} \times \frac{\text{EBIT}}{\text{EBT}}$$

$$\text{Or} \quad \frac{\text{Contribution}}{\text{EBT}}$$

**Degree of Combined Leverage (DCL): -**

$$DCL = DOL \times DFL$$

Or

$$DCL = \frac{\%\ \text{Change in EBIT}}{\%\ \text{Change in Sales}} * \frac{\%\ \text{Change in EPS}}{\%\ \text{Change in EBIT}}$$

Or

$$DCL = \frac{\%\ \text{change in EPS}}{\%\ \text{change in Sales}}$$

## DIFFERENCE BETWEEN OPERATING AND FINANCIAL LEVERAGE

| S.No. | Operating Leverage | Financial Leverage |
|---|---|---|
| 1. | Establishes relationship between sales and Operating Profits | Relationship between Operating profits and return on owner's equity. |
| 2. | Concerned with investment decisions | Concerned with method of finance |
| 3. | Refers to fixed costs in the operations | Refers to the use of borrowed funds. |
| 4. | Relates to the assets side of Balance sheet. | Relates to the liability side of Balance Sheet. |
| 5. | Involves operating risk of being unable to cover fixed operating cost. | Involves financial risk being unable to cover fixed financial cost. |
| 6. | First stage leverage. | Second stage leverage as financial leverage starts where operating leverage ends. |

# COST OF CAPITAL

## MEANING

Cost of capital is the minimum required rate of return a project must earn in order to cover the cost of raising fund being used by the firm in financing of the proposal. It may be defined in two phase i.e. operational term and economic term. As per operational term, it refers to the discount rate that would be used in determining the present value of the estimated future cash proceeds and eventually deciding whether the project is worth undertaking or not.

## CLASSIFICATION OF COST

The various concepts of cost of capital are not relevant for all-purpose of decision-making. Therefore for a proper understanding of the application of the cost of capital in financial decision-making various concept of cost should be distinguished. These concepts are -

**Future Cost and Historical Cost**

Future cost of capital refers to the expected cost of funds to be raised to finance a project while historical cost represents cost incurred in the past in acquiring fund. In financial decision future cost of capital is relatively more relevant and significant while evaluating viability of a project historical cost is taken into consideration.

**Specific Cost and Composite/Overall Cost**

Cost of each component of capital such as equity, debenture and preference share etc. is known as component or specific cost of capital. When these component costs are combined to determine the overall cost of capital it is regarded as composite, or combined or weighted cost of capital.

**Average Cost and Marginal Cost**

Average cost of capital is weighted average of cost of each component of funds employed by the firm, while the marginal cost of capital is average cost of new or incremental funds raised by the firm. For capital budgeting & financing decisions marginal cost of capital is more important.

**Explicit Cost and Implicit Cost**

*Explicit cost* of capital of any source is the discount rate that equates the present value of each inflow with present value of its incremental cash inflows. It arises when the firm considers

alternative uses of the funds raised. *Implicit cost* is also known as opportunity cost. It is the rate of return associated with the best investment opportunity for the firm and its shareholders that will be forgone if the project presently under consideration by the firm were accepted.

## FACTORS AFFECTING COST OF CAPITAL

The elements in the business environment that cause a company's cost of capital to be high or low determine the cost of capital of any firm. These factors are:

### 1. General Economic Conditions

The general economic conditions determine the demand for and supply of capital within the economy as well as the level of expected inflation. This economic variable is reflected in the risk less rate of return. This rate represents the rate of return on risk free investments such as the interest rate on short-term government securities.

### 2. Risk and Cost of Capital

High-risk investments only make the investors attractive to purchase the security. The risk elements are composed of five aspects that are closely intertwined. These are -

(a) ***Financial Risk***- refers to the proportion of debt and equity with which a firm is financed.

(b) ***Business Risk***- refers to the variability in return of assets and is affected by the company's investment decision.

(c) ***Purchasing Power Risk***- refers to the change in purchasing power of money measured by price level changes.

(d) ***Money Rate Risk***- refers to the premium in the yield demanded by suppliers of capital to cover the risk of an increase in future interest rate.

(e) ***Market/Liquidity Risk***- refers to the ability of a supplier of fund to sell his holding quickly.

### 3. Floating Cost

Floating cost is the cost of marketing new securities. It includes legal fees, printing expenses, underwriting commission etc. They are called floating because they incurred in floating new securities. It is also called underwriting cost or issuance cost. These costs directly influence the cost of capital. High floating cost leads to higher cost of capital.

## COMPONENTS OF COST OF CAPITAL

The overall cost of capital of a firm is comprised of the cost of the various components of financing, techniques to determine the specific cost of each of these sources such as debt, preference share, retained earning, and equity share. The measurement of cost of capital is the process of determines the cost of fund to the firm. The method of measuring cost of capital of different components is given as under: -

**COST OF DEBENTURES AND BONDS**

The cost of capital for debenture/bond is the rate of return i.e. interest that potential investors or holders require on the firm's debt securities. The debenture holders receive a fixed rate of interest on their investment. The interest on debentures is tax deductible so, the after tax interest rate will be lower. For calculation we can divide the debenture into two categories i.e. Perpetual Debt and Redeemable Debt.

**1. Perpetual Debt/ Irredeemable Debt**

The debenture availed by the firm on a regular basis is called perpetual debt. The cost of capital of such type of debt may be ascertained as under: -

$$Ki = \frac{I}{Bo}$$

Where - Ki = Cost of debenture capital (Before Tax)

I = Annual interest

Bo = Net proceeds

***Tax Adjustment***

Interest on debenture is tax deductible. It works as a tax shield and the tax liability of a firm is reduced. Thus the effective cost of debenture is lower than the interest paid to investor but it depends on tax rate. The real cost of debt is determined after considering tax shield, as follows -

$$Kd = Ki (1-t)$$

Where - Kd = Cost of debenture capital (after tax)

T = tax rate

The tax benefit is not available, to firms having loss or no tax-paying situation. In this condition Kd will be equal to Ki.

**2. Redeemable Debenture**

To calculate the cost of capital of redeemable debenture, it can be divided into two categories such as (a) If redemption is made after a certain period

(b) If redemption is made gradually in installment.

***(a) If redemption is made after a certain period***

$$K_d = \frac{I\,(1 - t) + (RV - NP) / N}{(RV + NP) / 2}$$

Where: RV = Redemption value of debenture

N = Life of Debenture

NP = Net Proceeds

***(b) If redemption is made gradually in installment***

$$B_o = \sum_{i=1}^{n} \frac{I_i(1-t)}{(1+K_d)^i} + \frac{COP}{(1+K_d)^i} + \frac{COP_n}{(1+K_d)^n}$$

Where: COP = Regular/ Periodical cash outflow in installments

Bo = Net proceeds

**COST OF PREFERENCE SHARE**

It represents the rate of return that must be earned on the preference shares financed investments to keep earning available to the residual stockholders unchanged. The rate of dividend is predetermined but the preference dividend is not entitled for tax benefit. It is of two types i.e. redeemable and irredeemable.

**Irredeemable Preference Shares**

The preference shares which cannot be redeemed in company's life time are known as irredeemable or perpetual preference shares. The firm has to pay dividend at a fixed rate on these shares, the calculation of cost is as under -

$$K_p = PD / P_O$$

Where: PD = Annual Preference dividend

Po = Net Proceeds

**Redeemable Preference Shares**

If the preference shares are redeemable at the end of a specific period than the cost of capital can be calculated through the following equation: -

$$Po = \sum_{i=1}^{n} \frac{PD_1}{(1+Kp)^i} + \frac{p_n}{(1+KP)^n}$$

Where: Pn = Amount payable at the time of redemption

n = Redemption period of preference shares i.e No. of years

Kp = cost of preference shares

**COST OF EQUITY CAPITAL**

It is generally argued that the equity capital is free of cost. But it is not true: The reason behind this argument is that there is no legal binding on company to pay dividend to the equity shareholders. The objective of management is to maximize shareholders wealth and maximization of market price of share is operational substitute of wealth maximization. Therefore the required rate of return, which equates the present value of expected dividends with the market value of shares, is cost of equity capital. The cost of equity may be defined as

"The minimum, rate of return that a firm must earn on the equity-finance portion of an investment project in order to leave unchanged the market price of the shares". Thus the expected rate of return in equity share is just equal to the required rate of return of investors. This can be calculated by various approaches which are as follows –

**1. Dividend Approach**

According to this approach cost of equity is the rate of dividend expected by equity shareholders from the firm.

$$K_e = \frac{DP}{MP}$$

Where: MP = Market Price per share (if not given, then net proceeds)

DP = Dividend per share

***In case of Dividend Growth Rate, the cost of equity will be -***

$$K_e = \frac{DP}{MP} + G$$

Where: G = Annual Growth Rate of dividend

**2. Earning Price Approach**

Earning price approach takes into consideration the earning available to equity shareholders rather than dividend distributed.

$$K_e = \frac{EPS}{MPS}$$

Where: EPS = Earning per share

**3. Capital Asset Price Method (CAPM)**

CAPM is an alternative method to measure the cost of equity share capital other than dividend method, which is directly based on risk consideration. Risk is the variability of returns inherent in the type of security while return defined as total economic return obtained from it. Under this method total risk associated with the security can be divided into unsystematic and systematic.

