CORPORATE FINANCE

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MODULE-1

Finance is the life blood of business. In general sense it is the provision of money when it is required. Its management is concerned with the process of acquiring financial resources and its judicious usage, so as to maximize the firms value, thereby maximizing owners and shareholders wealth. The responsibility of Finance manager is to acquire funds needed by the firm, by diversifying the sources on one hand and its immediate effective utilization on the other. Thus the success and failure of any firm is predominantly linked with the quality of financial decision. The Globalization era in recent days practice has cause to bring some tremendous reform in financial management. The infusion of information technology for coupled the interest of financial authority to add the innovation to their existing ideas to diversify the sources and way to utilize the funds. Hence, it results to cause the increment in competition, merger, takeover, cost management, quality improvement of financial discipline. Again in the light of global competition its a question of survival before many an industry, in the to the spectrum of global economy. But the age of information technology has given a fresh perspective to the financial manager, by changing the paradigm from controller to facilitator

Financial process management is a way to get separate finance-related business functions to run in a smooth, coordinated way. It is the technique by which you streamline the various financial business processes in your organization, and get them to function as a single coherent, consistent unit. Financial management is managerial activity which is concerned with the planning and controlling of the firm's financial resources. J.E. Brandley defines financial management as that area of business management devoted to judicious use of capital and a careful selection of the source of capital in order to enable a spending unit to move in the direction of reaching the goals.

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

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

Financial management:-

- Efficient acquisition of finance (owned funds or borrowed funds)
- Efficient utilization of finance
- Efficient distribution of surplus (how to distribute and how much to distribute)

For smooth functioning of business.

Scope of financial management

1. Estimating financial requirements- the first task of a financial manager is to estimate short term and long term financial requirements of his business. For this purpose, he will prepare a financial plan for present as well as future. The amount required for

purchasing fixed assets as well as needs of funds for working capital will have to be ascertained. The estimations should be based on sound financial principles so that neither there are inadequate nor excess funds with the concern. The inadequacy of funds will adversely affect the day to day working of the concern whereas excess funds may tempt a management to indulge in extravagant spending or speculative.

2. Deciding capital structure- the capital structure refers to the kind of proportion of different securities for raising funds. After deciding about the quantum of funds required it should be decided which type of securities should be raised. It may be wise to finance fixed assets through long term debts. Even here if gestation period is longer, then share capital may be most suitable. Long term funds should be employed to finance working capital also, if not wholly then partially. Entirely depending upon overdrafts and cash credits for meeting working capital needs may not be suitable. A decision about various sources for funds should be linked to the cost of raising funds. If cost of raising funds is very high then such sources may not be useful for long. A decision about the kind of securities to be employed and the proportion in which these should be used is an important decision which influences the short term and long term financial planning of an enterprise.
3. Selecting a source of finance- after preparing a capital structure, an appropriate source of finance is selected. Various sources from which finance may be raised, include share capital, debentures, financial institutions, commercial banks, public deposits. If finances are needed for short periods then banks, public deposits and financial institutions may be appropriate; on the other hand, if long term finances are required then share capital and debentures may be useful. If the concern does not want to tie down assets as securities then public deposits may be a suitable source. If management does not want to dilute ownership then debentures should be issued in preference to shares. The need, purpose, object and cost involved may be the factors influencing the selection of a suitable source of financing.
4. Proper use of surplus- the utilization of profits or surpluses is also an important factor in financial management. A judicious use of surpluses is essential for expansion and diversification plans and also in protecting the interests of shareholders. The ploughing back of profits is the best policy of further financing but it clashes with the interests of shareholders. A balance should be struck in using funds for paying dividend by the declaration of dividend and expected profitability in future. A finance manager should consider the influence of various factors such as trend of earnings of an enterprise, expected earnings in future, market value of shares, need for funds for financing expansion. A judicious policy for distributing surpluses will be essential for maintaining proper growth of the unit.
5. Proper cash management- cash management is also an important task of finance manager. He has to assess various cash needs at different times and then make arrangements for arranging cash. Cash may be required to purchase raw materials, make payments to creditors, meet wage bills, meet day to day expenses. The usual sources of cash may be cash sales, collection of debts, short term arrangements with banks. The cash management should be such that neither there is a shortage of it and nor it is idle. Any shortage of cash will damage the creditworthiness of the enterprise.

The idle cash with the business will mean that it is not properly used. It will be better if cash flow statement is regularly prepared so that one is able to find out various sources and applications. If cash is spent on avoidable expenses then such spending may be curtailed. A proper idea on sources of cash inflow may also enable to assess the utility of various sources. Some sources may not be providing that much cash which we should have thought. All this information will help in efficient management of cash.

6. Portfolio management- it is concerned with the efficient management of investment in securities. Here, an investment can be defined as the current commitment of funds for a period of time in order to derive a flow of funds in future which would compensate the investor. It involves a complex process of selection of securities taking into account different types of risks involved in such investment as well as the return from such investment. The investor's attitude towards risks influences the pattern of investment. At present, portfolio management is supposed to be the most important area of financial management.
7. Management of retained earnings- in any business firm a portion of its profits has to be distributed as dividends to its shareholders and the remaining portion is retained for reinvestment purposes. This retained earnings constitute the internal source of funds for any firm. The payment of dividends causes a depletion of total assets of the firm. If the firm fails to raise its required funds from outside sources its future growth would be affected. Hence, the management should also design proper retention policy or a dividend policy that would fulfill the expectations of the shareholders without affecting the future growth of the firm. Thus, the dividend policy/ retention policy of a business enterprise also comes under the purview of financial management.

Functions of financial management

1. Investment decision- The investment decision is concerned with the selection of assets in which funds will be invested by a firm. The asset of a business firms includes long term assets (fixed assets) and short term assets (current assets). Long term assets will yield a return over a period of time in future whereas short term assets are those assets which are easily convertible into cash within an accounting period. The long term investment decision.is known as capital budgeting whereas short term investment decision is identified as working capital management.

- Relates to selection of asset in which fund will be invested by firm.
- Every firm wants to invest in most appropriate option which brings maximum return.
- Firm can invest its funds in acquiring fixed assets as well as current asset.

2. Dividend decision- Dividend of a firm to the policy decisions are concerned with the distribution of profits of a firm to the shareholders. How much of the profits should be paid as dividend? i.e dividend payout ratio. The decision will depend upon the preferences of the shareholder, investment opportunities available within the firm and the opportunities for future expansion of the firm. The dividend payout ratio is to be determined in the light of the objectives of maximizing the market value of the share. The dividend decisions must be analysed in relation to the financing decisions of the

firm to determine the portion of retained earnings as a means of direct financing for the future expansions of the firm.

3. Financing decision- the financing decision is concerned with capital mix or capital structure of a firm. The term capital structure refers to the proportion of debentures capital and equity share capital. Financing decision of a firm relates to the financing mix. This must be decided taking into account the cost of capital, risk and return to the shareholders. Employment of debt capital implies a higher return to the shareholders and also the financial risk. There is a conflict between return and risk in the financing decisions of a firm. So, the finance manager has to bring a tradeoff between risk and return by maintaining a proper balance between debt capital and equity share capital. On the other hand, it is also the responsibility of the finance manager to determine an appropriate capital structure.

Objectives of financial management

1. Profit maximization: This is the main objective of financial management. The finance manager strives to achieve optimal profit in the short term and long-term course of business. The finance manager shall try to achieve as high as profits. The company makes a decent profit in the long run if the finance manager makes the proper decisions using the various methods and tools available
2. Wealth maximization: It means shareholders' value maximization. Wealth maximization means earning maximum wealth for shareholders. So, the finance manager tries to give maximum dividends to shareholders. The dividend declaration and payout policy are decided by financial management. Dividend decisions include a proper dividend policy regarding the distribution or retaining of company profits. This is related to the performance of the company. Better the performance, the higher is the market value of shares. In nutshell, the finance manager tries to maximize shareholders' value.
3. Proper mobilization: Mobilization of finance is an important objective of financial management. It means utilizing effectively the sources of finance. The finance manager can manage various sources of funds such as shares, debentures, after estimating the financial requirements, the finance manager must decide about the sources of finance.
4. Increase efficiency: Financial management tries to increase the efficiency of all sections of the company. Proper distribution of finance to all departments increases the efficiency of the entire company.
5. Proper estimation of total financial requirements: This means that the finance manager would be able to estimate the financial requirements of the company. He should be able to compute how much financing is required to start and run the business/ He shall estimate the fixed and working capital requirements of the company. If not, there will be a shortage

or surplus of finance. The finance manager shall use various factors like the technology used by the company, the number of employees used, the scale of operations, and legal requirements.

6. Proper utilization of finance: The finance manager must make optimum utilization of finance. This can be done by using various financial tools as managing receivables, effective payment policy in hand, and better inventory management.
7. Maintaining proper cash flow: The financial manager shall ensure that there is a regular supply of liquidity in the company monitoring closely all the cash inflows and outflows reducing the instances of underflow and overflow of cash. The finance manager is entrusted with the responsibility to maintain an optimum level of liquidity. Healthy cash flow improves the chances of survival and success of the company.
8. Survival of company: The company must survive in this competitive business world. Hence, the finance manager shall take all the decisions intuitively. The big decisions shall be taken with proper due diligence and consultancy with consultants.
9. Creating reserves: The higher the reserves, the better it will be for the company to overcome uncertainty. The company shall have an optimal dividend payout policy that will help itself to create reserves over the year. It must also keep the profits as reserves. The reserves can be used for the expansion of the company and overcoming uncertainty. It can also be used to face contingencies in the future.
10. Reduce the cost of capital: This includes risk evaluation, measuring the cost of capital, and estimating benefits out of a particular project. Managers are responsible for deciding how available funds should be invested in fixed or current assets to get the best available returns.
11. Reduce operating risks: The company goes through various risks and uncertainties. The finance manager must take steps to reduce these risks. This can be done by avoiding high-risk allocation of capital for expansion All the decisions shall be taken with proper consultancy.
12. Prepare capital structure: This means bringing a proper balance between the different sources of capital. This balance is necessary for liquidity, economy, flexibility, and stability.

Profit maximization vs wealth maximization

For optimal financial decisions, it is essential to define objectives of financial management. These objectives serve as decision criterion. Financing is a functional area business and

therefore, the objectives of financial management must be in tune with the overall objectives of the business. The main objectives of business are survival and growth. In order to survive in the business and to grow, a business must earn sufficient profits. It must also maintain good relations with investors, employees, customers and other groups of society. It should also provide maximization of owner's economic welfare. Consequently, there are two well-known criteria in this regard:

Profit maximization- according to this criterion, the financial decisions (investment, financing and dividend) of a firm should be oriented to the maximization of profits (i.e select those assets, projects and decisions which are profitable and reject those which are not profitable). Hence, actions that increase the firm's profit are undertaken while those that decrease profit are avoided.

Merits

- Allocation of resources
- Main source of inspiration
- Maximum social welfare
- Basis of decision making

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.

Drawbacks

- It is vague
- It ignores time value of money
- It ignores risks
- It ignores social responsibility

Wealth maximization- considering the shortcomings of profit maximization, wealth maximization is taken as the basic objective of financial management. It is also known as 'value maximization' or 'net present value maximization'. 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.

Features/objectives

1. It measures income in terms of cash flows, and avoids the ambiguity now associated with accounting profits as, income from investments is measured on the basis of cash flows rather than on accounting profits.
2. It recognizes time value of money by discounting the expected income of different years at a certain discount rate (cost of capital).
3. It analyses risk and uncertainty so that the best course of action can be selected from different alternatives.
4. It is not in conflict with other motives like maximization of sales or market value of shares. It helps rather in the achievement of all these other objectives.

Profit maximization	**Wealth maximization**
It is a traditional approach	It is a modern approach
It emphasizes short term	It emphasizes long term
It ignores time value of money	It considers time value of money
It ignores risk and uncertainty	It recognizes risk and uncertainty
It measures the performance of a business firm only on the basis of its profit	It measures the performance of a business firm only on the basis of shareholders wealth
It is based on the assumption of perfect competition in the product market	It assumes an efficient capital market
A firm may not pay regular dividends to its shareholders and reinvest its retained earnings to achieve this goal	A firm pays regular dividends to its shareholders to achieve this goal

Functions of finance manager

1. Estimating the Amount of Capital Required: This is the foremost function of the financial manager. Business firms require capital for:
(i) purchase of fixed assets,

(ii) meeting working capital requirements, and

(iii) modernisation and expansion of business.

The financial manager makes estimates of funds required for both short-term and long-term.

2. Determining Capital Structure: Once the requirement of capital funds has been determined, a decision regarding the kind and proportion of various sources of funds has to be taken. For this, financial manager has to determine the proper mix of equity and debt and short-term and long-term debt ratio. This is done to achieve minimum cost of capital and maximise shareholders wealth.
3. Choice of Sources of Funds: Before the actual procurement of funds, the finance manager has to decide the sources from which the funds are to be raised. The management can raise finance from various sources like equity shareholders, preference shareholders, debenture-holders, banks and other financial institutions, public deposits, etc.
4. Procurement of Funds: The financial manager takes steps to procure the funds required for the business. It might require negotiation with creditors and financial institutions, issue of prospectus, etc. The procurement of funds is dependent not only upon cost of raising funds but also on other factors like general market conditions, choice of investors, government policy, etc.
5. Utilization of Funds: The funds procured by the financial manager are to be prudently invested in various assets so as to maximize the return on investment: While taking investment decisions, management should be guided by three important principles, viz., safety, profitability, and liquidity.
6. Disposal of Profits or Surplus: The financial manager has to decide how much to retain for ploughing back and how much to distribute as dividend to shareholders out of the profits of the company. The factors which influence these decisions include the trend of earnings of the company, the trend of the market price of its shares, the requirements of funds for self-financing the future programmes and so on.

