



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)

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SCHOOL OF MANAGEMENT STUDIES

UNIT – I - FINANCIAL MANAGEMENT – SBAA5203

I. INTRODUCTION

1.1 FINANCE

Finance is the life blood of business. Finance may be defined as the art and science of managing money. Finance also is referred as the provision of money at the time when it is needed. Finance function is the procurement of funds and their effective utilization in business concerns.

The term financial management has been defined by Solomon, "It is concerned with the efficient use of an important economic resource namely, capital funds". The most popular and acceptable definition of financial management as given by S. C. Kuchal is that "Financial Management deals with procurement of funds and their effective utilization in the business. Financial management is the operational activity of a business that is responsible for obtaining and effectively utilizing the funds necessary for efficient operations. Thus, Financial Management is mainly concerned with the effective funds management in the business.

Financial management is that activity of management which is concerned with the planning, procuring and controlling of the firm's financial resources. It means applying general management principles to financial resources of the institutions. Financial activities of an institutions is one of the most important and complex activities of a firm. Therefore in order to take care of these activities a financial manager performs all the requisite financial activities. A financial manager is a person who takes care of all the important financial functions of an organization. The person in charge should maintain a far sightedness in order to ensure that the funds are utilized in the most efficient manner. His actions directly affect the Profitability, growth and goodwill of the firm.

The scope and coverage of financial management have undergone fundamental changes over the last half a century. During 1930s and 1940s, it was concerned of raising adequate funds and maintaining liquidity and sound financial structure. This is known as the 'Traditional Approach' to procurement and utilization of funds required by a firm. Thus, it was regarded as an art and science of raising and spending of funds. The traditional approach emphasized the acquisition of funds and ignored efficient allocation and constructive use of funds. It does not give sufficient attention to the management of working capital.

During 1950s, the need for most profitable allocation of scarce capital resources was recognized. During 1960s and 1970s many analytical tools and concepts like funds flow statement, ratio analysis, cost of capital, earning per share, optimum capital structure,

portfolio theory etc. were emphasized. As a result, a broader concept of finance began to be used. Thus, the modern approach to finance emphasizes the proper allocation and utilization of funds in addition to their economical procurement. Thus, business finance is defined as "the activity concerned with the planning, raising, controlling and administering of funds used in the business."

Modern business finance includes –

- (i) Determining the capital requirements of the firm.
- (ii) Raising of sufficient funds to make an ideal or optimum capital structure
- (iii) Allocating the funds among various types of assets
- (iv) Financial control so as to ensure efficient use of funds.

1.2 DEFINITION OF FINANCIAL MANAGEMENT

"Financial management is the activity concerned with planning, raising, controlling and administering of funds used in the business." – Guthman and Dougal

"Financial management is that area of business management devoted to a 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." – J.F. Brandley

"Financial management is the operational activity of a business that is responsible for obtaining and effectively utilizing the funds necessary for efficient operations." - Massie

1.3 NATURE OF FINANCIAL MANAGEMENT

1. Financial Management is an integral part of overall management. Financial considerations are involved in all business decisions. So financial management is pervasive throughout the organisation.
2. In most of the organizations, financial operations are centralized. This results in economies.
3. Financial management involves with data analysis for use in decision making.
4. The central focus of financial management is valuation of the firm. That is financial decisions are directed at increasing/maximization/ optimizing the value of the firm.
5. Financial management essentially involves risk-return trade-off Decisions on investment involve choosing of types of assets which generate returns accompanied by risks. Generally higher the risk, returns might be higher and vice versa. So, the

financial manager has to decide the level of risk the firm can assume and satisfy with the accompanying return.

6. Financial management affects the survival, growth and vitality of the firm. Finance is said to be the life blood of business. It is to business, what blood is to us. The amount, type, sources, conditions and cost of finance squarely influence the functioning of the unit.
7. Finance functions, i.e., investment, rising of capital, distribution of profit, are performed in all firms - business or non-business, big or small, proprietary or corporate undertakings.
8. Financial management is a sub-system of the business system which has other subsystems like production, marketing, etc. In systems arrangement financial sub-system is to be well-coordinated with others and other sub-systems.
9. Financial Management is the activity concerned with the control and planning of financial resources.
10. Financial management is multi-disciplinary in approach. It depends on other disciplines, like Economics, Accounting etc., for a better procurement and utilisation of finances.