Calculation of cost of equity share capital under this method is given as under: -

$$Ke = Rf + B\ (Rm - Rf)$$

Where: Rf = Risk free interest rate

B = beta factor (measure of non-diversifiable risk)

Rm = expected cost of capital of the market portfolio

The cost of equity capital will be high if the beta factor is high. The B (beta factor) indicates the systematic risk of firm's securities. It shows the sensitivity of firm security to market portfolio.

**COST OF RETAINED EARNING**

If the entire earning is not distributed and the firm retains a part then these retained earnings are available within the firm. Companies are not required to pay any dividend on retained earnings, so it is generally observed that this source of finance is cost free, but it is not true. If earnings were not retained, they would have been paid out to the ordinary shareholders as dividend. This dividend forgone by the equity shareholders is opportunity cost. The firm has required to earn on retained earnings at least equal to the rate that would have been earned by the shareholders if they were distributed to them. So the cost of retained earning may be defined as opportunity cost in term of dividends forgone by withholding from the equity shareholders.

**WEIGHTED AVERAGE COST OF CAPITAL**

In order to evaluate a capital expenditure project, overall or average cost of capital is required. The overall cost of capital is the rate of return that must be earned by the firm in order to satisfy the requirements of different investors. It is the minimum rate of return on the asset of the firm, so it is preferably calculated as weighted average rather than the simple average.

# UNIT - 3

# CAPITAL STRUCTURE

## INTRODUCTION

Capital structure means the pattern of capital employed in the firm. It is a financial plan of the firm in which the various sources of capital are mixed in such proportions that those provide a distinct capital structure most suitable for the requirement of the firm.

Capital structure represents the mutual proportion between long term sources of capital which includes equity shares, preference shares, reserve & surplus and long term debts.

According to **Weston and Brigham:-**

"Capital structure is the permanent financing of the firm, represented by long-term debt, preferred stock and net-worth."

**Financial structure:** - refers to the way, the company's assets are financed. It is the entire left hand side of balance sheet which includes all the long term and short-term sources of capital.

**Asset Structure:** - Asset structure refers to total assets and their components. It includes all types of assets of the company i.e. fixed assets and current assets.

**Capitalization:-** Capitalization is a quantitative concept indicating the total amount of long-term finance required to carry on the business capitalization comprises a corporation's ownership capital and its borrowed capital, as represented by its long - Term indebtedness.

## OPTIMUM CAPITAL STRUCTURE

The optimal or the best capital structure implies the most economical and safe ratio between various types of securities. A capital structure of security mix that minimizes the firm's cost of capital and maximizes firms' value is called optimal capital structure.

Essentials of Optimum Capital Structure:-

1. Simplicity:- The capital structure should not complicated. Therefore, it is essential that in the beginning only equity shares or preference shares should be issued and afterwards debentures may be issued

2. Flexibility:- The capital structure should suit to the requirement of the firm in both short-term and long-term.
3. Minimum Cost:- A sound capital structure must ensure the minimum cost of capital therefore, while determining the capital structure, such a mix of different securities should be selected in which the cost in minimum.
4. Minimum Risk:- The capital structure should be heart risky. Therefore, sound capital structure attempts at a perfect trade-off between return and risk.
5. Maximum Return:- The appropriate capital structure would be one that is most profitable to the company. It is possible when the cost of financing is minimum and the firm earns stables and adequate income regularly.
6. Maximum Control:- The capital structure should be designed to preserve the control of the company's management in the hands of existing shareholders. Therefore, additional funds be raised through debentures and preference shares.
7. Safety:- Debt should be used to the extent that the burden of fixed charges does not create the danger of insolvency.
8. Adequate Liquidity:- The capital structure should be determined in such a way the it may always provide adequate liquidity.
9. Alternative Rules:- The capital structure should be that which provides different sights to the securities holder such as return, voting power, redemption, transfer etc. are more and more attractive.
10. Fulfill Legal Requirements:- The capital structure should fulfill certain rules framed in companies and other acts regarding the ratios of various types of securities in the capital structure of business concerns.

**FACTORS DETERMINING CAPITAL STRUCTURE**

All the factors which affect its capital structure should be considered at the time of its formation. Generally factors affecting capital structure are divided in two categories, namely (A) Internal factors, and (B) External Factors.

## Factors Affecting Capital Structure

| Internal factors | External Factors |
|---|---|
| - Size of business | - Capital Market Conditions |
| - Nature of business | - Nature of Invertors |
| - Regularity of Income | - Policy of financial Institutions |
| - Assets Structure | - Taxation Policy |
| - Age of Firm | - Government Control |
| - Attitude of Management | - Cost of Capital |
| - Freedom of Working | - Seasonal Nature |
| - Desire to control | - Economic Fluctuations |
| - Future plans | - Nature of competition |
| - Period and Purpose of Financing | |
| - Operating Ratio | |
| - Trading on Equity | |

## POINT OF INDIFFERENCE

Point of indifference is a level of earnings before interest and tax where earnings per share remain constant irrespective of the debt equity mix. The policy of trading on equity increases the earnings per shares but it is beneficial to a certain point after which it can proves to be disastrous. Hence till the rate of intent is lower than the return on assets, trading on equity is beneficial, but when both becomes equal which is called the point of indifference, more use of debt capital will be harmful.

Thus with the help of EBIT-EPS analysis keeping in view the point of indifference an optimal capital structure can be determined. The point of indifference of EBIT can be ascertained by using the following algebraic formula:

$$\frac{(X-R_1)(1-T) - PD}{N_1} = \frac{(X-R_2)(1-T) - PD}{N_2}$$

Where,

X = EBIT at Indifference Point

$R_1$ = Interest in option I
$R_2$ = Interest in option II
T = Tax Rate
PD = Preference Dividend
$N_1$ = No. of Equity Shares in Option I
$N_2$ = No. of Equity Shares in Option II

**TRADING ON EQUITY**

Gestenberg defines trading on equity in these words: "When a person or corporation used borrowed capital as well as owned capital in the regular conduct of its business then it is said to be trading on equity."

Trading on equity is an arrangement under which a company makes use of borrowed capital carrying a fixed rate of interest or dividend in such a way as to increase the return on equity shares. The policy of trading on equity can be adopted only when the management is confident that he will earn profits more than the interest to be paid on debt capital. In other words, trading on equity is advantageous when the rate of interest on debt is less than average rate of return.

**Utility of Trading on Equity:-**

The basic philosophy behind trading on Equity is to use debt capital to earn more than their cost and to raise the rate of return on equity share capital. This policy leads higher dividend rate for equity shares, improvement of the goodwill of the firm and increase in the market price of equity shares. All these factors make it easy to get more lean from market at a lower rate of interest.

**Limitations of Trading on Equity:**

1. The firm should not follow the policy of trading on equity if there is no certainty and stability of income of the firm.
2. Increasing rate of interest of future loans as the risk of successive creditors increases due to prior lien of the existing creditors on the assets of the firm.
3. Sometimes the management, despite of strong financial position or the capacity to raise loans by issuing debentures at favorable terms, does not prefer the policy of trading on equity.
4. There is a limit of carrying on business with the use of borrowed funds. After that limit, there is a fear of over capitalization.

5. There are some legal and contractual difficulties without the fulfillment of those the management cannot follow the policy of trading on equity.
6. There are some other limitations like increasing burden of interest, interference of creditors in management and falling goodwill of the firm. For More Detail: - http://www.gurukpo.com

**THEORIES OF CAPITAL STRUCTURE**

The theories of capital structure are as follows:-

1. Net Income theory.
2. Net Operating Income theory.
3. Traditional theory.
4. Modigliani – Miller theory.

**Net Income (NI) Theory:-**

This theory was propounded by ***David Durand***. According to this theory a firm can increase the value of the firm and reduce the overall cost of capital by increasing the proportion of debt in its capital structure to the maximum possible extent.