7. Management of Cash: Management of cash and other current assets is an important task of financial manager. It involves forecasting the cash inflows and outflows to ensure that there is neither shortage nor surplus of cash with the firm. Sufficient funds must be available for purchase of materials, payment of wages and meeting day-to-day expenses.

8. Financial Control: Evaluation of financial performance is also an important function of financial manager. The overall measure of evaluation is Return on Investment (ROI). The other techniques of financial control and evaluation include budgetary control, cost control, internal audit, break-even analysis and ratio analysis. The financial manager must lay emphasis on financial planning as well.

AGENCY PROBLEMS

In modern organization, there is a separation of ownership and management. The management acts on behalf of owners and is their agents. Consequently, management should act in such a manner so as to maximize wealth of their principals i.e owners. However, this may not happen because owners and management have different interests. Due to these different interests and separation of management from ownership, management may behave in a manner which is inconsistent with the interest of owners. These behavioral problems on the part of management lead to agency problems.

RISK AND RETURN

The two main determinants of security price are risk and return. Return on assets can be computed as the annual income received plus change in the market price of an asset. Whereas return can be defined as the variability of actual return from the expected return associated with a specified investment/asset. Risk analysis of capital investment is the most complex and controversial area in finance. In order to analyze the performance of an investment it is very important that investors learn how to measure returns such as holding period return, annualized return, etc. Since return and risk are related, the measurement of return also helps in the understanding of the riskiness of an investment.

A person making an investment expects to get some returns from the investment in the future. However, as future is uncertain, the future expected returns too are uncertain. It is the uncertainty associated with the returns from an investment that introduces a risk into a project. The expected return is the uncertain future return that a firm expects to get from its project. The realized return, on the contrary, is the certain return that a firm has actually earned.

Risk and return both are highly correlated with each other during investment. There are different types of risks, say industry-specific risk, project-specific risk, market risk, etc. return on investment is shown in the percentage. With the help of diversification, investors can reduce the overall risk, which is associated with their portfolio, but potential returns may be limited.

Risk Concepts

If an outcome is known with certainty, such as the value of a treasury bill at maturity, it is considered riskless.

On the other hand, if an investment has a potential for loss, it would be considered risky. Hence, risk can be defined as a measure of the uncertainty in a set of potential outcomes for an event in which there is a chance of some loss.

Investment Rules

Investment rule number 1: If two investments have the same expected return and different levels of risk, the investment with the lower risk is preferred.

Investment rule number 2: If two investments have the same level of risk and different expected returns, the investment with the higher expected return is preferred.

Since investors aim to maximize return and minimize risk, it is obvious that an investment with both a higher expected return and lower level of risk is preferred over another asset.

Trade off between risk and return

All investors should plan their investment to provide for their requirement of a comfortable life and make a provision for a pension fund, provident fund, etc, for future data. If someone wants to get more return, then he/she has to take more risks. As we know that risk can be diversified through the security portfolio (a combination of securities). There are mainly two components of risk portfolio, namely systematic/unavoidable risk and unsystematic/avoidable risk. The systematic risk affects the overall market, whereas unsystematic risk is unique to a particular security, which can be reduced by diversification.

Risk and return relationship- there is direct relationship between risk and return. An investment proposal involving low risk has low return while a proposal involving higher risk has higher return. Therefore, a finance manager is often required to trade off between the risk and return. A proper balance or combination is to be maintained between the risk and return by a finance manager in order to maximize the wealth of the shareholders in terms of market price of the share. Such a combination is called risk return trade off.

Capital Asset Pricing Model (CAPM)

This model describes the relationship between expected return and risk of investing in security. Capital Asset Pricing Model for risk measurement was given by Sharpe, Lintner and Treynor. It provides a framework for basic risk-return trade-off in the management of portfolios. It also explains the behavior of security prices and gives a mechanism on the investors overall portfolio risk and return. The CAPM model links the systematic risk and return of all securities. Systematic risk can be measured in the form of beta coefficient, which measures the sensitivity of return. CAPM is based on the systematic risk and investors need to be compensated for it in the form of risk premium. CAPM is needed to calculate WACC (weighted average cost of capital) as it computes the cost of equity. CAPM is used to quantify the relationship between the expected rate of return and the systematic risk of individual securities as well as portfolios. It states that the expected return on an investment is a function of time value of money, a reward for taking on risk and the amount of risk

Assumptions-

CAPM is an equilibrium model of the trade-off between expected portfolio return and unavoidable risk. There are following assumptions of CAPM:

1. Capital markets are efficient where investors are well informed.
2. Transactions cost to make investments in different securities are zero.
3. There are negligible restrictions on investment and no taxes.
4. The situation of market is alike perfect competition, and no investor is large enough to affect the market price of the stock.

Return on an investment = Rf + (Rm – Rf)* beta

- SML tells about the market risk in an investment or identifies a point beyond which an investor may run into risk. It tells the relation between the required rate of return of security as a function of the non-diversifiable risk (or systematic risk).

- In an ideal scenario of market equilibrium, all the securities will fall on the SML. A security that is above the SML line is said to be underpriced. This is because it suggests that its return is more than what is needed to offset the systematic risk with that security. Similarly, security below the SML is overpriced. This is because it is unable to give the required return to compensate for the risk.So, we can say that SML eventually helps investors to identify over or underpriced securities.

- $E(R_i) = R_f + \beta_i [E(R_M) – R_f]$

- In the above security market line formula:
- $E(R_i)$ is the expected return on the security
- R_f is the risk-free rate and represents the y-intercept of the SML
- β_i is a non-diversifiable or systematic risk. It is the most crucial factor in SML. We will discuss this in detail in this article.
- $E(R_M)$ is expected to return on market portfolio M.
- $E(R_M) – R_f$ is known as Market Risk Premium
- CML, on the other hand, is a graphical representation that tells the rate at which the securities are providing a return. In simple words, it helps to determine the degree of profit an investor makes as per their investment. Or, we can say that CML shows the rate of returns on the basis of risk-free rates and the risk-level in a portfolio. In simple words, CML depicts a trade-off between the risk and return for efficient portfolios. This line represents the combination of portfolios that include the risk-free rate and risky assets. So, a portfolio on the SML would maximize the performance by optimizing the risk/return relationship.
- $ER_p = R_f + SD_p * (ER_m – R_f) /SD_m$

where,

- Expected Return of Portfolio
- Risk-Free Rate
- Standard Deviation of Portfolio
- Expected Return of the Market
- Standard Deviation of Market

Investor may be risk seeker, risk averse and risk neutral

- Risk seeker- investor who is willing to accept greater investment uncertainty and volatility in exchange for the potential of higher return

- Risk averse- investor who prefers lower returns with known risks rather than higher returns with unknown risk

Types of Risk

The total risk of an investment can be broken down into Unsystematic or diversifiable or company-specific risk, and Systematic or non-diversifiable risk or beta or market risk

- Systematic risk comprises factors that are external to a company and affect a large number of securities simultaneously. This is uncontrollable and is also known as systematic risk. For example, recession or inflation.
- Unsystematic risk includes those factors which are internal to companies and affect only those particular companies. These are controllable to some extend. This is also known as unsystematic risk.
- A Well-diversified portfolio is one whose unsystematic risk has been completely eliminated. For example, large mutual fund companies.

Systematic risk types -

Interest rate risk- It affects debt securities like bond and debentures directly and share indirectly. Bonds will have fixed coupon rate of interest. The coupon rate is equal to the interest rate prevailing in the market at the time of issue. Subsequent to the issue the market interest rate may change but the coupon rate remains constant till the maturity of the instrument. The market price of the bonds and debentures is inversely related to the market interest rates. As a result the market price of debt securities fluctuates in response to variations in the market interest rates. This variation in bond prices caused due to the variations in interest rates is known as interest rate risk.

Market Risk- Market price of shares have two trends: Bullish trend and Bearish trend. It will suggests ups and downs in economy in long run but short term volatility in the stock market is caused by sweeping changes in investors expectations. The variation in returns caused by the volatility of the stock market is referred to as the market risk

Purchasing power risk- Inflation results in lowering of the purchasing power of money. Eg A person lends Rs.100 today at 10% interest. After one year he will get back Rs.110, but if the prices have increased by 8% Rs.110 received will have purchasing power of only Rs.101.20 (92% of Rs.110). Thus inflation causes a variation in the purchasing power of the return from an investment is called purchasing power risk

Unsystematic Risk- When volatility occurs because of firm specific factors is known as unsystematic risk. It is unique to the company or industry. It arises from two source. The operative environment of the company. The financing pattern adopted by the company. The two types of unsystematic risk are- Business risk and financial risk.

- Business risk is a function of the operating conditions faced by a company and is the variability in operating income caused by the operating conditions of the company.
- Financial risk is function of financial leverage which is the use of debt in the capital structure. the variability in EPS due to the presence of debt in the capital structure of a company is referred to as financial risk.

BASIS	SYSTEMATIC RISK	UNSYSTEMATIC RISK
Meaning	Systematic risk refers to the hazard which is associated with the market or market segment as a whole.	Unsystematic risk refers to the risk associated with a particular security, company or industry.
Nature	Uncontrollable	Controllable
Factors	External factors	Internal factors
Affects	Large number of securities in the market.	Only particular company.
Types	Interest risk, market risk and purchasing power risk.	Business risk and financial risk
Protection	Asset allocation	Portfolio diversification

Measurement of Risk

- The expected return from the investment can be calculated as follows:
- R = (dividend + end of the period stock price/Initial investment)- 1
- R = (D/P0)+(P1 –P0/P0)
- P0- beginning of they year
- P1- end of the year
- Expected Return of the investment is the probability weighted average of all the possible returns.

Expected return-

$$\bar{X} = \sum_{i=1}^{n} X_i p(X_i)$$

Measurement of systematic Risk

The systematic risk is measured by a statistical measure called Beta. Two statistical methods may be used for the calculation of Beta

1. Correlation Method

2. Regression Method

- Standard deviation method- It is the most common quantitative measure of risk of an asset. It considers every possible event and weight to its probability is assigned to each to its probability is assigned to each event. Standard deviation is a measure of dispersion around the expected or average mean value.

Correlation Method

$$\beta = \frac{r_{im}\sigma_i\sigma_m}{\sigma_m^2}$$

Where,

β = Beta, or measurement of systematic risk

r_{im} = Correlation coefficient of returns of stock and returns of the market index

σ_i = Standard deviation of return of stock i

σ_m = Standard deviation of returns of the market index

σ^2_m = Variance of the market returns.

Regression method- The model postulates a linear relationship between a dependent variable and an independent variable. The Model helps to calculate the values of two constants namely α and β. α measure the value of dependent variable even when the independent variable has zero value. -β measure the change in the dependent variable in response to unit change in the independent variable.

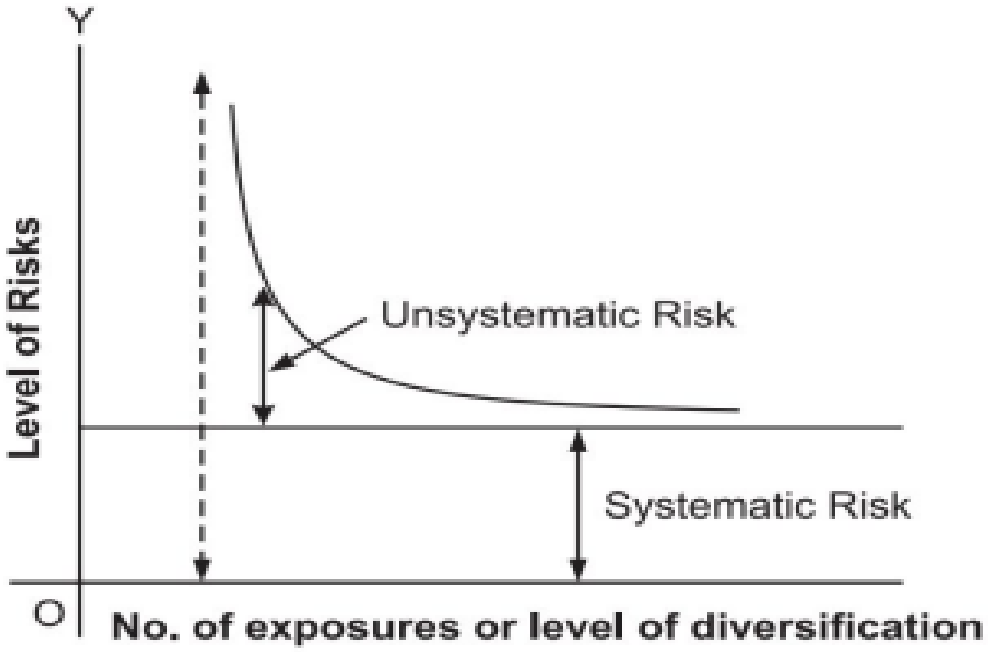
Form of regression equation

- $Y_= \alpha + \beta X$
- Y = Dependent variable
- X = Independent variable
- - β α are constants
- The formula for the calculation of alpha and Beta
- $-\alpha = \bar{Y} - \beta\bar{X}$

$-\beta = n\sum XY - (\sum X)(\sum Y) / n\sum X^2 - (\sum X)^2$

- $\bar{Y}$ = Mean value of the dependent variable scores
- $\bar{X}$ = Mean value of the independent variable scores
- Y = Dependent variable scores

- X = Independent variable scores
- - n = Number of items



Beta is a statistical measure of the volatility of an individual security compared with the market as a whole. It is the relative tendency of a security's returns to respond to overall market fluctuations. The average beta is 1.0, and a stock with a beta of 1.0 is said to have the same level of risk as that of the market in general. Securities with a beta less than 1.0 are considered less risky than the average stock and the market in general, for example, utility stocks. Securities with a beta greater than 1.0 are considered more risky than the average stock and the market in general, for example technology stocks. A zero-beta, such as a Treasury bill, is uncorrelated or independent of the market in general. Betas are estimated by running a regression of the returns (typically weekly returns) on a stock (dependent variable) with those on a market index (independent variable), such as the Standard and Poor's 500. The slope of the regression line (coefficient of the independent variable) measures beta or the systematic risk estimate of the stock. Once individual stock betas are determined, the portfolio beta is easily calculated as the weighted average. Beta is the return of the individual security is taken as the dependent variable and the return of the market index is taken as the independent variable. The regression equation is represented as follows:

- $Ri = \alpha+\beta Rm$

- Ri = Return of the individual security
- Rm =Return of the market index
- - α = Estimated return of the security when the market is stationary
- -β change in the return of security in response to unit change
- -β measures the volatility of security's returns relative to the market the larger the beta the more volatile the security.
- As the beta of 1 indicates a security of a average risk
- Greater than 1 has above the average risk

SOURCES OF FINANCE

Sources of finance for business are equity, debt, debentures, retained earnings, term loans, working capital loans, letter of credit, euro issue, venture funding etc. These sources of funds are used in different situations. They are classified based on time period, ownership and control, and their source of generation. It is ideal to evaluate each source of capital before opting for it. Sources of capital are the most explorable area especially for the entrepreneurs who are about to start a new business. It is perhaps the toughest part of all the efforts. There are various capital sources, we can classify on the basis of different parameters. Having known that there are many alternatives to finance or capital, a company can choose from. Choosing the right source and the right mix of finance is a key challenge for every finance manager. The process of selecting the right source of finance involves in-depth analysis of each and every source of fund. For analyzing and comparing the sources, it needs the understanding of all the characteristics of the financing sources. There are many characteristics on the basis of which sources of finance are classified. On the basis of a time period, sources are classified as long-term, medium term, short term.