1.4 FINANCE AND OTHER RELATED DISCIPLINES :

Financial management is an integral part of the overall management, on other disciplines and fields of study like economics, accounting, production, marketing, personnel and quantitative methods. The relationship of financial management with other fields of study is explained below

(i) Finance and Economics

Finance is a branch of economics. Economics deals with supply and demand, costs and profits, production and consumption and so on. The relevance of economics to financial management can be described in two broad areas of economics i.e., micro economics and macroeconomics. Micro economics deals with the economic decisions of individuals and firms. It concerns itself with the determination of optimal operating strategies of a business firm. These strategies include profit maximization strategies, product pricing strategies, strategies for valuation of firm and assets etc. The basic principle of micro economics that applies in financial management is marginal analysis. Most of the financial decisions should be made taken into account the marginal revenue and marginal cost. So, every financial

manager must be familiar with the basic concepts of micro economics. Macroeconomics deals with the aggregates of the economy in which the firm operates. Macroeconomics is concerned with the institutional structure of the banking system, money and capital markets, monetary, credit and fiscal policies etc. So, the financial manager must be aware of the broad economic environment and their impact on the decision making areas of the business firm.

(ii) Finance and Accounting

Accounting and finance are closely related. Accounting is an important input in financial decision making process. Accounting is concerned with recording of business transactions. It generates information relating to business transactions and reporting them to the concerned parties. The end product of accounting is financial statements namely profit and loss account, balance sheet and the statements of changes in financial position. The information contained in these statements assists the financial managers in evaluating the past performance and future direction of the firm (decisions) in meeting certain obligations like payment of taxes and so on. Thus, accounting and finance are closely related.

(iii) Finance and Production

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

(iv) Finance and Marketing

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

(v) Finance and Quantitative Methods

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

(vi) Finance and Costing

Cost efficiency is a major strategic advantage to a firm, and will greatly contribute towards its competitiveness, sustainability and profitability. A finance manager has to understand, plan and manage cost, through appropriate tools and techniques including Budgeting and Activity Based Costing.

(vii) Finance and Law

A sound knowledge of legal environment, corporate laws, business laws, Import Export guidelines, international laws, trade and patent laws, commercial contracts, etc. are again important for a finance executive in a globalized business scenario. For example the guidelines of Securities and Exchange Board of India [SEBI] for raising money from the capital markets. Similarly, now many Indian corporate are sourcing from international capital markets and get their shares listed in the international exchanges. This calls for sound knowledge of Securities Exchange Commission guidelines, dealing in the listing requirements of various international stock exchanges operating in different countries.

(viii) Finance and Taxation

A sound knowledge in taxation, both direct and indirect, is expected of a finance manager, as all financial decisions are likely to have tax implications. Tax planning is an important function of a finance manager. Some of the major business decisions are based on the economics of taxation. A finance manager should be able to assess the tax benefits before committing funds. Present value of the tax shield is the yardstick always applied by a finance manager in investment decisions.

(ix) Finance and Treasury Management

Treasury has become an important function and discipline, not only in every organization. Every finance manager should be well grounded in treasury operations, which is considered as a profit center. It deals with optimal management of cash flows, judiciously investing surplus cash in the most appropriate investment avenues, anticipating and meeting emerging cash requirements and maximizing the overall returns.

(x) Finance and Banking

Banking has completely undergone a change in today's context. The type of financial assistance provided to corporate has become very customized and innovative. Banks provides both long term and short term finance, besides a number of innovative corporate and retail

banking products, which enable corporate to choose between them and reduce their cost of borrowings. It is imperative for every finance manager to be up-to date on the changes in services & products offered by banking sector including several foreign players in the field.