As debt is cheaper source of finance, it results in a decrease in overall cost of capital leading to an increase in the value of the firm as well as market value of equity shares.

***Assumptions:***

1. The cost of debt is cheaper than the cost of equity
2. Income tax has been igored
3. The cost of debt capital and cost of equity capital remains constant i.e. with the increase in debt capital the risk perception of creditors and equity investors does not change.
4. Total value of firm = Market value of Equity + market value of debt. Or V = S +D

   Market Value of share (S);

$$S = \frac{NI}{Ke} \quad \text{Or} \quad \frac{(EBIT-I)}{Ke}$$

Where;

NI = Earnings available for equity shareholders

EBIT = Earnings before interest and Tax

Ke = Cost of Equity Capital.

The overall cost of capital or capitalization ratio:

$$Ko = \frac{EBIT}{V}$$

Ko = Overall cost of capital

**Net Operating Income (NOI) Theory**

This theory has also been propounded by David Durand. This theory is just opposite that of Net Income Theory. According to this theory, the total market value of the firm (v) is not affected by the change in the capital structure and the overall cost of capital (Ko) remains fixed irrespective of the debt-equity mix. According to this theory there is nothing like optimum capital structure.

***Assumptions:-***

1. The split of total capitalization between debt and equity is not essential or irrelevant.
2. At every level of capital structure business risk is constant; therefore, the rate of capitalization also remains constant.
3. The rate of debt capitalization remains constant.
4. There are no corporate taxes.
5. With the use of debt funds which are cheaper, the risk of shareholders increases, which in turn results to increase in the equity capitalization rate. Hence debt capitalization rate remains constant.

***Computation:-***

$$\text{Value of the Firm} = \frac{EBIT}{Ko} \qquad \text{Or } V = S + D \qquad \text{Or } S = V - D$$

$$\text{Cost of Equity Capital} = Ke = \frac{EBIT - I}{S} \qquad \text{(where, I = Interest on debt)}$$

**Modigliani – Miller Theory:-**

This theory was propounded by Franco Modigliani and Merton Miller (generally referred to as M-M) who are Nobel Prize winners in financial economies. They have discussed their theory in two situations:

(i) When there are no corporate taxes, and

(ii) When there are corporate taxes.

**(i) In the Absence of Corporate taxes:-**

As per Modigliani – Miller if there are no corporate taxes than the changes in the capital structure of any firm do not bring any change in the overall cost of capital and total value of firm. The reason is that though the debt is cheaper to equity with increased use of debt as a source of finance, the cost of equity increases and the advantage of low-cost debt is offset equally by the increased cost of equity. According to this theory, two identical firms in all respect, except their capital structure, cannot have different market value or cost of capital due to arbitrage processes.

For example, suppose the capital structure of company comprises of equity share capital of Rs 10, 00, 00 and 6% debentures of Rs 20, 00, 00. If the average rate of return on total capital employed is 10%, the company will earn a profit of Rs. 30,000 (10% on 30, 00, 00). Out of this profit, the company will have to pay leaving a balance of (1800/10,0,0x100) Which is the company succeeds in paying more dividend on equity shares capital with the use of borrowed capital such a situation in any business is known as 'trading on equity'.

**Assumptions:-**

1. The capital market is perfect.
2. There is no transaction cost.
3. All the firms can be divided in hom0geneous risk classes.
4. There is no corporate tax.
5. All the profits of the firm are distributed.
6. Individual investors can easily get loans on the same terms and conditions as firm can.

**(ii) When Corporate Taxes Exist:-**

The basic theory of Modigliani- Miller that the changes in the capital structure do not affect the total value of the firm and overall cost of capital is not true in the presence of corporate taxes. Corporate taxes are reality; therefore, they changed their basic theory in the year 1963.

They accepted this fact that for corporate tax determination of interest is a deductible expenditure than the cost of debt is low. Therefore if any firm uses debt in its capital structure it leads to reduction in the overall cost of capital and increase in the value of the firm. They accepted that the total value of a leveraged firm is high than the non-leveraged firm.

**Computation:-**

Value of Unlevered firm (Vu) = $Vu = \frac{EBIT\ (1 - T)}{Ke}$

Where: Vu = Earning after tax but before Interest

Ke = After tax equity capitalization Rate

Value of levered firm ($V_l$) = $V_l = Vu + DT$ or $\frac{EBIT\ (1 - T)}{Ke} + DT$

Where: D = Amount of Debt

T = Tax Rate

**Traditional Theory:-**

The traditional theory is a mid-path between Net Income theory and Net Operating Income theory. According to this theory the cost of debt capital is lower than the cost of equity capital, therefore a firm by increasing the proportion of debt capital in its capital structure to a certain limit can reduce its overall cost of capital and can raise the total value of the firm. But after certain limit the increase in debt capital leads to rise in overall cost of capital and fall in the total value of the firm. A rational or appropriate mix of debt and equity minimizes overall cost of capital and maximizes value of the firm. Thus this theory accepts the idea of existence of optimum capital structure. Ezra Solomon has explained the effects of changes in capital structure on the overall cost of capital (Ko) and the total value of firm (V) in the following stages:

**First Stage:** In the beginning the use of debt capital in the capital structure of the firm results in fall of overall cost of capital and increases the total value of the firm because in the first stage cost of equity remains fixed rises slightly and use of debt is favorably treated in capital market.

**Second State:** In this stage beyond a particular limit of debt in the capital structure, the additional of debt capital will have insignificant or negligible effect on the value of the firm and the overall cost of capital. It is because the increase in cost of equity capital, due to increase in financial risk, offsets the advantage of using low cost of debt. Therefore during this second stage the firm can reach to a point where overall cost of capital is minimum and the total value of the firm is maximum.

**Third Stage:** - If the proportion of debt capital in the capital structure of the firm increases beyond an accepted limit this dead to increase in the overall cost of capital and fall in the total value of the firm because the financial risk rises rapidly which results into higher cost of equity capital which cannot be offset led by low debt capital cost. Hence, the total value of the firm will decrease and the overall cost of capital will increase.

# UNIT-4

# MANAGEMENT OF WORKING CAPITAL

## MEANING OF WORKING CAPITAL

It is a fund needed to fulfill the operating cost of a concern. Each and every business concern should have adequate funds to meet its day-to-day expenses and to finance current asset viz., debtors, receivables and inventories. The funds tied up in current assets are known as working capital funds. The funds invested in these current assets keep revolving and are being constantly converted into cash and this cash in again converted into current assets.

Therefore, working capital is also known as circulating capital, 'revolving capital,' 'short-term capital', or liquid capital.

## WORKING CAPITAL MANAGEMENT

Working capital in that part of firms capital which is required for financing current assets such as cash, debtors, receivables inventories, marketable securities etc. Funds invested in such assets keep revolving with relative rapidity and are constantly converted in to cash.

**Working capital** is a financial metric which represents the amount of day-by-day operating liquidity available to a business. Along with fixed assets such as plant and equipment, working capital is considered a part of operating capital. It is calculated as current assets minus current liabilities. A company can be endowed with assets and profitability, but short of liquidity, if these assets cannot readily be converted into cash.

## CLASSIFICATION OF WORKING CAPITAL

**Gross working capital** – Refers to firms investments in current assets which are converted in to cash during an accounting year such as cash, bank balance, short term investments, debtors, bills receivable, inventory, short term loans and advances etc.

**Net working capital** – Refers to difference between current assets and current liabilities or excess of total current assets over total current liabilities.

**Regular or permanent working capital** – Refers to minimum amount which permanently remain blocked and cannot be converted in to cash such as minimum amount blocked in raw material, finished product debtors etc.

**Variable or temporary working capital** – Refers to amount over and above permanent working capital i e difference between total working capital less permanent working capital.

**Seasonal working capital** - Refers to capital required to meet seasonal demand e.g. extra capital required for manufacturing coolers in summer, woolen garments in winter. It can be arranged through short term loans.

**Specific working capital** – Refers to part of capital required for meeting unforeseen contingencies such as strike, flood, war, slump etc.

## CONCEPTS OF WORKING CAPITAL

1. **Quantitative concept /Gross working capital concept**: - The gross working capital refers to the firm's investment in current assets. According to J.S. Milli, "The sum of current assets is the working capital of the business."

   From the management point of view, this concept is more appropriate as the management formulates all the plans on the basis of current assets and concentrates his attention on the quantum of current assets and their profitability.

2. **Qualitative or Net working capital concept**: - The net working capital means the difference between current assets and current liabilities. If the amount of current assets and current liabilities is equal, it means that there is no working capital.