1. According to period-
a. Short term sources- bank credit, customers advances, trade credit, factoring, accruals, commercial papers, etc
b. Medium term sources- issue of preference shares, debentures, bank loans, public deposits, fixed deposits
2. According to ownership-
a. Owned capital- share capital, retained earnings, profits and surpluses
b. Borrowed capital- debentures, bonds, public deposits, loans.
3. According to sources of finance-
a. Internal sources such as ploughing back of profits retained earnings, profits, surpluses
b. External sources such as shares, debentures, public deposits, etc
4. According to mode of financing-

a. Security financing or external financing i.e, financing through raising of corporate securities such as share, debentures\
b. Internal financing i.e, financing through retained earnings, capitalization of profits and depreciation of funds, etc
c. Loan financing through raising of long term and short-term loans

Equity Shares

The equity shares may be regarded as the foundation of the financial structure of a company. They occupy a primary position. They represent the ownership capital of a company. The equity shareholders collectively own the company and enjoy all rewards and risks associated with such ownership. They do not have any preferential rights regarding either the payment of dividend or the repayment of capital at the time of company's liquidation.

Preference Shares

Preference share represents a particular portion of the share capital which has been endowed with certain preferences and limitations. It represents a hybrid security that have some characteristics of equity shares and some attributes of debentures.

Types:-

1. Cumulative and non-cumulative preference shares- In case of cumulative preference shares dividends not paid in a particular year are carried forward to the next year. Such unpaid dividends go on accumulating and become payable out of the profits in subsequent years. Such arrears of dividend must be paid before dividend is paid on any other class of shares. Unless otherwise stated preference shares are cumulative. On non-cumulative preference shares dividends do not accumulate. In case the company does not declare dividend in any year, the right to dividend in any year, the right to dividend in respect of that year is lost forever. The dividend claim is not carried to subsequent year.
2. Participating and non-participating preference shares- Participating preference shares give the holder the right to share in the profits left after the payment of dividend to preference and equity shareholders. On the contrary, the holders of non-participating preference shares do not enjoy the right share in the surplus profits. They get only the fixed dividend.
3. Convertible and non-convertible preference shares- Holders of a convertible preference shares can get such shares converted into equity shares after a fixed period. On the other hand, shares which cannot be converted into equity shares are known as non-convertible preference shares.

4. Redeemable and irredeemable preference shares- The holders of redeemable preference shares can be refunded their capital after the expiry of a specified period or at the discretion of the company. Only a company limited by shares can issue redeemable preference shares. The intention to return money should be made clear when the shares are issued. The Companies act lays down several conditions for the redemption of preference shares. Non-redeemable preference shares cannot be redeemed before the winding up of the company. However, the Companies Amendment Act 1996 lays down that preference shares cannot be issued for a period of more than twenty years.

Debentures

Debentures are another kind of security traded in the capital market. A debenture is an acknowledgement of a debt by a company, usually issued under a common seal, and unsecured or secured by a fixed or floating charge on the assets of the company. The terms and conditions under which they are issued are endorsed on the back of the security.

Types:-

1. Conversion- On the basis of debentures are classified into convertible and non-convertible debentures. The convertible debentures give the holder an option to convert them into equity shares during a specified period at a particular rate whereas the non-convertible debentures cannot be converted into equity shares.
2. Security- On the basis of security, debentures are classified as unsecured or naked and secured. When the debentures are issued without any charge on the assets of the company it is called unsecured or naked debentures. When a charge is made on the assets of the company, it is called secured debentures. The charge may be either floating or fixed. When the charge is floating, a company is free to deal with the assets forming the subject-matter of the charge until the said charge gets fixed. A company can even mortgage such property in priority of the floating charge. Then, the claims of debenture holders come after the preferential creditors but before the unsecured creditors. Under fixed charge, a specific asset or group of assets or property is pledged as security.
3. Repayment- On the basis of repayment of capital, debentures may be classified as redeemable and irredeemable. Redeemable debentures provide for the payment of the capital on a specified date or on demand. In the case irredeemable debentures, the company does not fix any date for the repayment of capital. The holders of such

security cannot demand repayment of the capital amount so long as the company is a going concern.

4. Transfer- Debentures of companies are transferable. On this basis, debentures are classified as bearer debentures and registered debentures. Bearer debentures are transferrable by mere delivery whereas a registered debenture can be transferred only by registering the transfer with company.

Right issue

The rights issue involves selling of securities to the existing shareholders I proportion to their current holding. As per section 81 of the Companies Act 1956, when a company issues additional equity capital it has to be offered first to the existing shareholders on a pro rata basis. However, the shareholders may forfeit this special right by passing a special resolution and thereby enable the company to issue additional capital to the public through a public issue. Rights issue is an inexpensive method of floatation of shares as the offer is made through a formal letter to the existing shareholders.

Advantages

- It ensures equitable distribution of shares without disturbing the establishment equilibrium of shareholding and the control of the company is preserved in the hands of the existing shareholders.
- The expenses to be incurred, otherwise if shares are offered to the public are avoided.
- There is more certainty of the shares being sold to the existing shareholders.
- It betters the image of the company and stimulates enthusiastic response from shareholders and the investment market.
- It ensures that the directors do not misuse the opportunity of issuing new shares to their relatives and friends at lower price on one hand on the other get more controlling rights in the company.

Bonus issue

A bonus issue is an offer given to the existing shareholders of the company to subscribe for additional shares. Instead of increasing the dividend payout, the companies offer to distribute additional shares to the shareholders.

Advantages

- It makes available capital to carry on a larger and more profitable business.
- It is felt that financing helps the company to get rid of market influences.
- When a company pays bonus to its shareholders in the form of shares and not in cash, its liquid resources are maintained and the working capital of the company is not affected.

- It enables a company to make use of its profits on a permanent basis and increases credit worthiness of the company.
- It is the cheapest method of raising additional capital for the expansion of the business.
- Abnormally high rate of dividend can be reduced by issuing bonus shares which enables a company to restrict entry of new entrepreneur into the business and thereby reduces competition.
- The balance sheet of the company will reveal a more realistic picture of the capital structure and capacity of the company.

Mutual Fund

Mutual fund is an investment vehicle. It consists of a pool of funds collected from many investors for the purpose of investing. Mutual funds are operated by fund managers, who invest the fund's capital and attempt to produce income for the fund's investors. A mutual fund's portfolio is designed according to its objectives as specified in its portfolio.

Types

1. Open-end mutual funds- An open-ended mutual fund is the one whose units can be freely sold and repurchased by the investors. They are bought and sold on demand at their net asset value (NAV). The NAV, which is based on the value of the fund's underlying securities, is generally calculated at the close of every trading day. Investors buy shares directly from a fund.
2. Close-end mutual funds- Closed-ended mutual funds have a fixed number of units, and a fixed tenure, after which their units are redeemed or they are made open-ended. Like stocks, their share prices are determined according to supply and demand, and they often trade at a wide discount or premium to their NAVs. According to the Investment Company Institute, more than 90 percent of closed-end funds calculate the value of their portfolios every day.
3. Exchange traded funds- Exchange-traded funds, or ETFs, also trade like stocks on an exchange, but their market prices are more closely to their NAV than closed-end funds. Under normal market conditions, premiums and discounts usually stay within 1 percent of NAV, with the exception of some smaller ETFs that trade infrequently. Investors can trade intraday.

BASIS	SHARES	DEBENTURES
Meaning	The shares are the owned funds of the company.	The debentures are the borrowed funds of the company.
What is it?	Shares represent the capital of the company.	Debentures represent the debt of the company.
Holder	The holder of shares is known as shareholder.	The holder of debentures is known as debenture holder.
Status of Holders	Owners	Creditors
Form of Return	Shareholders get the dividend.	Debenture holders get the interest.
Payment of return	Dividend can be paid to shareholders only out of profits.	Interest can be paid to debenture holders even if there is no profit.
Allowable deduction	Dividend is an appropriation of profit and so it is not allowed as deduction.	Interest is a business expense and so it is allowed as deduction from profit.
Security for payment	No	Yes
Voting Rights	The holders of shares have voting rights.	The holders of debentures do not have any voting rights.
Conversion	Shares can never be converted into debentures.	Debentures can be converted into shares.
Repayment in the event of winding up	Shares are repaid after the payment of all the liabilities.	Debentures get priority over shares, and so they are repaid before shares.
Quantum	Dividend on shares is an appropriation of profit.	Interest on debentures is a charge against profit.
Trust Deed	No trust deed is executed in case of shares.	When the debentures are issued to the public, trust deed must be executed.

BASIS	EQUITY SHARES	PREFERENCE SHARES
Meaning	Equity shares are the ordinary shares of the company representing the part ownership of the shareholder in the company.	Preference shares are the shares that carry preferential rights on the matters of payment of dividend and repayment of capital.
Payment of dividend	The dividend is paid after the payment of all liabilities.	Priority in payment of dividend over equity shareholders.
Repayment of capital	In the event of winding up of the company, equity shares are repaid at the end.	In the event of winding up of the company, preference shares are repaid before equity shares.
Rate of dividend	Fluctuating	Fixed
Redemption	No	Yes
Voting rights	Equity shares carry voting rights.	Normally, preference shares do not carry voting rights. However, in special circumstances, they get voting rights.
Convertibility	Equity shares can never be converted.	Preference shares can be converted into equity shares.
Arrears of Dividend	Equity shareholders have no rights to get arrears of the dividend for the previous years.	Preference shareholders generally get the arrears of dividend along with the present year's dividend, if not paid in the last previous year, except in the case of non-cumulative preference shares.

TIME VALUE OF MONEY –

It is an individual's preference for possession/holding of a given amount of money at the present time, rather than the same amount at a future time. It is generally expressed in the form of interest rate or discount rate. This concept is mainly used for comparing the investment alternatives and to solve the problems related to loans, leases, etc. There are mainly four reasons that may be attributed to the individual's time preference for money:

i. Preference for consumption
ii. Investment opportunities
iii. Risk
iv. Inflation

The money have in hand at the moment is worth more than the same amount in future. The reason for this is possible earning capacity. The fundamental code of finance maintains that, given money can generate interest, the value of a certain sum is more if it will receive sooner. This is why it is called as the present value. Basically, the time value of money validates that it is more beneficial to have cash now than later. Say, if you invest a Rs. 100 today – the returns will be more compared to the same investment made 2 months from now. Moreover, there is always a risk that the borrower might delay even more or not pay at all in the future. This is a practical approach to financial decision-making process. Today's technology provides multiple calculators and applications to help & derive both present value and future value of money. If we do not take the time to comprehend how these calculations are derived, we may make critical financial decisions using inaccurate data (because we may not be able to recognize whether the answers are correct or incorrect).

Compounding- this process is followed to finding out the future values of cash flows by applying compound interest.

Simple interest- this is calculated on the principal amount. So, no compounding of interest has taken place.

Compound interest- this interest is received on the principal amount as well as on interest earned but not withdrawn during earlier/ previous periods.

Present value- present value of future cash flows is the amount of current cash that is of equivalent value to the decision market

Discounting- it iis the process of determining the present value of a series of future cash flows. The interest rate which is used for discounting cash flow is known as the discount rate

Annuity-a series of equal amount of cash flows over a certain given years is called an annuity. Annuities are level streams of payments. Each payment is the same amount and occurs at a regular interval. Annuities are common in business. They can arise in loans, retirement plans, leases, insurance settlements, tax-related calculations, and so forth. Sometimes, one may be curious to learn how much a recurring stream of payments will grow to after a number of periods. This is called the future value of an annuity.

When cash flows occur at the end of each period the annuity is called a regular annuity or a deferred annuity. Is the cash flows occur at the beginning of each period the annuity is called annuity due.