(xi) Finance and Insurance

Evaluating and determining the commercial insurance requirements, choice of products and insurers, analyzing their applicability to the needs and cost effectiveness, techniques, ensuring appropriate and optimum coverage, claims handling, etc. fall within the ambit of a finance manager's scope of work & responsibilities.

(xii) International Finance

Capital markets have become globally integrated. Indian companies raise equity and debt funds from international markets, in the form of Global Depository Receipts (GDRs), American Depository Receipts (ADRs) or External Commercial Borrowings (ECBs) and a number of hybrid instruments like the convertible bonds, participatory notes etc. Finance managers are expected to have a thorough knowledge on international sources of finance, merger implications with foreign companies, Leveraged Buy Outs (LBOs), acquisitions abroad and international transfer pricing. This is an essential aspect of finance manager's expertise. Similarly, protecting the value of foreign exchange earned, through instruments like derivatives, is vital for a finance manager as the volatility in exchange rate movements can erode in no time, all the profits earned over a period of time.

(xiii) Finance and Information Technology

Information technology is the order of the day and is now driving all businesses. It is all pervading. A finance manager needs to know how to integrate finance and costing with operations through software packages including ERP. The finance manager takes an active part in assessment of various available options, identifying the right one and in the implementation of such packages to suit the requirement.

1.5 OBJECTIVES OF FINANCIAL MANAGEMENT

1. Profit maximization

It is commonly believed that a shareholders objective is to maximise profit. To achieve the goal of profit maximisation, the financial manager takes only those actions that are expected to make a major contribution to the firm's overall profits. The total earnings available for the firm's shareholders is commonly measured in terms of earnings per share (EPS). Hence the decisions and actions of finance managers should result in higher earnings per share for shareholders.

Points in favour of profit maximisation:

- It is a parameter to measure the performance of a business
- It ensures maximum welfare to the shareholders, employees and prompt payment to the creditors
- Increase the confidence of management in expansion and diversification.
- It indicates the efficient use of funds for different requirements.

Points against profit maximisation:

- It is not a clear term like accounting profit, before tax or after tax or net profit or gross profit.
- It encourage corrupt practices
- It does not consider the element of risk
- Time value of money is not reflected
- Attracts cut –throat competition
- Huge profits attracts government intervention
- It invites problem from workers.
- It affects the long run liquidity of a company.

2. Wealth Maximisation

The goal of the finance function is to maximise the wealth of the owners for whom the firm is being carried on. The wealth of corporate owners is measured by the share prices of the stock, which in turn is based on the timing of return, cash flows and risk. While taking decisions, only that action that is expected to increase share price should be taken.

It considers :

- (a) Time value of money on investment decision
- (b) The risk or uncertainty of future earnings and

(c) effects of dividend policy on the market price of shares.

Points In favour of Wealth Maximisation

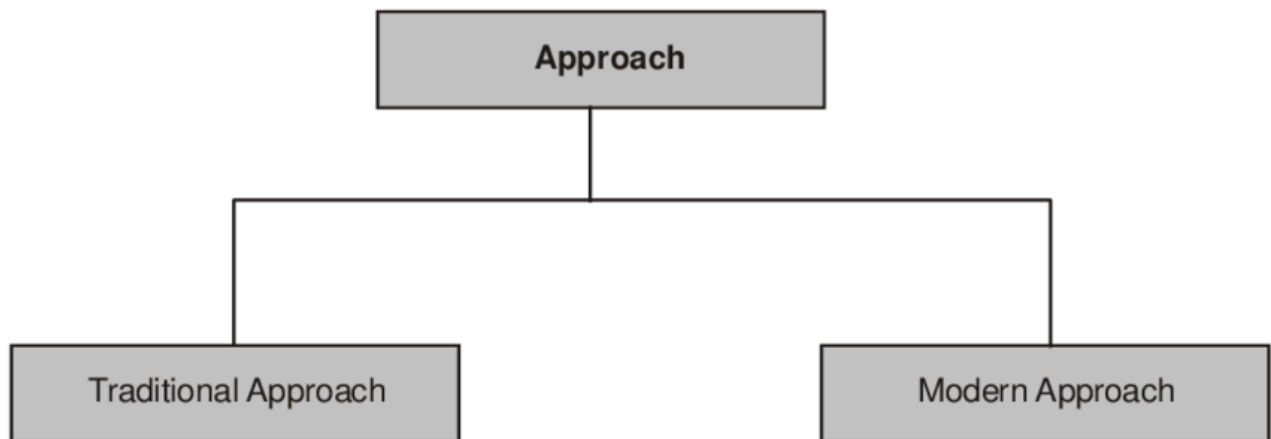
- It is a clear term
- Net effect of investment and benefits can be measured clearly.
- It considers the time value for money.
- It should be accepted universally
- It guides the management in framing a consistent strong dividend policy to reach maximum return to the equity holders