   The net working capital is a qualitative aspect of working capital and it measures the firm's liquidity. It also indicates the extent to which working capital can be financed with ling term funds. This concept is useful only for accountants, investors, creditors or those persons who have interest in the liquidity and financial soundness of the firm.

3. **Operating Cycle concept**:- The amount of working capital required by a firm depends upon the length of production process and the expenses needed for this purpose The time required to complete the production process right from Purchase of raw material to the realization of sales in cash is called the operating cycle or working capital cycle.

This concept is more appropriate than the qualitative and quantitative approach because in this case the fund required for carrying on the operational activities is treated as working capital. It is also called circulating capital.

## DETERMINANTS OF WORKING CAPITAL

The amount of working capital required depends upon a large number of factors and each factor has his own importance, They also wary from time to time in order to determine the proper amount of working capital of a firm, the following factors should be kept in mind :-

1. **Nature of business:** Firms dealing in luxury goods, construction business, steel industry etc need more capital while those dealing in fast moving consumer goods (FMCG"s) need less working capital.
2. **Size of business:** Working capital is influenced by size of the firm. Large size firms need more working capital as compared to small size firms.
3. **Level of technology:** use of high level technology leads to fastening the process and reduce wastage and in such case, less working capital would be required.
4. **Length of operating cycle:** longer is the operating cycle; higher would be the need of working capital.
5. **Seasonal nature:** firms dealing in goods of seasonal nature, higher capital during peak season would be required.
6. **Credit policy:** If credit policy followed is liberal more working capital would be required and if the same is strict less working capital would be required.
7. **Turnover of working capital:** If rate of turnover is more, less working capital would be required and this rate is less, more working capital would be required.
8. **Dividend policy:** If a firm retains more profit and distributes fewer amounts as dividend, less working capital would be required.
9. **Profit margin:** If rate of margin of profit is more, less working capital would be required.
10. **Rate of growth**: If growth rate is high and firm is continuously expending/ diversifying its production & business, more working capital would be needed.
11. Business Cycle fluctuation

12. Banking relations
13. Taxation Policy
14. Production process and policies
15. Requirement of cash
16. Availability of raw material
17. Terms of Purchase and Sales

**SIGNIFICANCE/IMPORTANCE OF ADEQUATE WORKING CAPITAL**

- Prompt payment to supplies & benefit of cash/ trade discount.
- Increase in good will/ image
- Easy loans from banks
- Increase in the efficiency of employee's executives/ directors.
- Increase in the productivity as well as profitability

**Limitation of Inadequate Working Capital**

- Stock out situation may arise
- Losing customers
- Less profit
- Down fall of good will / image

**Limitations of Excess working capital**

- Unnecessary piling of stock due to which loss of interest on amount blocked
- Loss due to theft, pilferage etc
- Lead to inefficiency of management
- Adversely affect production and profitability

**METHODS OF ESTIMATING WORKING CAPITAL REQUIREMENTS**

1. Operating Cycle Method
2. Net Current Assets Forecasting

3. Projected Balance Sheet Method
4. Adjusted Profit and Loss Method

# CASH MANAGEMENT

## INTRODUCTION

Efficient management of cash is crucial to the solvency of business. It implies making sure that all business generated revenues are efficiently controlled and utilized in best possible manner to result in gains to the organization. Cash management is concerned with optimizing amount of cash available to the company & maximizing interest on spare funds not required immediately by the company.

## OBJECTIVES OF CASH MANAGEMENT

1. Ensuring availability of cash as per payment schedule
2. Minimize amount of idle cash
3. Effective control of cash (Maximizing interest on cash/funds not required immediately by the firm).

## MOTIVES OF HOLDING CASH

a. **Transaction motive**: - Refers to cash required for making payments like wages, operating expenses, taxes, dividend, interest etc.
b. **Precautionary motive:** - To make payment for unpredictable contingencies like strike, lockout, fire, sharp rise in prices etc.
c. **Speculative motive**: - To take advantages of unexpected opportunities e.g. purchase of raw material at reduced prices on cash basis, buying securities at time when prices have fallen.

## IMPORTANCE /ADVANTAGES OF EFFICIENT MANAGEMENT OF CASH

- firms goodwill is maintained by meeting obligations in time
- cash discount can be availed
- healthy relations can be maintained

- Unforeseen events can easily by face.

**Scope of cash management: -**

1. Cash planning & forecasting
    - Cash budget
    - Cash flow statement
    - Ratio analysis
2. Managing cash flows
    - Inflows
    - Out flows
3. Determining optimum level of cash
4. Investing surplus cash.

**CASH BUDGET**

A statement showing estimate of cash receipts, cash disbursement and net cash balance for a future period of time. It is a time based schedule & covers a specific period. **There are two methods of preparing cash budget -**

- Cash budget for a short period (up to one year) A statement projecting cash inflows and flows for a firm over various interim periods (months, quarters). For each period, expected cash inflows are put against expected out follows to find out if there is any surplus or deficiency.
- Long term cash budget (3 to 7 years) under this method profit and loss account is adjusted to know estimates of cash receipts/ payments

**This cash budgets helps in**

- planning for borrowings
- planning for repayment of loans
- distribution of dividends
- estimation of idle cash
- better coordination of timings of each inflows & out flows

- identification of cash surplus position and planning for alternative investments in advance

**COLLECTION AND DISBURSEMENT METHODS TO IMPROVE CASH MANAGEMENT EFFICIENCY**

**(A) COLLECTION METHODS**:

**Concentration banking** – improving flow of cash by establishing collection centers at different places i.e. multiple collection centers instead of single centre. Even the local cheques received are collected fast and amount is deposited in bank. The bank in the head office of firm is known as concentration bank.

**Lock Box system** – A firm takes on rent post office boxes in selected areas and instructs the customers to mail their payment in these boxes. The bank of the firm is authorized to open these boxes, pick up mails and deposit cheques in the account of firm and sends a list of cheques received for the record of firm.

**(B) DISBURSEMENT METHODS –**

1. **Centralized disbursement centre** – Establishing a centralized disbursement centre at head office of firm and all payments only through this centre. This would help in consolidating all funds in a single account and making a proper schedule of payments/ handling funds.
2. **Payment on due date** – all payment on their due dates (not early & not late) strictly according to agreed terms so that there is no loss of cash/ trade discount and credit worthiness of firm is maintained.
3. **Proper synchronization of receipts and payments**
4. **Utilizing float** – float indicates difference between bank balance and firm's bank account & bank pass book. It arises due to time gap between cheque written/issued and time when it is presented or time gap between cheque deposited and time when credit is actually given by the bank to the firm this float may be

- **Postal float** – Time required for receiving cheque from customers through post.
- **Deposit float** –Time required processing the cheques received and depositing them in bank.
- **Bank float** – Time required by banker to collect the payment from customer's bank.

**MODELS OF CASH MANAGEMENT**

(i) **Baumol Model: -** It is like EOQ model of inventory control. According to this model, optimum level of cash is one at which carrying cost of cash or cost of receiving cash is minimum. Carrying cost of cash refers to interest for gone on marketable securities. This is also called opportunity cost. Cost of receiving cash or transaction cost is the cost of converting marketable securities in cash.

(ii) **Hiller Orr model** – This model is based on assumption that cash balance changes randomly over a period of time in size. This model prescribes two levels i.e. upper limited and lower limit. Optimum balance of cash lies between upper and lower limit. When cash balance reaches upper limit, cash equal to difference between upper limit and optimum limit, it should be invested in marketable securities. When cash balance reaches to lower limit, cash equal to difference between optimum limit and lower limit, finance manager should immediately sell marketable securities so that cash balance reaches normal level.

**TREASURY MANAGEMENT (TM)**

T.M mainly deals with working capital management and financial risk management. The working capital management includes cash management and decide asset liability mix. Financial risk includes forex and interest and interest rate management. Hence, key goal of TM is planning organizing and controlling cash assets to satisfy financial objectives of organization. The goal is to: - Maximize return on available cash - Minimize interest cost - Mobilize as much cash as possible for corporate returns.

**Key Responsibilities of T.M.**

- Maintaining good relations with banks and other financing institutions
- Managing cost while earning optimum return from any surplus fund.
- Providing long term and short term funds for business at minimum cost.
- Managing interest rate risk in accordance with firms/groups policy
- Advising on all matters of corporate finance including capital structure, merger & acquisitions etc.

**Functions of a Treasury manager**

1. **Cash management**: - efficient collection & payment of cash.
2. **Fund management**: - Planning and sourcing of short/medium/long term funds.
3. C**urrency management**: - managing foreign currency risk in a multinational company by T.M
4. **Banking function**: - negotiating with banks and maintaining good contact with banks.