Sinking fund- a fund created to accumulate the specified amount of sum in a future by way of regular periodic payment for some specific purpose. Basically, here the problem involves the determination of amount of annuity given future value after a given period at a given rate of interest. Hence, formula relating to future value of annuity is used for the purpose.

Present value of uneven periodic sum(perpetuity)- an investment that is made by a firm does not yield constant periodic cash flows. In many instances, the firm receives uneven cash flows. So, the present value factors for an annuity cannot be used.

BASIS	COMPOUNDING	DISCOUNTING
Meaning	The method used to determine the future value of present investment is known as Compounding.	The method used to determine the present value of future cash flows is known as Discounting.
Concept	If we invest some money today, what will be the amount we get at a future date.	What should be the amount we need to invest today, to get a specific amount in future.
Use of	Compound interest rate.	Discount rate
Known	Present Value	Future Value
Factor	Future Value Factor or Compounding Factor	Present Value Factor or Discounting Factor
Formula	FV = PV (1 + r)^n	PV = FV / (1 + r)^n

MODULE-II

Capital Budgeting

Capital budgeting is a company's formal process used for evaluating potential expenditures or investments that are significant in amount. It involves the decision to invest the current funds for addition, disposition, modification or replacement of fixed assets. The large expenditures include the purchase of fixed assets like land and building, new equipment's, rebuilding or replacing existing equipment's, research and development, etc. The large amounts spent for these types of projects are known as capital expenditures. Capital Budgeting is a tool for maximizing a company's future profits since most companies are able to manage only a limited number of large projects at any one time.

Capital budgeting usually involves calculation of each project's future accounting profit by period, the cash flow by period, the present value of cash flows after considering time value of money, the number of years it takes for a project's cash flow to pay back the initial cash investment, an assessment of risk, and various other factors. Capital budgeting is the process of making investment decisions in capital expenditure.

A capital expenditure may be defined as an expenditure the benefits of which are expected to be received over period of time exceeding one year

Need of capital budgeting

- Whether or not funds should be invested in long term projects such of an industry, purchase of plant and machinery.
- Analyze the proposal for expansion or creating additional capacities
- To decide the replacement of permanent assets such as building and equipment's.
- To make financial analysis of various proposals regarding capital investments so as to choose the best out of many alternative proposals

CAPITAL BUDGETING PROCESS:

Project identification and generation: The first step towards capital budgeting is to generate a proposal for investments. There could be various reasons for taking up investments in a business. It could be addition of a new product line or expanding the existing one. It could be a proposal to either increase the production or reduce the costs of outputs.

Project Screening and Evaluation: This step mainly involves selecting all correct criteria's to judge the desirability of a proposal. This has to match the objective of the firm to maximize its market value. The tool of time value of money comes handy in this step. Also the estimation of the benefits and the costs needs to be done. The total cash inflow and outflow along with the uncertainties and risks associated with the proposal has to be analyzed thoroughly and appropriate provisioning has to be done for the same.

Project Selection: There is no such defined method for the selection of a proposal for investments as different businesses have different requirements. That is why, the approval of

an investment proposal is done based on the selection criteria and screening process which is defined for every firm keeping in mind the objectives of the investment being undertaken.

Once the proposal has been finalized, the different alternatives for raising or acquiring funds have to be explored by the finance team. This is called preparing the capital budget. The average cost of funds has to be reduced. A detailed procedure for periodical reports and tracking the project for the lifetime needs to be streamlined in the initial phase itself. The final approvals are based on profitability, Economic constituents, viability and market conditions.

Implementation: Money is spent and thus proposal is implemented. The different responsibilities like implementing the proposals, completion of the project within the requisite time period and reduction of cost are allotted. The management then takes up the task of monitoring and containing the implementation of the proposals.

Performance review: The final stage of capital budgeting involves comparison of actual results with the standard ones. The unfavorable results are identified and removing the various difficulties of the projects helps for future selection and execution of the proposals.

CAPITAL BUDGETING DECISIONS

The crux of capital budgeting is profit maximization. There are two ways to it; either increase the revenues or reduce the costs. The increase in revenues can be achieved by expansion of operations by adding a new product line. Reducing costs means representing obsolete return on assets.

Accept / Reject decision – If a proposal is accepted, the firm invests in it and if rejected the firm does not invest. Generally, proposals that yield a rate of return greater than a certain required rate of return or cost of capital are accepted and the others are rejected. All independent projects are accepted. Independent projects are projects that do not compete with one another in such a way that acceptance gives a fair possibility of acceptance of another.

Mutually exclusive project decision – Mutually exclusive projects compete with other projects in such a way that the acceptance of one will exclude the acceptance of the other projects. Only one may be chosen. Mutually exclusive investment decisions gain importance when more than one proposal is acceptable under the accept / reject decision. The acceptance of the best alternative eliminates the other alternatives.

Capital rationing decision – In a situation where the firm has unlimited funds, capital budgeting becomes a very simple process. In that, independent investment proposals yielding a return greater than some predetermined level are accepted. But actual business has a different picture. They have fixed capital budget with large number of investment proposals competing for it. Capital rationing refers to the situation where the firm has more acceptable investments requiring a greater amount of finance than that is available with the firm. Ranking of the investment project is employed on the basis of some predetermined criterion such as the rate of return. The project with highest return is ranked first and the acceptable projects are ranked thereafter.

FACTORS AFFECTING CAPITAL BUDGETING

Availability of Funds	Working Capital
Structure of Capital	Capital Return

Management decisions	Need of the project
Accounting methods	Government policy
Taxation policy	Earnings
Lending terms of financial institutions	Economic value of the project

IMPORTANCE OF CAPITAL BUDGETING

1) Long term investments involve risks: Capital expenditures are long term investments which involve more financial risks. That is why proper planning through capital budgeting is needed.

2) Huge investments and irreversible ones: As the investments are huge but the funds are limited, proper planning through capital expenditure is a pre-requisite. Also, the capital investment decisions are irreversible in nature, i.e. once a permanent asset is purchased its disposal shall incur losses.

3) Long run in the business: Capital budgeting reduces the costs as well as brings changes in the profitability of the company. It helps avoid over or under investments. Proper planning and analysis of the projects helps in the long run.

SIGNIFICANCE OF CAPITAL BUDGETING

- Capital budgeting is an essential tool in financial management
- Capital budgeting provides a wide scope for financial managers to evaluate different projects in terms of their viability to be taken up for investments
- It helps in exposing the risk and uncertainty of different projects
- It helps in keeping a check on over or under investments
- The management is provided with an effective control on cost of capital expenditure projects
- Ultimately the fate of a business is decided on how optimally the available resources are used

Techniques of capital budgeting

NPV method- This is one of the widely used methods for evaluating capital investment proposals. In this technique the cash inflow that is expected at different periods of time is discounted at a particular rate. The present values of the cash inflow are compared to the original investment. If the difference between them is positive (+) then it is accepted or otherwise rejected. This method considers the time value of money and is consistent with the objective of maximizing profits for the owners. However, understanding the concept of cost of capital is not an easy task.

The net present value is calculated by taking the difference between the present value of cash inflows and the present value of cash outflows over a period of time. The investment with a

positive NPV will be considered. In case there are multiple projects, the project with a higher NPV is more likely to be selected.Net present value (NPV) is the excess of the present value (PV) of cash inflows generated by the project over the amount of initial investment (I).

- NPV is positive the project can be accepted
- NPV is negative the project can be rejected
- The project which gives the highest positive NPV should be selected

Advantages of Net Present Value (NPV)

The net present value of a project in business guides the finance team for making wise decisions. Let us now go through the numerous benefits it has for the company, in the long run:

- Simple to Use: The net present value method is easy to apply to a real business project if the cash flows and discount rate are known.
- Provides Time Value of Money: This method takes into consideration the effect of inflation on the future profitability of the project, thus estimating the time value of money.
- Customization: In NPV, the discount rate can be adjusted according to the risk prevailing in the industry, along with various other factors, to obtain an appropriate output.
- Determines Investment Value: The earnings throughout the project's life span can be acquired by using the NPV method, which facilitates the company to know the future value of a specific investment.
- Comparable: It facilitates the comparison of values generated in the future, by two or more similar projects to find out the most feasible option.
- Comprehensive Method: It finds the present value of a project by examining the effect of various factors like risk, cash outflows, and inflows.
- Measures Profitability: It is one of the most proficient methods of determining the actual profitability of a project in its lifetime.
- Identifies Risk: In the absence of NPV, the managers would fail to estimate the risk of loss or meagre profitability in case of a long-lived project. It is otherwise possible by identifying the project with negative or zero NPV.
- Reinvestment Assumption: The net present value is quite logical since, here the cash flows are not expected to be reinvested in the financial market, as done in the internal rate of return.

Disadvantages of Net Present Value

The biggest disadvantage to the net present value (NPV) method is that it requires some guesswork about the firm's cost of capital. Assuming a cost of capital that is too low will result in making suboptimal investments. Assuming a cost of capital that is too high will result in forgoing too many good investments.

The net present value (NPV) is an effective means of evaluating a project's profitability; however, it has certain drawbacks. These are as follows:

- Forecasting Errors: While assessing the viability of a long-lived project, the estimation of cash flows may not be that accurate for the later years.
- Minimum Contribution to Shareholder's Value: The shareholder's value maximization is the result of the overall growth of a company, whereas a high NPV contributes little towards it.
- Depends Upon Discount Rates: Since this method is based on discount rates, even a slight change may result in an entirely different NPV.
- Neglects Sunk Cost: The sunk cost like research and development, trial, etc. incurred before the project starts, is mostly high. This cost is wholly ignored under the computation of NPV.
- No Effect on EPS and ROE: Often, the projects with high NPV but the short duration may not enhance the earning per share and return on equity.
- Incomparable for Differing Project Size: The concept of capital rationing is applied in NPV; therefore, the projects which do not lie under the capital budget limit cannot be compared under this method.

Payback period method- As the name suggests, this method refers to the period in which the proposal will generate cash to recover the initial investment made. It purely emphasizes on the cash inflows, economic life of the project and the investment made in the project, with no consideration to time value of money. Through this method selection of a proposal is based on the earning capacity of the project. With simple calculations, selection or rejection of the project can be done, with results that will help gauge the risks involved. However, as the method is based on thumb rule, it does not consider the importance of time value of money and so the relevant dimensions of profitability. PB measures the length of time required to recover the amount of initial investment.

In this technique, the entity calculates the time period required to earn the initial investment of the project or investment. The project or investment with the shortest duration is opted for. It is the number of years it takes for the firm to recover the original investment by net returns before depreciation, after taxes

Payback period = Cash outlay (investment) / Annual cash inflow

Merits of Payback Period method

1. It is very simple to understand and easy to calculate.

2. It requires less cost, time and labour when compared to other methods of capital budgeting.

3. This method reduces or avoids the loss through obsolescence since shorter payback period is preferred to longer payback period.

4. This method is mostly suitable to a company which has less amount of cash in hand and a company whose liquidity position is very weak.

5. It gives much importance to the speedy recovery of investment in capital assets.

Demerits of Payback Period

1. A slight change made in the labour cost or cost of maintenance, there is a much change in its earnings and affects the payback period.

2. This method ignores the short term solvency or liquidity of the business concern.

3. It ignores capital wastage and economic life by restricting consideration to the project's gross earnings.

4. The time value of money is not considered in the payback period method.

5. It overlooks the cost of capital which is a main factor in sound capital budgeting decision. This method does not consider the cash inflows arising after the payback period.

6. This could be misleading in capital budgeting decisions.

7. This method fails to measure the productivity of capital expenditure plan because it does not attempt to measure the return on investment.

8. This method does not consider full earnings or full savings of the capital expenditure plan i.e. savings or earnings available during whole economic life of the project.

9. This method also fails to assign proper weightage to the unevenness of rate of profit of various projects.

10. It may be difficult to determine minimum acceptable payback period. Generally, it is a subjective decision.

11. This method treats the each asset individually in isolation with other assets. But, in practice, it is not feasible.

Accounting rate of return method (ARR)- This method helps to overcome the disadvantages of the payback period method. The rate of return is expressed as a percentage of the earnings of the investment in a particular project. It works on the criteria that any project having ARR higher than the minimum rate established by the management will be considered and those below the predetermined rate are rejected.

This method takes into account the entire economic life of a project providing a better means of comparison. It also ensures compensation of expected profitability of projects through the concept of net earnings. However, this method also ignores time value of money and doesn't consider the length of life of the projects. Also it is not consistent with the firm's objective of maximizing the market value of shares.

This technique uses the accounting information revealed by the financial statements to measure the profitability of an investment proposal. In this technique, the total net income of the investment is divided by the initial or average investment to derive at the most profitable investment.

Merits of Using ARR

- Simplicity − The ARR method is one of the easiest methods to evaluate an investment. Unlike NPV and IRR methods, it does not involve critical and complex computations. Moreover, being simple to understand, ARR is widely used for audiences who have less knowledge of finance. Simplicity makes ARR the preferred choice of investment evaluation for non-finance managers.

- Use of accounting data − Unlike NPV and IRR methods, ARR does not require considering cash flows. ARR can be calculated right from accounting data. As accounting data are readily available, ARR calculation is one of the easiest ways to evaluate an investment. Moreover, as accounting data is a true reflection of a company's performance, ARR is quite appropriate in evaluating a firm's performance based on given investments.

- Accounting profitability − ARR method consists of the entire stream of income and profitability throughout the project. Therefore, it provides a complete picture of the profitability of an investment project. Using accounting profitability offers the companies the flexibility to focus on more profitable investment options, thereby providing an easy route to evaluate the investments.