.Points against wealth maximisation:

- This concept is useful for equity share holders not for debenture holders
- The expectations of workers, consumers and various interest groups create a greater influence that must be respected to achieve long run wealth maximization and also for their survival.

Basis	Wealth Maximization	Profit Maximization
Definition	It is defined as the management of financial resources aimed at increasing the value of the stakeholders of the company.	It is defined as the management of financial resources aimed at increasing the profit of the company.
Focus	Focuses on increasing the value of the stakeholders of the company in the long term.	Focuses on increasing the profit of the company in the short term.
Risk	It considers the risks and uncertainty inherent in the business model of the company.	It does not consider the risks and uncertainty inherent in the business model of the company.
Usage	It helps in achieving a larger value of a company's worth which may reflect in the increased market share of the company.	It helps in achieving efficiency in the company's day-to-day operations to make the business profitable.

1.6 SCOPE OF FINANCIAL MANAGEMENT



1. The Traditional Approach:

The traditional approach to the finance function relates to the initial stages of its evolution during 1920s and 1930s . According to this approach, the scope, of finance function was confined to only procurement of funds needed by a business on most suitable terms.

The utilisation of funds was considered beyond the purview of finance function. It was felt that decisions regarding the application of funds are taken somewhere else in the organisation. However, institutions and instruments for raising funds were considered to be a part of finance function.

The traditional approach suffers from many serious limitations:

- (i) It is outsider-looking in approach that completely ignores internal decision making as to the proper utilisation of funds.
- (ii) The focus of traditional approach was on procurement of long-term funds. Thus, it ignored the important issue of working capital finance and management.
- (iii) The issue of allocation of funds, which is so important today, is completely ignored.

2. The Modern Approach:

The modern approach views finance function in broader sense. It includes both rising of funds as well as their effective utilisation under the purview of finance. The finance function does not stop only by finding out sources of raising enough funds; their proper utilisation is also to be considered. The cost of raising funds and the returns from their use should be compared.

The funds raised should be able to give more returns than the costs involved in procuring them. The utilisation of funds requires decision making. Finance has to be considered as an

integral part of overall management. So finance functions, according to this approach, covers financial planning, rising of funds, allocation of funds, financial control etc.

The modern approach considers the three basic management decisions, i.e., investment decisions, financing decisions and dividend decisions within the scope of finance function.