# RECEIVABLES MANAGEMENT

## MANAGEMENT OF RECEIVABLE

Receivables are created on account of credit sales. They are represented in the balance sheet in the form of sundry debtors, trade debtors, and book debts, accounts receivable, bills receivable etc. Receivables constitute around 15 to 20% of assets or around 1/3 of working capital in a big organization and substantial amount of working is blocked in this asset. Hence, their efficient management occupies great significance in financial management. Receivable Management means matching the cost of increasing sales with the benefits arising out of increased sales and maximizing return on investment of firm under this head.

Hence, the prime objective of receivables management is to:

- Optimize return on investment
- By minimizing costs associated with receivables

## BENEFITS OF RECEIVABLES

1. Growth in sales- If a firm does not sell on credit, sales cannot grow.
2. Increase in profit– Growth in sales leads to increase in profit. At times, credit sales are at a price more than price of cash sales
3. Enables to face competition in market

## COSTS ASSOCIATED WITH RECEIVABLES

1. **Carrying cost** – cost of amount blocked in the form of
    - Interest if amount is borrowed
    - Opportunity cost if amount blocked is out of retained earnings.
2. **Administrative costs** – Cost incurred on maintaining staff, for keeping records and for process of collecting amount from debtors. E.g.
    - Salary to staff
    - Cost of collecting information about debtors
    - Record keeping

- Cost of collecting cheques
- Cost on phone calls, reminders follow up
- Cost on office space, equipments etc and expenditure on staff assigned the duty of collection of amount from debtors.

3. **Delinquency cost** - cost on following up with delinquent debtors, reminders, site collection, legal charges etc.
4. **Default cost** – cost of debtors becoming bad debts.

## FACTORS EFFECTING INVESTMENTS IN RECEIVABLES

1. **Level of sales** – Higher the sales, high would be amount of credit sales & receivable would also be high.
2. **Nature and conditions of business** – In competitive market, more credit sales in consumer durables like furniture, refrigerators etc.
3. **Credit policy of firm** – If credit policy is liberal, more would be amount of receivables
4. **Terms of credit** - Terms of cash & trade discount and period in which payment is expected from debtors.
5. Capacity of credit department
6. Scrutiny of orders placed by customers
7. Assessing creditworthiness for which collecting information from various sources
8. Timely collection of receivables from debtors

## CREDIT POLICY

The firm's credit policy involves analysis of:

1. Opportunity cost of lost contribution.
2. Credit administration cost and risk of bad-debt losses.

There is a contrary relationship that exists between the two costs. If a company adopts stringent credit policy, there occurs considerable reduction in the level of profitability by the liquidity position stands story. However, the firm losses in terms of contribution due to higher opportunity

cost resulting form lost sales. Yet, the credit administrative cost & risk of bad debt losses are quite low.

Contrary to this, a company resorting to liberal credit policy has it profitability rising above liquidity but the problem of liquidity becomes evident as a result of heavy investment in receivables due to increased sales. Besides this, the opportunity costs of such a firm declines as the firm raptures lost contribution. But the credit administrative costs increase as more accounts are to be handled and also there is rise in risk of bad debt losses.

In reality, it is rather a different task to establish an optimum credit policy as the best combination of variables of credit policy is quite difficult to obtain. The important variables of credit policy should be identified before establishing an optimum credit policy.

The three important decisions variables of credit policy are:

1. Credit terms,
2. Credit standards, and
3. Collection policy.

Credit Control - Credit control is a complex process, which costs both time and administrative costs. Broadly, speaking, the function of credit control incorporates the following elements: -

1. Checking Customers Credit Worthiness - This step relates to applicants ability to pay for the goods or services opted by him. The decision pertaining to credit grant and its volume largely depends upon this assessment. The assessment can be done on the basis of financial soundness, general behavior, past records, business habits and traits. Trade reference, banker's records available with the geriatric etc. are a few of certain elements that provide relevant information for conducting this assessment.
2. Prompt Invoicing and Follow-up - This is an executive action involving prompt issue of invoice and equally close follow-up action. A continuous personal attention is required for reviewing amounts of bills receivables. Methods are selected among the various possible alternatives available to ensure that the time period is minimum between the realization of payments and converting it into bank's credit account.
3. Credit Insurance - This point pertains to credit exports. As credit sales does not fall under any credit insurance policy coverage in India. It is export credit guarantee department, which

formulates appropriate rules and issues credit insurance policies for exports on payments of a nominal premium. These facilities are of high importance for credit control of exports.

4. Financial Statements - Financial statement is an important document that presents desirable sources of information to the seller regarding the financial position of customer for credit control. For the companies carrying out seasonal business, interim statements instead of financial statements are preferred. For acquiring authenticated information audited financial statement should be favored rather than unaudited figures.
5. Use of Electronic Data Processing Equipment - In the modern world, the importance of computers cannot be possibly denied. Electronic data processing equipment holds its own individual importance in providing timely and accurate information pertaining to the status of accounts. The computer can provide a vast array of detailed information, previously impractical to obtain that may be useful not only to the credit manager but to other management as well. In addition to processing data the computer can be programmed to make certain routine credit decisions.

# INVENTORY MANAGEMENT

## INTRODUCTION

Inventory means stock of goods in the form of raw material, stores or supplies, work in progress and finished product waiting for sale.

Important **features** of inventory are.

- If accounts for large share of working capital
- Risk factor is high in holding inventory
- If involves many types of costs.
- It influences price and income of the firm as well as profitability.
- It involves almost all functional areas of management i.e. purchase, production, marketing & finance.

## TYPES OF RISKS ASSOCIATED WITH INVENTORY

- Risk of price fluctuation
- Risk of deterioration of quality of goods
- Risk of obsolescence
- Risk of pilferage & loss

## INVENTORY MANAGEMENT

It means efficient management/ control of capital invested in inventory for obtaining maximum return by keeping inventory costs at minimum.

OBJECTIVES OF INVENTORY CONTROL

There are two main objectives of inventory control, these are -

**Operating objectives**

a. Regular flow of material
b. Minimization of risks due to Stock out.
c. Avoid obsolescence of stored goods due to change in demand, technology etc.

**Financial objective**

a. Minimum investment or maximization of returns on investments
b. Minimizing inventory costs.

**KEY FUNCTIONS OF INVENTORY CONTROL**

1) Effective use of financial resources
2) Economy in purchasing
3) Uninterrupted production of goods & services
4) Protection against loss of material
5) Prompt delivery of goods to customers
6) Eliminating redundant inventory
7) Providing information to management for decision making

**DANGERS OF OVER STOCKING OF INVENTORY**

1) **Blocking of funds** – If there is over stock of inventory, then it may lead to reduction in profit due to interest cost or opportunity cost.
2) **Increase in holding cost** – besides interest, rent of space, insurance, loss on account of theft, pilferage etc.
3) **Loss of liquidity** – as it is difficult to sell stores, woks in proposes as well as semi-finished goods.
4) **Dangers of under stocking of inventory/stock out/ shortage of inventory items**
   - Loss of profit due to loss of sales
   - Loss of future sales as customers may go else where
   - Loss of customer's confidence resulting to loss of good will
   - Loss of machine and men hours as they may remain idle which lead to frustration in labour may force, unnecessary stoppage in production, extra costs in urgent replenishment of items.

**DIFFERENT TYPES OF COSTS ASSOCIATED WITH INVENTORY**

- **Material cost** – Which include cost of purchasing material/ Goods including transportation cost, sales tax, octroi, handling cost (loading unloading) etc.

- **Ordering costs**: Clerical & administrative costs such as salary, postage, stationary telephone etc associated with purchasing, cost of requisition of material for order, follow up, receiving/evaluating quotations, checking of material when received (quality/quantity) accounting costs such as checking of supplies against orders, making payment, maintaining records of purchase etc. setup costs when items are manufactured internally.
- **Carrying costs**- storage cost e.g. Rent, lighting heating, refrigeration, labour costs in handling material, store staff equipments, taxes, depreciation, insurance, product deterioration obsolescence spoilage, breakage, pilferage, audit & accounting cost and lastly interest cost on capital or opportunity cost.
- **Stock out costs or shortage of material** – Which include loss of profit due to loss of sale, loss of future sales, loss of loosing goodwill in the eyes of customers and loss of man and machine hours.

**TECHNIQUE OF INVENTORY MANAGEMENT**

**EOQ** - Optimum size of an order for replenishment of an item of inventory is called EOQ.

**ROP** - Re-ordering point is the level of inventory at which an order should be placed for replenishment of on item of inventory.