Demerits of Using ARR

- Cash flows are ignored − ARR uses profitability as the measure of investment evaluation ignoring the cash flows. As profitability is an incomplete measure of true investment evaluation, ARR is flawed in some cases of investment. Accounting profits are usually based on some arbitrary assumptions, and it may also involve non-cash items. It is therefore inappropriate to rely on ARR completely as a standalone tool to evaluate an investment project.

- Time value is ignored − ARR method completely ignores the time value of money which states that a certain amount of money at present is worth more than the same amount of money in the future. The lack of adjustment of the time value of money makes ARR an inappropriate process to evaluate investments.

- Arbitrary cut-off − Most of the companies that prefer ARR as an evaluation technique use an arbitrary cut-off yardstick to restrict the projects. Usually, the yardstick is the firm's current return on its assets which is also known as book value. Due to this, growth companies earning very big rates on the existing assets may reject profitable projects, while smaller companies with fewer returns from assets may choose less profitable projects.

ARR= Average income/Average Investment

Discounted cash flow method- discounted cash flow technique calculates the cash inflow and outflow through the life of an asset. These are then discounted through a discounting factor. The discounted cash inflows and outflows are then compared. This technique takes into account the interest factor and the return after the payback period.

Internal Rate of Return (IRR)- This is defined as the rate at which the net present value of the investment is zero. The discounted cash inflow is equal to the discounted cash outflow. This method also considers time value of money. It tries to arrive to a rate of interest at which funds invested in the project could be repaid out of the cash inflows. However, computation of IRR is a tedious task.

It is called internal rate because it depends solely on the outlay and proceeds associated with the project and not any rate determined outside the investment.

- Accept if IRR > K
- Reject if IRR < K
- May accept or reject if IRR = K
- Where k is cost of capital

Merits of IRR Method

Following are the merits of using IRR as an investment evaluation method −

- Time value of money − IRR considers the time value of money. It states that a rupee today will be worth more than a rupee tomorrow. By considering the time value of money, IRR makes a correct assumption about profitability. In fact, IRR saves enough wealth by considering the time value of money.

- Measurement of profitability − IRR considers all cash flows to correctly measure the profitability of an investment proposal. This provides a comprehensive measurement of profitability as future cash inflow and outflow estimates are considered. By including cash flow features, IRR takes the view of the entire life of a project to measure profitability in the long-term future.

- Increase in Shareholders' value − IRR aims to maximize the shareholders' wealth by considering all aspects related to shareholders' wealth maximization rules. It is by large one of the most promising features of IRR because every investment needs to prioritize shareholders' wealth creation and maximization.

Demerits of IRR Method

Following are some of the demerits of using IRR as an investment evaluation method −

- Multiple Rates of Return − According to IRR, an investment project may have different and multiple rates of return. Having more than one rate not only increases the complexity of the calculation, but it also creates a dilemma where choosing the

best project becomes critical. Therefore, having multiple rates of returns is one of the prominent demerits of IRR.

- Failing to identify the best project in case of mutually exclusive ones − IRR may fail to identify the best project if there are mutually exclusive projects on the horizon. Not being able to identify the better project means there may be large losses in the future for which IRR estimation becomes flawed and non-competitive in nature.
- Value additivity does not hold good − Unlike NPV, value additivity doesn't hold good for IRR. This means that the IRR for a larger project need not be equal to the sum of all smaller subsidiary projects. In addition of smaller projects' IIRs are incapable to produce the IRR of the larger project, it is not possible to calculate the value of IRR of the larger projects even if we know the smaller IRRs. This creates a big issue in applying and calculating IRRs in both theory and practice.

Profitability Index (PI)- t is the ratio of the present value of future cash benefits, at the required rate of return to the initial cash outflow of the investment. It may be gross or net, net being simply gross minus one. The profitability index is the ratio of the total PV of future cash inflows to the initial investment, that is, ***PV/I.*** This index is used as a means of ranking projects in descending order of attractiveness. If the profitability index is greater than 1, then accept.

Profitability Index is the ratio of the present value of future cash flows of the project to the initial investment required for the project.The formula to calculate profitability index (PI) or benefit cost (BC) ratio is as follows.

PI = PV cash inflows/Initial cash outlay A,

Merits of Profitability Index Method

Recognition of Time Value of Money- Like NPV, PI also considers the time value of money. This leads to better recognition of profitability as the future incomes are taken to be less than the equivalent present incomes. By taking the time value of money into consideration, PI maximizes the true profitability of an investment proposal.

Time value of money also helps in determining the long-term goals as well as capital budgeting measures that require sound policies about future cash flows.

Value Maximization- The PI process is consistent with the shareholders' value maximization principle. The projects that have positive PI values that are more than 1 will have positive NPVs. According to the rules of thumb, projects with positive NPV are undertaken by firms. So when the PI is positive and more than 1, it will be undertaken by the company, and shareholders' wealth will be maximized. This is a very important merit of PI because shareholders' wealth maximization is the primary goal of all investment strategies.

Demerits of Profitability Index Method

Relative Measure of Profitability- In the case of PI, the ratio of the present value of cash inflows to the initial value of cash outflows gives a relative measure of the profitability calculated by PI. Therefore, it is an insufficient measure of profitability. PI can only assume true profitability as it is related to initial cash outflow and not with all outflows that occur in the future.

Cash flow and discount rate calculation- Like NPV and IRR, PI also considers cash flows and discount rates which are impossible to estimate accurately. Therefore, although theoretically sound, PI is not far from flaws in practice. As the determination of cash flows in the future cannot be completely accurate, the value of profit measured by PI cannot be free from flaws. The same statement holds good for discount rate calculations.

COST OF CAPITAL

The cost of capital is the minimum rate of return required on the investment projects to keep the market value per share unchanged.

In other words, the cost of capital is simply the rate of return the funds used should produce to justify their use within the firm in the light of the wealth maximisation objective. Cost of capital is vital part of investment decision as it is used to measure the value of investment proposal provided by the business concern. It is used as a discount rate to determine the present value of future cash flows related with capital projects. Cost of capital is also termed as cut-off rate, target rate, hurdle rate and required rate of return. When the companies are using different sources of finance, the finance manager must take vigilant decision with regard to the cost of capital; because it is closely associated with the value of the firm and the earning capacity of the firm.

Hamption J.: The cost of capital may be defined as ―the rate of return the firm requires from investment in order to increase the value of the firm in the market place.

James C. Van Horne: The cost of capital is ―a cut-off rate for the allocation of capital to investments of projects. It is the rate of return on a project that will leave unchanged the market price of the stock.

Soloman Ezra: ‖Cost of Capital is the minimum required rate of earnings or the cut-off rate of capital expenditure‖

Future cost and Historical cost:

It is commonly known that, in decision-making, the relevant costs are future costs are not the historical costs. The financial decision-making is no exception. It is future cost of capital which is significant in making financial decisions.

Specific cost and combined cost: The cost of each component of capital (ex-common shares, debt etc.,) is known as specific cost of capital. The combined or composite cost of capital is an inclusive: cost of capital from all sources. It is, thus, the weighted average cost of capital.

Explicit cost and implicit cost: The explicit cost of capital is the internal rate of return of the financial opportunity and arises when the capital is raised. The implicit of capital arises when the firm considers alternative uses of the funds rained. The methods of calculating the specific costs of different sources of funds are discussed.

Cost of debt: It is relatively easy to calculate cost of debt, it is rate of return or the rate of interest specified at the time of debt issue. When a bond or debenture is issued at full face value and to be redeemed after some period, then the before tax cost of debt is simply the normal rate of interest.

Cost of preference capital: The measurement of the cost of preference capital poses some conceptual difficulty. In the case of debt, there is a binding legal obligation on the firm to pay interest and the interest constitutes the basis to calculate the cost of debt.

However, when reference to the preference capital, it may be stated that the payment of dividends on preference capital is not legally binding on the firm and even if the dividends are paid, it is not a charge on earnings, rather it is a distribution or appropriation of earnings to a class of owners. It may, therefore, be concluded, that the dividends on preference capital do not constitute cost. This is not true.

The cost of preference capital is a function of the dividend expected by investors; preference capital is never issued with an intention not to pay dividends. Although it is not legally binding upon the firm to pay dividends on preference capital, yet it is generally paid when the firm makes sufficient profits.

The preference share may be treated as a perpetual security it is irredeemable. Thus, its cost is given by the following equation.

Where Kp is the cost of preference share, Dp represents the fixed dividend per preference share and P is the price per- preference share.

Cost of equity capital: It is sometimes argued that tine equity capital is free of cost. This is not true. The reason for advancing such an argument is that it is not legally binding on the company to pay dividends to the common shareholders. Also, unlike the interest rate on debt or the rate of dividend on preference capital, the dividend rate to the common shareholders is not fixed. However, the shareholders invest their money in common shares with an expectation of receiving dividends.

The market value of the share depends on the dividends expected by the shareholders. Therefore, the required rate of return which equates the present value of the expected dividends with the market value of share is the equity capita).

For the purpose of measuring the cost of equity, the equity capital will be divided into two parts a) external equity b) retained earnings.

a) External equity:

The minimum rate of return which is required on the new investment, financed by the new issue of common shares, to keep the market value of the share unchanged is the cost of new issue of common shares (or external equity).

b) Retained earnings:

The companies are not required to pay any dividends on retained earnings. Therefore, it is sometimes observed that this source of finance is cost free. But retained earnings is the dividend foregone by the shareholders.

The cost of retained earnings is measured by the following equation:

$K_r = D/P_o + g$

Where K_r = Cost of retained earnings

D = Dividend

g = growth rate

P_o =Market price of the share

Cost of Rights Issue: Rights issue is an invitation to the existing shareholders to subscribe for further shares to be issued by a company. A right simply means an option to buy certain shares at a privileged price which is considerably below the market price. It is generally felt that the cost of issue would be different from the cost of direct issue. But for two reasons, the real cost of rights issue would be the same as the cost of direct issue of share to the public.

i) The shareholder who is not interested in the rights issue, sells his rights and obtain cash. Then he has the old share plus the money obtained from selling the rights.

ii) Otherwise, the shareholder exercises his rights and acquires the share the new share, in addition to the old shares.

Weighted Average Cost of Capital (WACC)

Most of the time, we also use WACC in place of cost of capital because of its frequent and vast utilization especially when evaluating existing or new projects. WACC, as the term itself suggests, is the weighted average of all types of capital present in the capital structure of a

company. Assuming these two types of capital in the capital structure i.e. equity and debt, we can calculate the WACC the following formula:

WACC = Weight of Equity * Cost of Equity + Weight of Debt * Cost of Debt.

Market value weights are sometimes preferred to the book value weights as the market value represents the true value of the investors. However, market value weights suffer from the following limitations: i) Market value is subject to frequent fluctuations. ii) Equity capital gets more importance, with the use of market value weights. Moreover, book values are readily available.

Leverage

The term leverage refers to an increased means for accomplishing some purpose. It helps us in lifting heavy objects by the magnification of force when a lever is applied to a function. James Horne has defined leverage as the employment of an asset or funds for which the firm pays a fixed cost or fixed return. Christy and Roder defines leverage as the tendency for profits to change at a faster rate than sales. A few essential characteristics of leverage are as follows (a) Leverage is applied to the employment of an asset or funds. (b) Profits tend to change at a faster rate than sales. (c) There is risk return relationship which is basically found in the same direction. (d) If higher is the leverage, higher will be the risk and higher will be the expected returns.

OPERATING LEVERAGE

It takes place when a change in revenue produces a greater change in EBIT. It is related to fixed costs. A firm with relatively high fixed costs uses much of its marginal contribution to cover fixed costs. It refers to heavy usage of fixed assets. The use of fixed operating costs to magnify a change in profits relative to a given change in Sales. If a high percentage of a firm's total costs are fixed costs, then the firm is said to have a high degree of operating leverage. If a firm has a high degree of operating leverage, small change in sales will have large effect on operating income. Similarly, the operating profits of such a firm will suffer loss as compared to decrease in its sales. There will not be any operating leverage, if there are no fixed costs.

A few specific characteristics of operating leverage are as follows:

- It affects assets side of Balance sheet
- It is related to composition of fixed assets
- It is related in fluctuations in business risk
- It affects capital structure and return on total assets.

The operating leverage indicates the impact of change in sales on operating income. If a firm has a high degree of operating leverage, small change in sales will have large effect on operating income. A few areas of application are as follows:

1. Operating leverage has an important role in capital budgeting decisions. In fact, this concept was originally developed for use in capital budgeting.
2. Long term profit planning is also possible by looking at quantum of fixed cost investment and its possible effects.
3. Generally, a high degree of operating leverage increases the risk of a firm. For deciding capital structure in favour of debt, the impact of further increase in risk will influence capital structure decision.

FINANCIAL LEVERAGE

It refers to usage of debt in capital structure. It is the use of fixed cost capital (debt) in the total capitalization of the firm. Fixed cost capital includes loans, debentures and preferences share capital.

Financial leverage is expressed as the firm‘s ability to use fixed financial cost in such a manner so as to have magnifying impact on the EPS due to any change in EBIT (Earning Before Interest and Taxes). In other words, financial leverage is a process of using debt capital to increase the return on equity. According to Guthman ―Financial leverage is the ability of the firm to use fixed financial changes to magnify the effect of changes in EBIT on the firms EPS. Financial leverage helps the finance managers while devising the capital structure of the company. A high financial leverage means high fixed financial costs and high financial risk. Increase in fixed financial costs may force the company into liquidation. The following are the essentials of financial leverage

1. It relates to liabilities side of balance sheet
2. It is related to capital structure
3. It is related to financial risk
4. It affects earning after tax and earnings per share.
5. It may be Favorable or Unfavorable. Unfavorable leverage occurs when the firm does not earn as much as the funds cost.