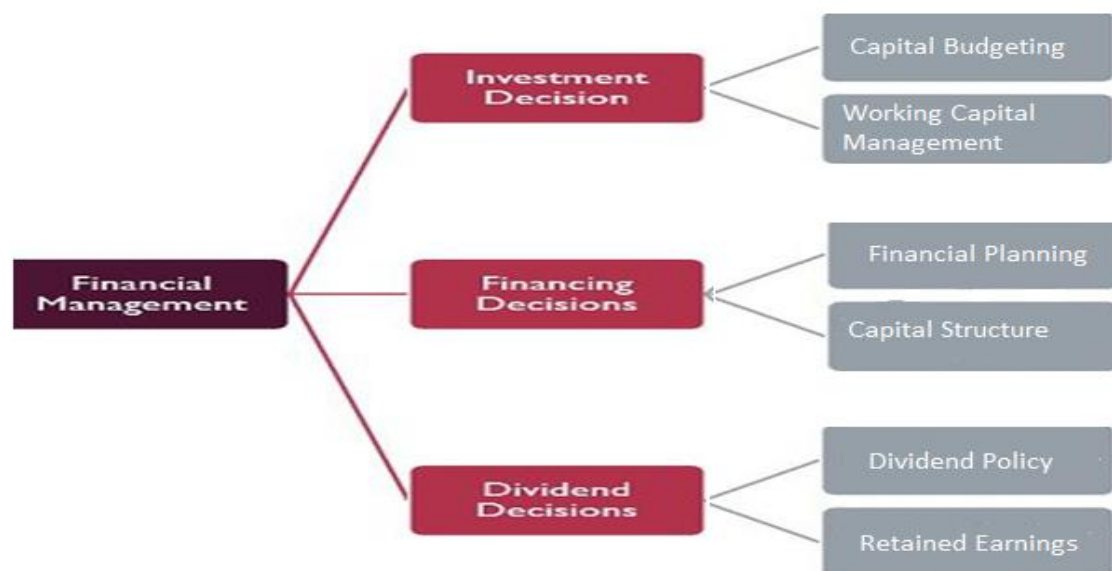


Figure showing Scope of financial management

In organizations, managers in an effort to minimize the costs of procuring finance and using it in the most profitable manner, take the following decisions:

Investment Decisions: Managers need to decide on the amount of investment available out of the existing finance, on a long-term and short-term basis. They are of two types: Long-term investment decisions or Capital Budgeting mean committing funds for a long period of time like fixed assets. These decisions are irreversible and usually include the ones pertaining to investing in a building and/or land, acquiring new plants/machinery or replacing the old ones, etc. These decisions determine the financial pursuits and performance of a business. Short-term investment decisions or Working Capital Management means committing funds for a short period of time like current assets. These involve decisions pertaining to the investment of funds in the inventory, cash, bank deposits, and other short-term investments. They directly affect the liquidity and performance of the business.

Financing Decisions: Managers also make decisions pertaining to raising finance from long-term sources and short-term sources. They are of two types:

Financial Planning decisions which relate to estimating the sources and application of funds. It means pre-estimating financial needs of an organization to ensure the availability of adequate finance. The primary objective of financial planning is to plan and ensure that the funds are available as and when required.