**Stock levels** - Fixing levels like minimum, maximum, re-order and danger level.

**ABC analysis** – Always Better control. All items of inventory are divided in to three categories i.e. „A", „B", & „C".

Category A - Value 70% to 75%, where quantity is 5% to 10%

B - Value 20% to 25%, where quantity is 20% to 30%

C - Value 5% to 10%, where quantity is 65% to 70%

**VED Analysis** – Vital, Essential & Desirable (used for spare parts)

**SDE Analysis**

Scarce (items in short supply)

Difficult (items cannot be procured easily)

Easy (items which are easily available)

**FSN Analysis**

Fast moving (stock to be maintained in large quantity)

Slow moving (not frequently required by production dept.)

Non-moving (items which are rarely required by production dept)

## DIVIDEND POLICY

Dividend is divisible profit distributed amongst members/shareholders of a company in proportion to shares in the manner as prescribed under law. A dividend cannot be declared unless:

1. Sufficient profit is there in a company.
2. It has been recommended by Board of Directors.
3. Its acceptance has been given by the shareholders in Annual General Meeting (AGM)

### KIND OF DIVIDEND

I. Type of Security – Preference Dividend, Equity Dividend

II. Timings of Dividends – Interim Dividend, Regular Dividend

III. Mode of Payment – Cash, Stock dividend (Bonus), Script or Bond.

### DIVIDEND POLICY

Policy followed by Board of Directors concerning quantum of profit to be distributed as dividend. It also includes principal rules and procedure for planning and distributing dividend after deciding rate of dividend.

- Stable: Long term policy without frequent changes i.e. long term policy which is not affected by changes or quantum of profit.
- Lenient: Most of the profit is distributed amongst share holders and a very small part is kept as retained earnings. Even 90% to 95% profit is distributed as dividend. This is generally done in initial years to gain confidence of share holders.

### FACTORS AFFECTING DIVIDEND POLICY

The main **determinants** of dividend policy of a firm can be classified into:

1. **Dividend payout ratio** - Dividend payout ratio refers to the percentage share of the net earnings distributed to the shareholders as dividends. Dividend policy involves the decision to pay out earnings or to retain them for reinvestment in the firm. The retained earnings constitute a source of finance. The optimum dividend policy should strike a balance between current dividends and future growth which maximizes the price of the firm's shares. The dividend payout ratio of a firm should be determined with reference to two basic objectives – maximizing the wealth of the firm's owners and providing sufficient funds to finance growth. These objectives are interrelated.
2. **Stability of dividends -** Dividend stability refers to the payment of a certain minimum amount of dividend regularly. The stability of dividends can take any of the following three forms:
    a. constant dividend per share
    b. constant dividend payout ratio or
    c. constant dividend per share plus extra dividend
3. **Legal, contractual and internal constraints and restrictions -** Legal stipulations do not require a dividend declaration but they specify the conditions under which dividends must be paid. Such conditions pertain to capital impairment, net profits and insolvency. These restrictions may cause the firm to restrict the payment of cash dividends until a certain level of earnings has been achieved or limit the amount of dividends paid to a certain amount or percentage of earnings. Internal constraints are unique to a firm and include liquid assets, growth prospects, financial requirements, availability of funds, earnings stability and control.
4. **Owner's considerations -** The dividend policy is also likely to be affected by the owner's considerations of the tax status of the shareholders, their opportunities of investment and the dilution of ownership.
5. **Capital market considerations -** The extent to which the firm has access to the capital markets, also affects the dividend policy. In case the firm has easy access to the capital market, it can follow a liberal dividend policy. If the firm has only limited access to capital markets, it is likely to adopt a low dividend payout ratio. Such companies rely on retained earnings as a major source of financing for future growth.

6. **Inflation -** With rising prices due to inflation, the funds generated from depreciation may not be sufficient to replace obsolete equipments and machinery. So, they may have to rely upon retained earnings as a source of fund to replace those assets. Thus, inflation affects dividend payout ratio in the negative side.
7. **Liquidity position:** In tight liquidity position, instead cash dividend, bonus shares or scripts/bonds are issued.
8. **Trade Cycle:** In boom conditions, higher profits are there and hence high dividend.

**MODELS OF DIVIDEND (THEORIES)**

Relevance and Irrelevance Dividend Theory - Dividend is that portion of net profits which is distributed among the shareholders. The dividend decision of the firm is of crucial importance for the finance manager since it determines the amount to be distributed among shareholders and the amount of profit to be retained in the business.

A financial manager may treat the dividend decision in the following two ways:

**1) As a long term financing decision:** When dividend is treated as a source of finance, the firm will pay dividend only when it does not have profitable investment opportunities. But the firm can also pay dividends and raise an equal amount by the issue of shares.

**2) As a wealth maximization decision:** Payment of current dividend has a positive impact on the share price. So to maximize the price per share, the firm must pay more dividends.

**RELEVANT THEORY**

If the choice of the dividend policy affects the value of a firm, it is considered as relevant. In that case a change in the dividend payout ratio will be followed by a change in the market value of the firm. If the dividend is relevant, there must be an optimum payout ratio. Optimum payout ratio is that ratio which gives highest market value per share.

**Walter's Model (Relevant Theory)**

Prof. James E Walter argues that the choice of dividend payout ratio almost always affects the value of the firm. Prof. J. E. Walter has very scholarly studied the significance of the relationship

between internal rate of return (R) and cost of capital (K) in determining optimum dividend policy which maximizes the wealth of shareholders.

The optimum dividend policy will have to be determined by relationship of r & k under following assumptions.

a) Internal rate of return ® and cost of capital (k) are constant.
b) All new investment opportunities are to be financed through retained earnings and no external finance is available to the firm.
c) A firm has perpetual or an infinite life

According to the theory, the optimum dividend policy depends on the relationship between the firm's internal rate of return and cost of capital. If R>K, the firm should retain the entire earnings, whereas it should distribute the earnings to the shareholders in case the R<K. The rationale of R>K is that the firm is able to produce more return than the shareholders from the retained earnings.

**Gordon's Model (Relevant Theory)**

Another theory, which contends that dividends are relevant, is the Gordon's model. This theory is similar to that of Walter. This model is like Walters Model but a few extra assumptions are:

a) The firm operates its investment activity only through equity.
b) The retention ratio once decided is constant forever.

But Gordon goes one step ahead and argues that dividend policy affects the value of shares even when R=K. According to Gordon, the rational investors prefer current dividend to future dividend. Retained earnings are considered as risky by the investors. This behavior of investor is described as **"Bird in Hand Argument"**.

**IRRELEVANT THEORY**

If the choice of the dividend policy does not affect the value of a firm, it is considered as irrelevant. In that case a change in the dividend payout ratio will not change the market value of the firm.

**Modigliani-Miller Model (Irrelevance theory)**

According to MM, the dividend policy of a firm is irrelevant, as it does not affect the wealth of shareholders. According to the theory the value of a firm depends solely on its earnings power resulting from the investment policy and not influenced by the manner in which its earnings are split between dividends and retained earnings.

The assumptions of this model are:

a) Perfect Capital Market
b) Investors are rational by nature.
c) In absence of tax, no discrimination between dividend income and capital appreciation
d) The firm's investment policy is given.

If the company retains the earnings instead of giving it out as dividends, the shareholders enjoy capital appreciation, which is equal to the earnings, retained.

# SOURCES OF FINANCE

A company might raise new funds from the following sources:

- The capital markets
  - new share issues, e.g., by companies acquiring a stock market listing for the first time
  - rights issues
- Loan stock
- Retained earnings
- Bank borrowing
- Government sources
- Business expansion scheme funds
- Venture capital
- Franchising.

## ORDINARY (EQUITY) SHARES

Ordinary shares are issued to the owners of a company. They have a nominal or 'face' value, typically of $1 or 50 cents. The market value of a quoted company's shares bears no relationship to their nominal value, except that when ordinary shares are issued for cash, the issue price must be equal to or be more than the nominal value of the shares.

### Deferred ordinary shares

These are a form of ordinary shares, which are entitled to a dividend only after a certain date or if profits rise above a certain amount. Voting rights might also differ from those attached to other ordinary shares.

Ordinary shareholders put funds into their company:

a) By paying for a new issue of shares
b) Through retained profits.

Simply retaining profits, instead of paying them out as dividends, offers an important, simple low-cost source of finance, although this method may not provide enough funds, for example, if the firm is seeking to grow.