COMPOSITE/COMBINED LEVERAGE

Both operating and financial leverage magnify the returns. There is combined effect of these leverages on income. Both the leverages are closely concerned with the firm's capacity to meet its fixed costs (both operating and financial). In case both the leverages are combined, the result obtained will disclose the effect of change in sales over change taxable profit.

CAPITAL STRUCTURE

Funds required to manage and run the company is called Capital, But Correct Assessment of this fund is a prerequisite to avoid idle capital and at the same time scarcity of capital. This is a continuous phenomenon under each and every circumstance. Evaluation and Determination of various sources of funds with its respective cost is needed to ascertain cost of capital.

Creating a suitable proportion of these funds to attain minimum cost of capital is called Capital structure.

The objective of the firm should be directed towards the maximization of the value of the firm through capital structure, or decision should be examined from the point of view of its impact on the value of the firm.

If the value of the firm can be affected by capital structure or financing decision a firm would like to have a capital structure which maximizes the market value of the firm. The capital structure decision can affect the value of the firm either by changing the expected earnings or the cost of capital or both.

If it affects the cost of capital and the value of the firm, an optimum capital structure would be obtained at that combination of debt and equity that maximizes the total value of the firm (value of shares plus value of debt) or minimizes the weighted average cost of capital.

Features of Capital structure

It is the duty of the financial manager to design the capital structure which is most advantageous to the company. The capital structure should be planned carefully keeping in view, the interests of the equity shareholders as they are the ultimate owners of the company. The planning and designing of an optimal capital structure is not an easy task. However, it must be seen while designing the capital structure, that a sound or appropriate capital structure should have the following features:

i. Profitability: The capital structure of the company should be most advantageous to the shareholders. It should maximize the earnings per share while minimizing the cost of financing.
ii. Solvency: The excessive use of debt proportion in the total capital structure threatens the solvency of the company. Therefore, the debt capital should be employed up to such a level that the financial risk is within manageable limits.
iii. Flexibility: The capital structure should be flexible enough to meet the changing conditions of the firm, which will be possible for the company to provide funds whenever needed to finance any profitable activities.
iv. Conservatism: The capital structure of the company should be conservative in the sense that the debt component of the firm should not exceed the debt capacity of the firm. The debt capacity of the firm depends on its ability to generate enough future cash flows for meeting interest obligations and repayment of principal when it becomes due.
v. Control: The capital structure should be designed in such a way that it involves a minimum loss of control of the company by the existing shareholders. The above mentioned are the general features of an optimal capital structure. The relative importance of these features may differ from company to company. For example, one company may give more importance to flexibility to conservatism, and another company may go for solvency rather than profitability. But it may be said that the company's capital structure should be easily adaptable.

Determinants of Capital structure

The capital structure of a firm depends on a number of factors and these factors are of different importance and the influence of individual factors of a firm change over a period of time.

i. Trading on equity and EBIT - EPS analysis. The use of long - term debt and preference share capital, which are fixed income - bearing securities, along with equity share capital is called financial leverage or trading on equity. The use of long - term debt increases the earnings per share (EPS) as long as the return on investment (ROI) is more than the cost of debt. But the leverage effect is more pronounced in case of debt because of two reasons: i) cost of debt is usually lower than the other forms of capital, and ii) the interest paid on debt is tax deductible. The financial leverage is one of the important considerations, because of these reasons in planning the capital structure of a company. The companies with high level of Earnings Before Interest and Taxes (EBIT) can make profitable use of the high degree of leverage to increase the return on the shareholders' equity. The EBIT - EPS analysis is an important tool in the hands of the financial manager to get an insight into the firm's capital structure planning. Therefore, one should analyze the possible changes in EBIT and their impact on the EPS under different financing plans. In case of favorable conditions, the financial leverage increases the EPS; however, it can also increase the financial risk to the shareholders. Therefore, a firm should employ debt to such an extent that the financial risk does not spoil the leverage effect.

ii. Stability and growth of sales- This is another important factor which influences the capital structure of a firm. The steadiness in sales ensures stable earnings, so that the firm will not face any difficulty in meeting its fixed obligations, viz., interest payment and repayment of debt, so that it can raise a higher amount of debt. In the same way, the rate of growth in sales also affects the capital structure decision. Usually, higher the rate of growth in sales, greater can be the use of debt in the financing the firm. On the other hand, the firm should be very careful in employing debt capital if its sales are highly fluctuating and declining.

iii. Cost of capital- Cost of capital is also one of the important factors that should be kept in mind while designing the capital structure of a firm. Of all the sources of capital, equity capital is the costliest as the equity shareholders bear the highest amount risk. On the other hand, debt capital is the cheapest source of capital, because the interest on debt capital is tax deductible, which makes the debt capital cheaper when compared to other forms of capital. Preference share capital is also cheaper than equity capital as the dividends is paid at a fixed rate on preference shares. Since, the overall cost of capital is the aggregation of all specific cost of capitals, the capital structure should be designed carefully so that overall cost of capital is minimized.

iv. Cash flow ability- A firm which has the ability of generating larger and stable cash inflows will be able to employ more debt capital. The firm has to meet fixed charges in the form of interest on debt capital, fixed preference dividend and the principal amount, when it becomes due. The firm can meet these fixed obligations only when it has adequate cash inflows. Whenever, a firm wants to raise additional funds, it should estimate the future cash inflows to ensure the coverage of fixed charges. Therefore,

the calculations of fixed charges coverage and interest coverage ratios are relevant for this purpose.

v. Control- Sometimes, the designing of capital structure of a firm is influenced by the desire of the existing management to retain the control over the firm. Whenever additional funds are required, the management of the firm wants to raise the funds without any loss of control over the firm. If the equity shares are issued for raising funds, the control of the existing shareholders is diluted, hence, they may raise the funds by issuing fixed charge bearing debt and preference share capital, as preference shareholders and debt holders do not have any voting right. The debt financing is advisable from the point of view of control, but excessive dependence on debt capital may result in heavy burden of interest and fixed changes and may lead to liquidation of the company.

vi. Flexibility -Flexibility means the firm's ability to adapt its capital structure to the needs of the changing conditions. The capital structure of the firm must be designed in such a way that it is possible to substitute one form of financing for another to economize the use of funds. Preference shares and debentures offer the highest flexibility in the capital structure, as they can be redeemed at the discretion of the firm. Thus, the capital structure should be flexible enough to raise additional funds whenever required, without much delay and cost.

vii. Size of the firm- The size of the firm influences the design of capital structure of a firm. The small companies find it very difficult to mobilize long - term debt, as they have to prepare to pay higher rate of interest and with inconvenient terms. Hence, small firms make their capital structure very rigid and they have to depend more on equity capital and retained earnings for their requirements. Hence, the small firms for sometimes limit the growth of their business and any additional fund requirements met through by issuing equity or retained earnings only.

viii. Marketability and Timing-Capital market conditions are not changed from time to time. Sometimes there may be depression and at other times there may be boom condition in the market. The firm should decide whether to go for equity issue or debt capital by taking market situations into consideration. In the case of depressed conditions, the firm should not issue equity shares but go for debt capital. On the other hand, under boom conditions, it becomes easy for the firm to mobilize the funds by issuing equity shares. The internal conditions of a firm may determine the marketability of securities. For example, a highly levered firm may find it difficult to raise additional debt.

ix. Purpose of funds- The purpose for which funds are raised should also be considered while determining the capital structure. If the funds are raised for productive purpose, debt capital is more appropriate as the interest can be paid out of profits generated from the investment. But, if it is for unproductive purpose, equity should be preferred.

x. Legal restrictions- The various guidelines issued by the Government from time to time regarding the issue of shares and debentures should be kept in mind while determining the capital structure of a firm. These legal restrictions are very significant as they give a framework within which the capital structure decisions should be made.

ASSUMPTIONS

i. Firms employ only two types of capital: debt and equity

ii. The total assets of the firm are given. The degree of leverage can be changed by selling debt to purchase shares or selling shares to retire debt.
iii. The firm has a policy of paying 100 %dividends.
iv. The operating earnings of the firm are not expected to grow.
v. The business risk is assumed to be constant and independent of capital structure and financial risk.
vi. The corporate income taxes do not exist

THEORIES

Net Income Approach

Durand suggested this approach, and he favored the financial leverage decision. According to him, a change in financial leverage would lead to a change in the cost of capital. In short, if the ratio of debt in the capital structure increases, the weighted average cost of capital decreases, and hence the value of the firm increases.

Assumptions

i. The cost of debt is less than the cost of equity.
ii. The risk perception of investors is not affected by the use of debt, as a result, the equity capitalization rate (ke) and the debt – capitalization rate (kd) don't change with leverage.
iii. There are no corporate taxes. As per the above assumptions, cost of debt is cheaper than the cost of equity and they remain constant irrespective of the degree of leverage. If more debt capital is used because of its relative cheapens, the overall cost of capital declines and the value of the firm increases.

Net Operating Income Approach

Durand also provides this approach. It is the opposite of the Net Income Approach if there are no taxes. This approach says that the weighted average cost of capital remains constant. It believes in the fact that the market analyses a firm as a whole and discounts at a particular rate that has no relation to the debt-equity ratio. If tax information is given, it recommends that WACC reduces with an increase in debt financing, and the firm's value will start increasing.

Assumptions

i. The market capitalizes the value of the firm as a whole and the split between debt and equity is not important.
ii. The business risk remains constant at every level of debt - equity mix.
iii. There are no corporate taxes.
iv. The debt capitalization rate (Kd) is constant

According to this view, the use of less costly debt increases the risk to the equity shareholders which causes the equity capitalization rate (Ke) to increase. As a result, the low-cost advantage of the debt is exactly offset by the increase in the equity capitalization rate.

Thus, the overall capitalization rate (Ko) remains constant and consequently the value of the firm does not change.

Traditional Approach- This Traditional approach is also known as intermediate approach, which has been popularized by Ezra Solomon. It is a compromise view between the two extremes of net income approach and net operating income approach. According to this approach, the cost of capital can be reduced or the value of the firm can be increased with a judicious mix of debt and equity. This theory explains that the cost of capital declines with an increase of debt capital up to a reasonable level, and after that it increases with a further rise in debt capital.

First Stage: Increasing Value: In this first stage, the cost of equity (Ke) and the cost of debt (Kd) are constant and cost of debt is less than cost of equity. The employment of debt capital up to a reasonable level will cause the overall cost of capital to decline due to the low-cost advantage of debt. As a result, the Ko decreases with increasing leverage, and thus, the total value of the firm, V, also increases.

Second Stage: Optimum Value Once the firm has reached a certain degree of leverage, a further increase in debt will have no effect on the value of the firm and the cost of capital. This is because of the fact that a further rise in debt capital increases the risk to equity shareholders that leads to a rise in Ke. This rise in Ke exactly offsets the low - cost advantage of debt capital so that the overall cost of capital (Ko) remains constant, which maximize the value of the firm.

Third Stage: Declining Value If the firm involves the debt capital beyond an acceptable level, it will cause an increase in risk to both equity shareholders and debt - holders, because of which both cost of equity (Ke) and cost of debt (Kd) start rising in this stage, which will in turn cause an increase in the overall cost of capital (Ko). It can be inferred from the foregoing discussion that the cost of capital (Ko) is a function of leverage. The cost of capital declines and the value of the firm increases with a rise in debt capital up to a certain level and beyond this level, the overall cost of capital (Ko) tends to rise and as a result the value of the firm will decline.

Criticism

The traditional view on capital structure supports that investors value levered firm more than unlevered firm, which means that they pay a premium for the shares of levered firm. Here, there is no sufficient justification for the assumption that investors' perception about risk of leverage is different at different levels of leverage.

Modigliani and Miller Approach (MM Approach)

It is a capital structure theory named after Franco Modigliani and Merton Miller. MM theory proposed two propositions.

- Proposition I: It says that the capital structure is irrelevant to the value of a firm. The value of two identical firms would remain the same, and value would not affect the choice of finance adopted to finance the assets. The value

of a firm is dependent on the expected future earnings. It is when there are no taxes.

- Proposition II: It says that the financial leverage boosts the value of a firm and reduces WACC. It is when tax information is available.

Assumptions

The M M's Proposition I is based on certain assumptions, which are relate to the behaviour of the investors, capital markets and the tax environment of the country.

They are:

i. There is a perfect capital market, where in (a) the investors are free to buy and sell securities, (b) they can borrow funds without restriction at the same terms as the firms do, (c) they behave rationally, (d) they are well informed, and (e) there are no transaction costs

ii. Firms can be classified into homogeneous risk classes, i.e., the same risk class will have the same degree of financial risk.

iii. All investors have the same expectation of a firm's net operating income (EBIT).

iv. The dividend payout ratio is 100%, which means there are no retained earnings.

v. There are no corporate taxes.

Criticism on M & M Hypothesis

The arbitrage process is the behavioral and operational foundation for the M & M Hypothesis, which fails to bring the desired equilibrium because of the following limitations.

i. Rates of interest are not the same for the individuals and firms. The firms generally have a higher credit standing because of which they can borrow funds at a lower rate of interest as compared to individuals.

ii. Another criticism is that the home - made leverage is not a perfect substitute for corporate leverage. If the firm borrows, the risk to the shareholder is limited to his shareholding but whereas, if he borrows personally, the liability will be extended to his personal property also. Hence, the assumption of home - made leverage is a perfect substitute for corporate leverage is not valid.

iii. The assumption of transaction costs does not exist is impracticable because these costs are necessarily involved in buying and selling of securities.

iv. The working of arbitrage is affected by institutional restrictions, because the institutional investors are not allowed to practice home - made leverage.

v. The major limitation of M-M hypothesis is the existence of corporate taxes, which are tax deductible and hence, a levered firm will have a lower cost of debt due to tax advantage when taxes exist

DIVIDEND POLICY

Dividend refers to that part of profits of a company which is distributed among its shareholders. Dividend is the right as well as reward of the shareholders. A dividend policy is a financial decision that involves deciding on the dividend payout ratio, the frequency of dividends and should they pay dividends at all or not. It is drafted by the company's board of directors and acts as a guideline for distributing dividends to the investors. If a company provides more dividends to its shareholders, then it has to meet its future requirement through issue of shares or debt. Dividend policy thus affects both the long-term financing and wealth of shareholders. The firm decision to pay dividends should be in such a manner so as to equitably apportion the distributed profits and retained earnings. The dividend decision of a

firm depends on the profits, investment opportunities in hand, availability of funds, industry trends in dividend payment, and the company's dividend payment history.