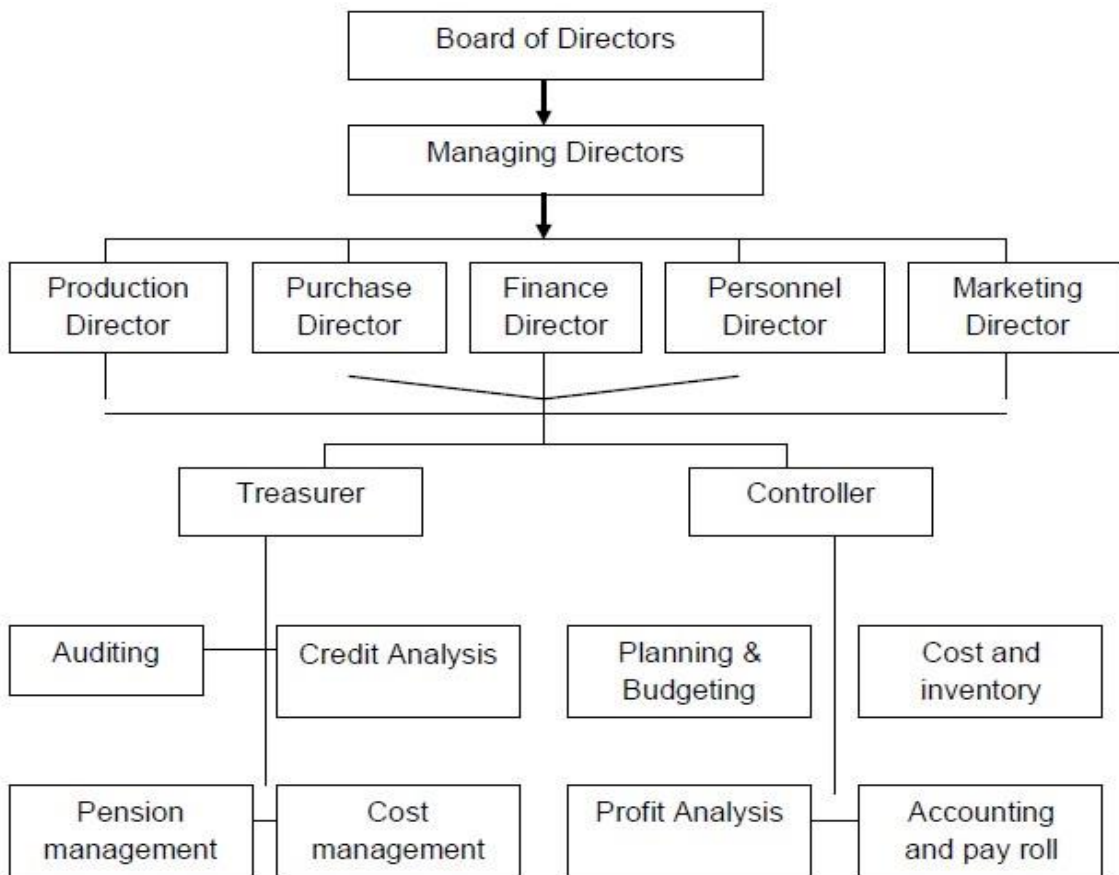
Capital Structure decisions which involve identifying sources of funds. They also involve decisions with respect to choosing external sources like issuing shares, bonds, borrowing from banks or internal sources like retained earnings for raising funds. The decisions are made in the light of the cost of capital, risk factor involved and returns to the shareholders.

Dividend Decisions: These involve decisions related to the portion of profits that will be distributed as dividend. Dividend is that portion of divisible profits that is distributed to the owners i.e. the shareholders. Retained earnings is the proportion of profits kept in, that is, reinvested in the business for the business. Shareholders always demand a higher dividend, while the management would want to retain profits for business needs. Dividend decision is to whether to distribute earnings to shareholder as dividends or retain earnings to finance long-term profits of the firm. It must be done keeping in mind the firm's overall objective of maximizing the shareholders' wealth.

1.7 ORGANIZATION OF FINANCE FUNCTION

Finance, being an important portfolio, the finance function is entrusted to top management. The Board of Directors, who are at the helm of affairs, normally constitutes a 'Finance Committee' to review and formulate financial policies. Two more officers, namely 'treasurer' and 'controller' – may be appointed under the direct supervision of CFO to assist him/her. In larger companies with modern management, there may be Vice-President or Director of finance, usually with both controller and treasurer. The organization of finance function is portrayed below

Organization of Finance Function



The terms 'controller' and 'treasurer' are in fact used in USA. This pattern is not popular in Indian corporate sector. Practically, the controller / financial controller in India carried out the functions of a Chief Accountant or Finance Officer of an organization. Financial controller who has been a person of executive rank does not control the finance, but monitors whether funds so augmented are properly utilized.

The function of the treasurer of an organization is to raise funds and manage funds. The treasurer's functions include forecasting the financial requirements, administering the flow of cash, managing credit, flotation of securities, maintaining relations with financial institutions and protecting funds and securities. The controller's functions include providing information to formulate accounting and costing policies, preparation of financial reports, direction of internal auditing, budgeting, inventory control payment of taxes, etc.

1.8 DUTIES AND RESPONSIBILITIES OF FINANCIAL MANAGER (OR) FUNCTIONS OF FINANCIAL MANAGER (OR) ROLE OF FINANCIAL MANAGER.

Finance manager is an integral part of corporate management of an organization. With his profession experience, expertise knowledge and competence, he has to play a key role in

optimal utilization of financial resources of the organization. With the growth in the size of the organization, degree of specialization of finance function increases. In large undertakings, the finance manager is a top management executive who participates in various decision making functions.