**New shares issues**

A company seeking to obtain additional equity funds may be:

a) an unquoted company wishing to obtain a Stock Exchange quotation
b) an unquoted company wishing to issue new shares, but without obtaining a Stock Exchange quotation
c) a company which is already listed on Stock Exchange wishing to issue additional new shares.

**Rights Issues**

A rights issue provides a way of raising new share capital by means of an offer to existing shareholders, inviting them to subscribe cash for new shares in proportion to their existing holdings.

For example, a rights issue on a one-for-four basis at 280c per share would mean that a company is inviting its existing shareholders to subscribe for one new share for every four shares they hold, at a price of 280c per new share.

A company making a rights issue must set a price which is low enough to secure the acceptance of shareholders, who are being asked to provide extra funds, but not too low, so as to avoid excessive dilution of the earnings per share.

**PREFERENCE SHARES**

Preference shares have a fixed percentage dividend before any dividend is paid to the ordinary shareholders. As with ordinary shares a preference dividend can only be paid if sufficient distributable profits are available, although with 'cumulative' preference shares the right to an unpaid dividend is carried forward to later years. The arrears of dividend on cumulative preference shares must be paid before any dividend is paid to the ordinary shareholders.

From the company's point of view, preference shares are ***advantageous*** in that:

- Dividends do not have to be paid in a year in which profits are poor, while this is not the case with interest payments on long term debt (loans or debentures).

- Since they do not carry voting rights, preference shares avoid diluting the control of existing shareholders while an issue of equity shares would not.
- Unless they are redeemable, issuing preference shares will lower the company's gearing. Redeemable preference shares are normally treated as debt when gearing is calculated.
- The issue of preference shares does not restrict the company's borrowing power, at least in the sense that preference share capital is not secured against assets in the business.
- The non-payment of dividend does not give the preference shareholders the right to appoint a receiver, a right which is normally given to debenture holders.

However, dividend payments on preference shares are not tax deductible in the way that interest payments on debt are. Furthermore, for preference shares to be attractive to investors, the level of payment needs to be higher than for interest on debt to compensate for the additional risks.

For the investor, preference shares are ***less attractive*** than loan stock because:

- they cannot be secured on the company's assets
- the dividend yield traditionally offered on preference dividends has been much too low to provide an attractive investment compared with the interest yields on loan stock in view of the additional risk involved.

**LOAN STOCK**

Loan stock is long-term debt capital raised by a company for which interest is paid, usually half yearly and at a fixed rate. Holders of loan stock are therefore long-term creditors of the company. Loan stock has a nominal value, which is the debt owed by the company, and interest is paid at a stated "coupon yield" on this amount. For example, if a company issues 10% loan stocky the coupon yield will be 10% of the nominal value of the stock, so that $100 of stock will receive $10 interest each year. The rate quoted is the gross rate, before tax.

Debentures are a form of loan stock, legally defined as the written acknowledgement of a debt incurred by a company, normally containing provisions about the payment of interest and the eventual repayment of capital.

**Debentures with a floating rate of interest**

These are debentures for which the coupon rate of interest can be changed by the issuer, in accordance with changes in market rates of interest. They may be attractive to both lenders and borrowers when interest rates are volatile.

**Security**

Loan stock and debentures will often be *secured.* Security may take the form of either a *fixed charge* or a *floating charge.*

a) **Fixed charge;** Security would be related to a specific asset or group of assets, typically land and buildings. The company would be unable to dispose of the asset without providing a substitute asset for security, or without the lender's consent.

b) **Floating charge;** With a floating charge on certain assets of the company (for example, stocks and debtors), the lender's security in the event of a default payment is whatever assets of the appropriate class the company then owns (provided that another lender does not have a prior charge on the assets). The company would be able, however, to dispose of its assets as it chose until a default took place. In the event of a default, the lender would probably appoint a receiver to run the company rather than lay claim to a particular asset.

**The redemption of loan stock**

Loan stock and debentures are usually redeemable. They are issued for a term of ten years or more, and perhaps 25 to 30 years. At the end of this period, they will "mature" and become redeemable (at par or possibly at a value above par).

**RETAINED EARNINGS**

For any company, the amount of earnings retained within the business has a direct impact on the amount of dividends. Profit re-invested as retained earnings is profit that could have been paid as a dividend. The major reasons for using retained earnings to finance new investments, rather than to pay higher dividends and then raise new equity for the new investments, are as follows:

1) The management of many companies believes that retained earnings are funds which do not cost anything, although this is not true. However, it is true that the use of retained earnings as a source of funds does not lead to a payment of cash.

2) The dividend policy of the company is in practice determined by the directors. From their standpoint, retained earnings are an attractive source of finance because investment projects can be undertaken without involving either the shareholders or any outsiders.
3) The use of retained earnings as opposed to new shares or debentures avoids issue costs.
4) The use of retained earnings avoids the possibility of a change in control resulting from an issue of new shares.

Another factor that may be of importance is the financial and taxation position of the company's shareholders. If, for example, because of taxation considerations, they would rather make a capital profit (which will only be taxed when shares are sold) than receive current income, then finance through retained earnings would be preferred to other methods.

A company must restrict its self-financing through retained profits because shareholders should be paid a reasonable dividend, in line with realistic expectations, even if the directors would rather keep the funds for re-investing. At the same time, a company that is looking for extra funds will not be expected by investors (such as banks) to pay generous dividends, nor over-generous salaries to owner-directors.

**BANK LENDING**

Borrowings from banks are an important source of finance to companies. Bank lending is still mainly short term, although medium-term lending is quite common these days.

Short term lending may be in the form of:

a) an overdraft, which a company should keep within a limit set by the bank.
b) a short-term loan, for up to three years.

Medium-term loans are loans for a period of from three to ten years. The rate of interest charged on medium-term bank lending to large companies will be a set margin, with the size of the margin depending on the credit standing and riskiness of the borrower. A loan may have a fixed rate of interest or a variable interest rate, so that the rate of interest charged will be adjusted every three, six, nine or twelve months in line with recent movements in the Base Lending Rate.

Lending to smaller companies will be at a margin above the bank's base rate and at either a variable or fixed rate of interest. Lending on overdraft is always at a variable rate. A loan at a variable rate of interest is sometimes referred to as a *floating rate loan.*

**LEASING**

A lease is an agreement between two parties, the "lessor" and the "lessee". The lessor owns a capital asset, but allows the lessee to use it. The lessee makes payments under the terms of the lease to the lessor, for a specified period of time.

Leasing is, therefore, a form of rental. Leased assets have usually been plant and machinery, cars and commercial vehicles, but might also be computers and office equipment. There are two basic forms of lease: "operating leases" and "finance leases".

**Operating leases**

Operating leases are rental agreements between the lessor and the lessee whereby:

a. the lessor supplies the equipment to the lessee
b. the lessor is responsible for servicing and maintaining the leased equipment
c. the period of the lease is fairly short, less than the economic life of the asset, so that at the end of the lease agreement, the lessor can either
    - lease the equipment to someone else, and obtain a good rent for it, or
    - sell the equipment secondhand.

**Finance leases**

Finance leases are lease agreements between the user of the leased asset (the lessee) and a provider of finance (the lessor) for most, or all, of the asset's expected useful life.

Suppose that a company decides to obtain a company car and finance the acquisition by means of a finance lease. A car dealer will supply the car. A finance house will agree to act as lessor in a finance leasing arrangement, and so will purchase the car from the dealer and lease it to the company. The company will take possession of the car from the car dealer, and make regular payments (monthly, quarterly, six monthly or annually) to the finance house under the terms of the lease.

Other important characteristics of a finance lease:

a. The lessee is responsible for the upkeep, servicing and maintenance of the asset. The lessor is not involved in this at all.
b. The lease has a primary period, which covers all or most of the economic life of the asset. At the end of the lease, the lessor would not be able to lease the asset to someone else, as the

asset would be worn out. The lessor must, therefore, ensure that the lease payments during the primary period pay for the full cost of the asset as well as providing the lessor with a suitable return on his investment.

c. It is usual at the end of the primary lease period to allow the lessee to continue to lease the asset for an indefinite secondary period, in return for a very low nominal rent. Alternatively, the lessee might be allowed to sell the asset on the lessor's behalf (since the lessor is the owner) and to keep most of the sale proceeds, paying only a small percentage (perhaps 10%) to the lessor.

**HIRE PURCHASE**

Hire purchase is a form of installment credit. Hire purchase is similar to leasing, with the exception that ownership of the goods passes to the hire purchase customer on payment of the final credit installment, whereas a lessee never becomes the owner of the goods.

Hire purchase agreements usually involve a finance house.

i) The supplier sells the goods to the finance house.
ii) The supplier delivers the goods to the customer who will eventually purchase them.
iii) The hire purchase arrangement exists between the finance house and the customer.