1. Profits- Dividend payment is made from the profits of the company. If the company has no profits, then the company won't be able to pay dividends.

2. Investment opportunities- If the firm has projects that will lead to the expansion and growth of the company, then the company would prefer retaining back the profits to fund the new projects.

3. Availability of funds- A firm's availability of funds impacts the dividend decision. If the firm has enough retained earnings to fund new projects, then they have enough funds to distribute dividends from the current year's profits.

4. Industry trends in dividend payment- A company has to keep up with the industry's dividend payment to survive. Else the shareholders might liquidate their shares in the company to invest in competitors' companies.

5. Company's dividend payment history- A company that is paying regular dividends tends to keep the dividends stable over the years. They either keep the dividend payout ratio steady or the dividend amount stable.

Irrelevance Theories-

Residual Theory- According to this theory, dividend policy has no effect on the wealth of the shareholders or prices of the shares and hence it is irrelevant so far as the valuation of the firm is concerned. This theory regards dividend policy merely as a part of financial decision because the earnings available may be retained in the business for reinvestment. But if the funds are not required in the business they may be distributed as dividend. Thus, the decision to pay dividends or retain the earnings may be taken as residual decision. The assumption of this theory is that raising financing from external sources involves higher cost.

Modigliani and Miller Approach

Modigliani-Miller have argued that firm's dividend policy is irrelevant to the value of the firm. According to this approach, the market price of a share is dependent on the earnings of the firm on its investment and not on the dividend paid by it. Earnings of the firm which affect its value, further depends upon the investment opportunities available to it.

Assumptions-

Perfect Capital Markets - This theory believes in the existence of 'perfect capital markets. It assumes that all the investors are rational, they have access to free information, there are no flotation or transaction costs and no large investor to influence the market price of the share.

No Taxes - There is no existence of taxes. Alternatively, both dividends and capital gains are taxed at the same rate.

Fixed Investment Policy - The company does not change its existing investment policy. It means whatever may be the dividend payment, the company will make investment as it has already decided upon. If the company is going to pay more amount of dividend, then it will more equity shares and vice versa.

No Risk of Uncertainty - All the investors are certain about the future market prices and the dividends. This means that the same discount rate is applicable for all types of stocks in all time periods.

Investor is indifferent between dividend income and capital gain income - It is assumed that investor is indifferent between dividend income and capital gain income. It means if he requires total return of Rs. 500, he may get Rs. 200 dividend income and Rs. 300 as capital gain income or reverse, in either of the case he gets equal satisfaction.

Relevance theory

Walter's Model

According to Walter's Model, value of the firm depends upon firm's earning level, dividend payout, constant reinvestment rate and the shareholder's expected rate of return. The model suggests that dividend policy of the company depends upon the fact that whether firm has got good investment opportunities or not. If the firm does not have enough investment opportunities, then it will pay the dividend otherwise it will retain the money. If the firm pays dividend, then shareholders invest the dividend income to get further return. The expected return on reinvestment of dividend income by shareholders is called the opportunity cost to the firm or the cost of capital of the firm. On the other hand, if dividend is not paid then the firm will reinvest the retained earnings for its future growth. The expected rate of return on reinvestment of retained earnings is called rate of return (r).

Assumptions

Internal Financing: All the investments are financed by the firm through retained earnings. In other words, retained earnings are the only source of finance. This means that the company does not rely upon external funds like debt or new equity capital.

Constant IRR and Cost of Capital: The internal rate of return (r) and the cost of capital (k) of the firm are constant. The business risks remain same for all the investment decisions.

Constant EPS and DPS: Beginning earnings and dividends of the firm never change. Though different values of EPS and DPS may be used in the model, but they are assumed to remain constant while determining a value.

100% Retention or Pay-out: All the earnings of the company are either reinvested internally or distributed as dividends.

Infinite Life: The company has an infinite or a very long life.

Gordon's Model

According to Gordon's Model, Dividend policy of a firm is relevant and can affect the value of a firm. Like Walter's Model value of the firm under this method also depends upon reinvestment rate (r) and shareholder's expectations. This is based on the premise that the investors are generally risk aversers and prefer to have current income i.e. dividend. Hence there is a direct relationship between dividend policy and the value of a firm.

Assumptions-

No Debt: The model assumes that the company is an all-equity company, with no proportion of debt in the capital structure.

No External Financing: The model assumes that all investment of the company is financed by retained earnings and no external financing is required.

Constant IRR: The model assumes a constant Internal Rate of Return (r), ignoring the diminishing marginal efficiency of the investment.

Constant Cost of Capital: The model is based on the assumption of a constant cost of capital (k), implying the business risk of all the investments to be the same.

Perpetual Earnings: Gordon's model believes in the theory of perpetual earnings for the company.

Corporate taxes: Corporate taxes are not accounted for in this model.

Constant Retention Ratio: The model assumes a constant retention ratio (b) once it is decided by the company. Since the growth rate (g) = b*r, the growth rate is also constant by this logic.

K>g: Gordon's model assumes that the cost of capital (k) > growth rate (g). This is important for obtaining the meaningful value of the company's share.

Types of Dividend Policies

Stable Dividend Policy

A stable dividend policy is the easiest and most commonly used. The goal of this policy is to provide shareholders with a steady and predictable dividend payout each year, which is what most investors seek. Investors receive a dividend regardless of whether earnings are up or down.

The goal is to align the dividend policy with the long-term growth of the company rather than with quarterly earnings volatility. This approach gives the shareholder more certainty concerning the amount and timing of the dividend.

Constant Dividend Policy

The primary drawback of the stable dividend policy is that investors may not see a dividend increase in boom years. Under the constant dividend policy, a company pays a percentage of its earnings as dividends every year. In this way, investors experience the full volatility of company earnings.

If earnings are up, investors get a larger dividend and if earnings are down, investors may not receive a dividend. The primary drawback to the method is the volatility of earnings and dividends. It is difficult to plan financially when dividend income is highly volatile.

Residual Dividend Policy

The residual dividend policy is also highly volatile, but some investors see it as the only acceptable dividend policy. With a residual dividend policy, the company pays out what dividends remain after the company has paid for capital expenditures (CAPEX) and working capital.

This approach is volatile, but it makes the most sense in terms of business operations. Investors do not want to invest in a company that justifies its increased debt with the need to pay dividends.

WORKING CAPITAL MANAGEMENT

It has been often observed that the shortage of working capital leads to the failure of a business. The proper management of working capital may bring about the success of a business firm. The management of working capital includes the management of current assets and current liabilities. A number of companies for the past few years have been finding it difficult to solve the increasing problems of adopting seriously the management of working capital. A firm may exist without making profits but cannot survive without liquidity. The function of working capital management in an organization is similar that of the heart in a human body. Also it is an important function of financial management. The financial manager must determine the satisfactory level of working capital funds and also the optimum

mix of current assets and current liabilities. He must ensure that the appropriate sources of funds are used to finance working capital and should also see that short term obligation of the business are met well in time. "Working Capital is the excess of C.A. over current liabilities."

There are two concepts of working capital viz. quantitative and qualitative. Some people also define the two concepts as gross concept and net concept. According to quantitative concept, the amount of working capital refers to 'total of current assets'. Current assets are considered to be gross working capital in this concept. The qualitative concept gives an idea regarding source of financing capital. According to qualitative concept the amount of working capital refers to "excess of current assets over current liabilities." L.J. Guthmann defined working capital as "the portion of a firm's current assets which are financed from long–term funds." The excess of current assets over current liabilities is termed as 'Net working capital'. In this concept "Net working capital" represents the amount of current assets which would remain if all current liabilities were paid. Both the concepts of working capital have their own points of importance. "If the objectives is to measure the size and extent to which current assets are being used, 'Gross concept' is useful; whereas in evaluating the liquidity position of an undertaking 'Net concept' becomes pertinent and preferable.

Current assets – It is rightly observed that "Current assets have a short life span. These types of assets are engaged in current operation of a business and normally used for short– term operations of the firm during an accounting period i.e. within twelve months. The two important characteristics of such assets are, (i) short life span, and (ii) swift transformation into other form of assets. Cash balance may be held idle for a week or two; account receivable may have a life span of 30 to 60 days, and inventories may be held for 30 to 100 days.

Current liabilities – The firm creates a Current Liability towards creditors (sellers) from whom it has purchased raw materials on credit. This liability is also known as accounts payable and shown in the balance sheet till the payment has been made to the creditors. The claims or obligations which are normally expected to mature for payment within an accounting cycle (1 year) are known as current liabilities. These can be defined as "those liabilities where liquidation is reasonably expected to require the use of existing resources properly classifiable as current assets, or the creation of other current assets, or the creation of other current liabilities."

TYPES OF WORKING CAPITAL

On the basis of periodicity: The requirements of working capital are continuous. More working capital is required in a particular season or the peck period of business activity. On the basis of periodicity working capital can be divided under two categories as under:

1. **Permanent working capital**: This type of working capital is known as Fixed Working Capital. Permanent working capital means the part of working capital which is permanently locked up in the current assets to carry out the business smoothly. The minimum amount of current assets which is required to conduct the business smoothly during the year is called permanent working capital. For example, investments

required to maintain the minimum stock of raw materials or to cash balance. The amount of permanent working capital depends upon the size and growth of company. Fixed working capital can further be divided into two categories as under

2. **Regular Working capital:** Minimum amount of working capital required to keep the primary circulation. Some amount of cash is necessary for the payment of wages, salaries etc.

3. **Reserve Margin Working capital:** Additional working capital may also be required for contingencies that may arise any time. The reserve working capital is the excess of capital over the needs of the regular working capital is kept aside as reserve for contingencies, such as strike, business depression etc.

4. **Variable or Temporary Working Capital:** The term variable working capital refers that the level of working capital is temporary and fluctuating. Variable working capital may change from one assets to another and changes with the increase or decrease in the volume of business. The variable working capital may also be subdivided into following two sub-groups.

5. **Seasonal Variable Working capital**: Seasonal working capital is the additional amount which is required during the active business seasons of the year. Raw materials like raw-cotton or jute or sugarcane are purchased in particular season. The industry has to borrow funds for short period. It is particularly suited to a business of a seasonal nature. In short, seasonal working capital is required to meet the seasonal liquidity of the business.

6. **Special variable working capital:** Additional working capital may also be needed to provide additional current assets to meet the unexpected events or special operations such as extensive marketing campaigns or carrying of special job etc.

Difference Between Permanent and Variable Working Capital: The distinction between permanent or fixed working capital and variable working capital or temporary working capital is of great importance in operating cycle and raising the funds. However, there is always a minimum level of current assets which is continuously required by the firm to carry on its business operations. This minimum level of current assets is referred to as permanent or fixed working capital and is permanent in the same way as the firm's fixed asset.

On the basis of concept

1. **Gross Working Capital:** Gross working capital refers to total investment in current assets. The current assets employed in business give the idea about the utilization of working capital and idea about the economic position of the company. Gross working capital concepts is popular and acceptable concept in the field of finance.

2. **Net Working Capital:** Net working capital means current assets minus current liabilities. The difference between current assets and current liabilities is called the net working capital. If the net working capital is positive, business is able to meet its current liabilities. Net working capital concept provides the measurement for determining the creditworthiness of company.

FACTORS DETERMINING WORKING CAPITAL

1. **Nature of Companies:** The composition of an asset is a function of the size of a business and the companies to which it belongs. Small companies have smaller proportions of cash, receivables and inventory than large corporation. This difference becomes more marked in large corporations. A public utility, for example, mostly employs fixed assets in its operations, while a merchandising department depends generally on inventory and receivable. Needs for working capital are thus determined by the nature of an enterprise.

2. **Demand of Creditors:** Creditors are interested in the security of loans. They want their obligations to be sufficiently covered. They want the amount of security in assets which are greater than the liability.

3. **Cash Requirements:** Cash is one of the current assets which are essential for the successful operations of the production cycle. A minimum level of cash is always required to keep the operations going. Adequate cash is also required to maintain good credit relation.

4. **Nature and Size of Business:** The working capital requirements of a firm are basically influenced by the nature of its business. Trading and financial firms have a very less investment in fixed assets, but require a large sum of money to be invested in working capital. Retail stores, for example, must carry large stocks of a variety of goods to satisfy the varied and continues demand of their customers. Some manufacturing business, such as tobacco manufacturing and construction firms also have to invest substantially in working capital and a nominal amount in the fixed assets.

5. **Time:** The level of working capital depends upon the time required to manufacturing goods. If the time is longer, the size of working capital is great. Moreover, the amount of working capital depends upon inventory turnover and the unit cost of the goods that are sold. The greater this cost, the bigger is the amount of working capital.

6. **Volume of Sales:** This is the most important factor affecting the size and components of working capital. A firm maintains current assets because they are needed to support the operational activities which result in sales. They volume of sales and the size of the working capital are directly related to each other. As the volume of sales increase, there is an increase in the investment of working capital-in the cost of operations, in inventories and receivables.

7. **Terms of Purchases and Sales:** If the credit terms of purchases are more favourable and those of sales liberal, less cash will be invested in inventory. With more favourable credit terms, working capital requirements can be reduced. A firm gets more time for payment to creditors or suppliers. A firm which enjoys greater credit with banks needs less working capital.

8. **Business Cycle:** Business expands during periods of prosperity and declines during the period of depression. Consequently, more working capital required during periods of prosperity and less during the periods of depression.

9. **Production Cycle:** The time taken to convert raw materials into finished products is referred to as the production cycle or operating cycle. The longer the production cycle, the greater is the requirements of the working capital. An utmost care should be taken to shorten the period of the production cycle in order to minimize working capital requirements.

10. **Liquidity and Profitability:** If a firm desires to take a greater risk for bigger gains or losses, it reduces the size of its working capital in relation to its sales. If it is interested in improving its liquidity, it increases the level of its working capital. However, this policy is likely to result in a reduction of the sales volume, and therefore, of profitability. A firm, therefore, should choose between liquidity and profitability and decide about its working capital requirements accordingly.

11. **Seasonal Fluctuations:** Seasonal fluctuations in sales affect the level of variable working capital. Often, the demand for products may be of a seasonal nature. Yet inventories have got to be purchased during certain seasons only. The size of the working capital in one period may, therefore, be bigger than that in another.

OPERATING CYCLE

The duration of time required to complete the sequence of events right from purchase of raw material / goods for cash to the realization of sales in cash is called the operating cycle, working capital cycle or cash cycle.

The operating cycle of a manufacturing firm where cash is needs to purchase raw materials and convert raw materials into work-in-process is converted into finished goods. Finished goods will be sold for cash or credit and ultimately debtors will be realized.

Operating Cycle of Non-Manufacturing Firm- The non-manufacturing firms, such as whole sellers and retailers, will not have the manufacturing phase; they will have rather direct conversion of cash into finished stock, into accounts receivables and then into cash.

Operating Cycle of Service and Financial Firms- In addition to this, some service and financial concerns may not have any inventory at all. Such firm have the shorter operating cycle.

LIQUIDITY VERSUS PROFITABILITY: RISK-RETURN TANGLE

The firm would make just enough investment in current assets, if it were possible to estimate working capital needs exactly. Under perfect certainty, the current assets holdings would be at the minimum level. A ledger investment in current assets under certainty would mean a low rate or return investment for the firm, as excess investment in current assets will not earn enough return. A smaller investment in current assets, on the other hand, would mean interrupted production and sales, because of frequent stock-outs and inability to creditor in time to restrictive credit policy. As it is not possible to estimate working needs accurately, the firm must decide about the levels of current assets to be carried. The current assets holdings of the firm will depend upon its working capital policy. It may follow a conservative or an aggressive policy. These polices have different risk-return implications.

A conservative policy means lower return and risk, while an aggressive policy produces higher return and risk. The two important aims of the working capital management are: profitability and solvency. Solvency, used in the technical sense, refers to the firm's continuous ability to meet maturing obligations. Lenders and creditors expected prompt settlement of their claims as and when due. To ensure solvency, the firm maintains a relatively large investment in current assets holdings. If the firm maintains a relatively large investment in current assets, it will have no difficulty in paying the claims of the creditors when they become due and will be able to fill all sales orders and ensure smooth production. Thus, a liquid firm has less risk of insolvency; that is, it will hardly experiences a cash shortage or stock-outs. However, there is a cost associated with maintaining a sound liquidity position. A considerable amount of the firm's funds will be tied up in current assets. And to the extent this investment is idle, the firm's profitability will suffer. To have high profitability, the firm may sacrifice solvency and maintain a relatively low level of current assets. When the firm does so, its profitability will improve as less funds are tied up in idle current assets, but its solvency would be threatened and would be exposed to greater risk of cash shortage and stock-outs. Therefore, the firm should balance the profitability solvency tangle by minimizing the total cost of liquidity and cost of illiquidity.

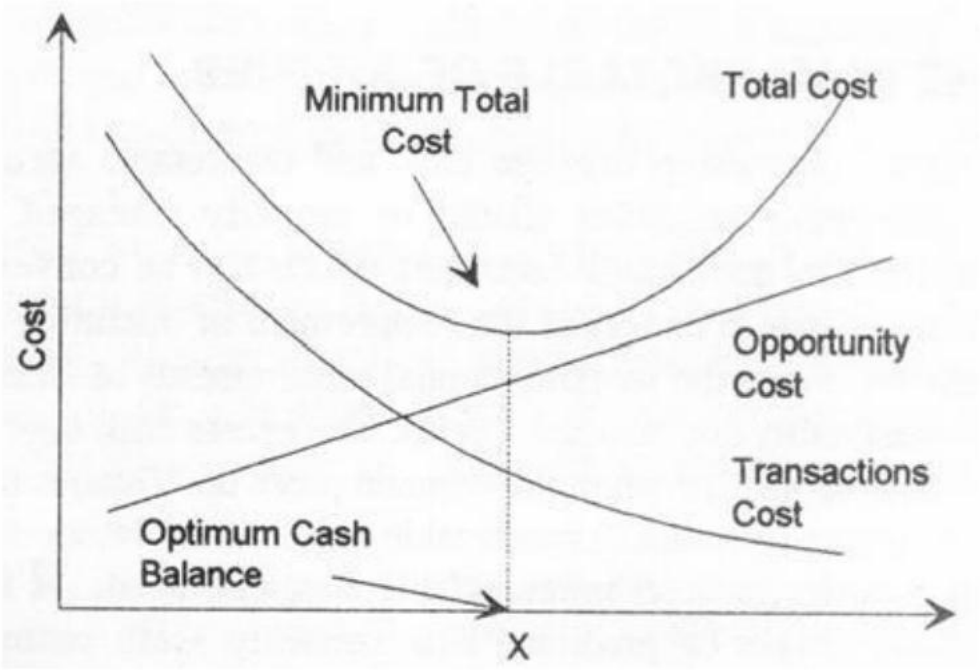
The Cost Trade-off: A different way of looking into the risk-return trade of is in terms of the cost of maintaining a particular level of current assets. There are two different kinds of costs involved.

First there is the cost of liquidity. If the firm carries too much liquidity, the firm's rate of return will be low. Funds tied up in idle cash and excess inventory earn nothing, and receivables levels that are too large also reduce the firm's profitability. Thus, the cost of liquidity increases with the level of current assets.

There is the cost of liquidity, which is the cost of having too little invested in current assets. If the firm carries too little cash, it may not be able to pay bills promptly at they mature. This

may force the firm to borrows at high rates of interest. This will also adversely affect the creditworthiness of the firm and it will face difficulties in obtaining funds in future. This all may force the firm into insolvency.

If the firm's inventory level too low, sales may be lost and customers may shift to competitors. Also, low level of book debts may be due to tight credit policy, which would impair sales further. Thus, the low level of current assets involves cost which increases as this level falls.



CASH MANAGEMENT

Cash is the most important asset for the operations of the business firms. It is the basic input needed to keep the business running on a continuous basis and also the ultimate out for the business operations. The business firm should always maintain sufficient cash reserves, because the excessive cash will remain idle, shortage will disrupt the firm operations. Normally, every business firm holds 1 to 3 percent of its assets in the form of cash to enable itself to discharge its routine obligations such as payment of salaries, bills, day-to-day expenses, repayment of loans, dividends, interest, etc. The meeting capacity of business transactions depends more on the amount of cash it holds either in bank or on hand. To enable its liquidity and paying capacity, a sound cash management is necessary.

Functions of Cash management: The following are the functions of cash officer of any business concern irrespective of its size, nature, volume of business, age, etc. The same can also be referred as management of receipts and payments, which includes:

1. Forecasting cash needs

2. Expediting cash collections

3. Disbursing cash to meet firm's obligations

4. Gainful investment of surplus cash

Different levels of cash

In any business firm, the cash balance may be either shortage or excessive and it is difficult to maintain exactly the required amount. Cash receipts and payments of a firm very rarely coincide, thus coincidence of cash receipts and payments is a big challenge. Either a firm faces cash shortage or cash surplus if not cash officer controls its cash flows. Normally, in these days of heavy competition, due to the uncertainties of cash sales and cash collections disbursements tend to be more than the cash receipts. The function of cash management is to match these two either by borrowing during times of cash shortage or investing cash in times of surplus so as to ensure that the firm is free from cash problems. Thus, cash manager invests the excess cash in securities and see that it will be made available in times of scarcity.

Objectives of Cash management

The objectives of working capital management such as profitability and liquidity are also implied to cash management. The cash manager has to arrange right amount of cash at right time for a right purpose to pay for. It does not mean that he can hold heavy amount at the cost of interest. In simple, the idle cash causes interest loss and the firm incur opportunity cost, which indirectly affects the profitability. Therefore, the cash manager has to hold optimum level of cash and not a rupee extra or short beyond the optimum level of cash.

Importance of Cash management:

Cash is unique resource and not comparable with any other component of current asset. If excess cash is held, it will not generate profits since cash is sterile. It will not be productive directly as in the case of other assets. Inventory bought excess will be useful even after sometime, without loss of value and many a time value of inventories tend to increase due to inflation. Hence idle cash will not generate profit but causes loss of interest. Further, cash shortage causes irreparable loss to the management, since firms loose not only profitable business opportunities but also goodwill when they fail to clear the bills timely due to cash shortage.

Motives for Holding cash

1. **Transactions motive:** Cash manager is expected to arrange right amount of cash at right time to pay for a right purpose. Infact, the cash receipts will never synchronize with cash obligations to pay for. Hence to meet the expenses timely, a firm has to hold optimum amount of cash and keep the firm comfortable in its cash transactions. Larger the business transactions more the amount of cash balance to be maintained and vice - verse.

2. **Precautionary motive:** Firms at times need cash without prior notice. They need cash under emergency conditions such as break down of machines, fire, theft t, accidents etc failing which they have to pay heavy penalties. In such cases cash rich companies can withstand rather than nil less cash companies. Thus, causalities, accidents, theft, machinery break - down, etc., in organizations generally demand cash immediately. To meet the said eventualities, the firms have to maintain cash balances. This cash balance is called precautionary cash balance. Hence, they have to raise funds in very short notice or sometimes spontaneously also

3. **Speculative motive:** Of course, not all firms do business with speculative motives. Occasionally, every business firm comes across speculative conditions such as sudden and heavy fluctuations in prices of raw materials and rates of interest leading to raise in market for goods. Hence, there is sudden rise in demand for goods, which warrants availability of cash in very short notice. Thus the speculative conditions give chance to raise profitable opportunities. Firms, having ability to generate cash in short notice will take advantage of these speculative conditions of business opportunities.

Factors affecting cash

1. **Credit position** Firms having goodwill in the market do not require cash balance much. They get services and goods on credit as they re-pay the bills timely out of the in-sale proceeds and have such firms need not maintain thereby cash balances.

2. **Debtors position:** The ability to pay bills depends upon the company's sales policy i.e., whether on credit or cash, credit for how long. Longer the credit period more the cash balances it should prepare to make its purchases. Further, a firm extending liberal credit will have its debtors position high and consequent of it more bad debts also. And firms with tight credit policy will maintain low debtors position and less bed debts hence and the firm is able to do the business with less cash balances.

3. **Nature of market:** It has great influence on cash requirement, in certain markets one has to buy on cash, since credit facility is not available. In some of the unorganized sectors and small businesses where bank loans are not extended, the firms have to arrange their own cash.

4. **Inventory levels:** Higher the inventory levels a firm follows, more the 'cash' required. Lower the inventory level less is the cash balance to be needed. Thus, inventory level certainly influences the cash requirements of the business.

5. **Technology** The firms, which are, followed manual methods need more cash by weekends to pay for wages. Whereas, the firms whose business activities are more technology based required less amount of cash for the above said purposes.

6. **Efficiently in using cash:** Cash balance depends upon the efficiency is using cash. Professional managements maintain, optimum cash balance and discharge cash obligations.

Cash budget- Cash budget is the summary statement of the firms expected cash inflows and out flows over a projected time period. It is a fool to forecast the cash inflows and outflows a for specific period. Cash forecasting is the focal aspect of cash budget. The expected cash receipts and payments are portrayed to arrive cash balance or cash shortage. The cash budgets can be prepared for weekly, monthly, quarterly and yearly. It is a short-term cash forecasting method. To work various policies of working capital 'cash budget' will help particularly for making the following polices.

Optimum level of cash Cash balance cannot be too high or low. The lower cash balance than the required level creates problems. The higher level of cash balance will ensure liquidity, but the firm has to sacrifice profits, as excess cash will not yield returns. Higher the holding of cash more the carrying costs, lower the level of cash, more the transaction costs. Thus, cash manager of a firm has to trade off between higher levels of cash balance and reach out optimum level of cash.

Cash Planning: Cash Planning refers to looking into future cash needs of a firm and it is a practice, which should be carried out periodically. Firms practicing cash planning will not have cash problems. Thus, cash planning is as good as insuring a firm from shocks of cash shortage caused by market uncertainties. Hence, the cash planning is a tool to control the use of cash optimally. Cash budget is the most significant device for planning and controlling cash receipts and payments.

Cash Management strategies It is necessary for a firm to have an optimum cash balance. For this purpose, it is necessary to know the cash cycle and cash turnout rate.

Cash Cycle: Cash cycle refers to the process by which cash is used to purchase material and convert material into finished goods and sales and ultimately result in collection of receivables. Cash cycle can be calculated as (average number of days taken to collect from accounts receivables + average age of inventories - average number of days for payments of accounts payable.)