The finance house will always insist that the hirer should pay a deposit towards the purchase price. The size of the deposit will depend on the finance company's policy and its assessment of the hirer. This is in contrast to a finance lease, where the lessee might not be required to make any large initial payment.

An industrial or commercial business can use hire purchase as a source of finance. With industrial hire purchase, a business customer obtains hire purchase finance from a finance house in order to purchase the fixed asset. Goods bought by businesses on hire purchase include company vehicles, plant and machinery, office equipment and farming machinery.

**GOVERNMENT ASSISTANCE**

The government provides finance to companies in cash grants and other forms of direct assistance, as part of its policy of helping to develop the national economy, especially in high technology industries and in areas of high unemployment. For example, the Indigenous Business

Development Corporation of Zimbabwe (IBDC) was set up by the government to assist small indigenous businesses in that country.

**VENTURE CAPITAL**

Venture capital is money put into an enterprise which may all be lost if the enterprise fails. A businessman starting up a new business will invest venture capital of his own, but he will probably need extra funding from a source other than his own pocket. However, the term 'venture capital' is more specifically associated with putting money, usually in return for an equity stake, into a new business, a management buy-out or a major expansion scheme.

The institution that puts in the money recognizes the gamble inherent in the funding. There is a serious risk of losing the entire investment, and it might take a long time before any profits and returns materialize. But there is also the prospect of very high profits and a substantial return on the investment. A venture capitalist will require a high expected rate of return on investments, to compensate for the high risk.

A venture capital organization will not want to retain its investment in a business indefinitely, and when it considers putting money into a business venture, it will also consider its "exit", that is, how it will be able to pull out of the business eventually (after five to seven years, say) and realize its profits. Examples of venture capital organizations are: Merchant Bank of Central Africa Ltd and Anglo American Corporation Services Ltd.

A venture capital organization will only give funds to a company that it believes can succeed, and before it will make any definite offer, it will want from the company management:

- a business plan
- details of how much finance is needed and how it will be used
- the most recent trading figures of the company, a balance sheet, a cash flow forecast and a profit forecast
- details of the management team, with evidence of a wide range of management skills
- details of major shareholders
- details of the company's current banking arrangements and any other sources of finance
- any sales literature or publicity material that the company has issued.

A high percentage of requests for venture capital are rejected on an initial screening, and only a small percentage of all requests survive both this screening and further investigation and result in actual investments.

**FRANCHISING**

Franchising is a method of expanding business on less capital than would otherwise be needed. For suitable businesses, it is an alternative to raising extra capital for growth. Franchisors include Budget Rent-a-Car, Wimpy, Nando's Chicken and Chicken Inn.

Under a franchising arrangement, a franchisee pays a franchisor for the right to operate a local business, under the franchisor's trade name. The franchisor must bear certain costs (possibly for architect's work, establishment costs, legal costs, marketing costs and the cost of other support services) and will charge the franchisee an initial franchise fee to cover set-up costs, relying on the subsequent regular payments by the franchisee for an operating profit. These regular payments will usually be a percentage of the franchisee's turnover.

Although the franchisor will probably pay a large part of the initial investment cost of a franchisee's outlet, the franchisee will be expected to contribute a share of the investment himself. The franchisor may well help the franchisee to obtain loan capital to provide his-share of the investment cost.

The advantages of franchises to the franchisor are as follows:

- The capital outlay needed to expand the business is reduced substantially.
- The image of the business is improved because the franchisees will be motivated to achieve good results and will have the authority to take whatever action they think fit to improve the results.

The advantage of a franchise to a franchisee is that he obtains ownership of a business for an agreed number of years (including stock and premises, although premises might be leased from the franchisor) together with the backing of a large organization's marketing effort and experience. The franchisee is able to avoid some of the mistakes of many small businesses, because the franchisor has already learned from its own past mistakes and developed a scheme that works.

**COMMERCIAL PAPERS**

It is an unsecured promissory note with a fixed maturity period. Commercial paper is a money-market security issued (sold) by large corporations to get money to meet short term debt obligations and is only backed by an issuing bank or corporation's promise to pay the face amount on the maturity date specified on the note. Since it is not backed by collateral, only firms with excellent credit ratings from a recognized rating agency will be able to sell their commercial paper at a reasonable price. Commercial paper is usually sold at a discount from face value, and carries higher interest repayment rates than bonds.

- The CPs can only be issued in multiples of Rs. 5 lakhs.
- The minimum denomination of CPs is Rs. 25 lakhs.
- The companies having minimum tangible net worth of Rs. 4 crore can only issue CPS.
- The company should have a credit rating of P2 from ICRA or AAA from CRISIL.
- The maturity period ranges from 90 days to 1 year.

**CREDIT RATING**

Credit ratings are determined by credit ratings agencies. The credit rating represents the credit rating agency's evaluation of qualitative and quantitative information for a company or government; including non-public information obtained by credit rating agencies analysts.

Credit ratings are not based on mathematical formulas. Instead, credit rating agencies use their judgment and experience in determining what public and private information should be considered in giving a rating to a particular company or government.

**FACTORING**

**Factoring** is a financial transaction whereby a business sells its accounts receivable (i.e., invoices) to a third party (called a factor) at a discount.

The three parties directly involved are: the one who sells the receivable, the debtor (the account debtor, or customer of the seller), and the factor. The receivable is essentially a financial asset associated with the debtor's liability to pay money owed to the seller (usually for work performed or goods sold).

In "advance" factoring, the factor provides financing to the seller of the accounts in the form of a cash "advance," often 70-85% of the purchase price of the accounts, with the balance of the purchase price being paid, net of the factor's discount fee (commission) and other charges, upon collection from the account client. In "maturity" factoring, the factor makes no advance on the purchased accounts; rather, the purchase price is paid on or about the average maturity date of the accounts being purchased in the batch.

Factoring can be classified in the following ways:

- **Without Recourses Factoring**: This type of factoring is also known as full factoring. In without recourse factoring factor bears all the risks of non-payment by the customer. The factor cannot recover any amount from the selling company. Thus, it results into the outright buying of selling company's receivables by the factor.
- **With Recourses Factoring**: In this type of factoring the selling company bears the risks of non-payment by the customer. The factor is only entitles to recover the funds advanced by him from the selling company.

**CERTIFICATE OF DEPOSIT**

It is a time deposit, a financial product commonly offered to consumers by banks, thrift institutions, and credit unions.

CDs are similar to savings accounts in that they are insured and thus virtually risk free; they are "money in the bank". They are different from savings accounts in that the CD has a specific, fixed term (often monthly, three months, six months, or one to five years), and, usually, a fixed interest rate. It is intended that the CD be held until maturity, at which time the money may be withdrawn together with the accrued interest.

In exchange for keeping the money on deposit for the agreed-on term, institutions usually grant higher interest rates than they do on accounts from which money may be withdrawn on demand, although this may not be the case in an inverted yield curve situation. Fixed rates are common, but some institutions offer CDs with various forms of variable rates.

The consumer who opens a CD may receive a paper certificate, but it is now common for a CD to consist simply of a book entry and an item shown in the consumer's periodic bank statements; that is, there is often no "certificate" as such. Consumers who wish to have a hard copy verifying

their CD purchase may request a paper statement from the bank or print out their own from the financial institution's online banking service.

**GLOBAL DEPOSITORY RECEPITS**

GDRs are financial instruments used by private markets to raise capital denominated in either U.S. dollars or Euros. It is a certificate issued by a depository bank, which purchases shares of foreign companies and deposits it on the account. The shares are held by a foreign branch of an international bank. The shares trade as domestic shares, but are offered for sale globally through the various bank branches. GDRs represent ownership of an underlying number of shares.

# REFERENCES

1. Maheshwari S.N., "Financial Management", Principles and Practice, Sultan Chand & Sons, 9th Edition 2004.

2. Khan M.Y, Jain P.K., "Financial Management", Tata McGraw Hill, 2001, 3rd Edition.

3. Pandey I. M., "Financial Management", Vikas Publishing House, Revised Ed., 2003

4. Hampton, Joh. J, Financial Decision Making, Prentice Hall of India, 4th Edition, 1998.

5. Horne Van C. & Wachowich M., "Fundamentals of Financial Management", Prentice Hall of India, 11th Edition 2002.

6. www.**investopedia**.com/

7. http://en.wikipedia.org/wiki/Main_Page

8. shodhganga.inflibnet.ac.in

9. www.studyfinance.com/lessons/dividends/

10. www.managementparadise.com