A) Determining financial needs:-

One of the most important functions of the financial manager is to ensure the availability of adequate financing, financial needs have to be assessed for different purposes. Money may be required for initial promotional expenses, fixed capital and working capital needs. Promotional expenditure includes expenditure incurred in the process of company formation.

B) Determining sources of funds:-

The financial manager has to choose source of funds. He may issue different types of securities and debenture, may borrow from a number of finance institutions and the public. The financial manager must definitely know what he is doing, workout strategies to ensure good financial health of the firm.

C) Financial analysis:-

It is the evaluation & interpretation of a firm's financial position and operation and involves a comparison and interpretation of accounting data. The financial manager has to interpret different statements.

D) Optimal capital structure:-

The financial manager has to establish an optimum capital structure and ensure the maximum rate of return on investment and the liabilities carrying – fixed charges has to be defined.

E) Cost –volume profit analysis:-

This is popularly known as the CVP relationship for this purpose fixed cost, variable cost and semi-variable cost have to be analyzed.

F) Profit planning and control:-

Profit planning and control have assumed great importance in the financial activities of modern business. Profit planning ensures the attainment of stability and growth. The break even analysis and cost volume profit analysis are important tools in profit planning and control of the firms.

G) Fixed assets management:-

A firm's fixed assets are land, building, machinery and equipment, furniture and such intangibles as patents, copy rights and goodwill. These fixed assets are justified to the extent of the utility or their production capacity.

H) Capital budgeting:-

It refers to the long-term planning for (1) investment in projects and fixed assets and (2) methods of financing the approved projects. It includes the methods of mobilization of long-term funds and their deployments in profitable projects. Capital budgeting is considered as the process of making investment decisions on capital expenditure.

I) Dividend policies:-

The dividend policy of a firm determines the magnitude of the earnings distributed to shareholders. The net operating profit or profit after tax (PAT) has to be intelligently apportioned between dividend payments, and investments. The dividend policy determines the amount of dividend payment to be made to the shareholders, the date of payments of dividends and the effect of the dividend policy on the value of the firm.

J) Acquisition and mergers:-

A merger is a transaction where two firms agree to integrate their operations on a relatively equal basis because they have resources and capabilities that together may create a stronger competitive advantage. Two or more companies combine to form either a new company or one of the combining companies survives, which is generally the acquirer.

1.9 SOURCES OF FINANCE

A) LONG TERM FINANCE

Financing means providing money for investment in the form of fixed assets and also in the form of working capital needed for day to day operations

(I) EXTERNAL SOURCES:

1. Owned capital (Preference and Equity Capital)
2. Debentures
3. Public Deposits
4. Lease Financing
5. Hire Purchase
6. Institutional Assistance
7. Government subsidies
8. Mortgage Bonds
9. Venture Capital

(II) INTERNAL SOURCES:

1. Retained earnings
2. Provision for Depreciation

EXTERNAL SOURCES:

1. Preference Shares:

Preference shares have two preferential rights. One at the time of payment of dividend and second repayment of capital at the time of liquidation of the company

The company has the following advantages by this way of source:

- No voting rights and normally has no control over the policies.
- Finance through preference shares is less costly as compared to the equity shares.

The disadvantages of raising funds by way of preference capital are:

- Compared to equity capital it is a very expensive source of financing.
- Though there is no legal obligation to pay preference dividends, skipping them can adversely affect the image of the firm in the capital market.

2. Equity Shares:

The equity shares are the main sources of finance and the owners of the company contribute it. It is the source of permanent capital since it does not have a maturity date. The holders of equity shares have a control over the working of the company. These shares are issued without creating any charge over the assets of the company.

The major advantage to raise funds through equity shares is that it does not involve any fixed obligation for payment of dividends. The disadvantage of raising funds by way of equity capital is high cost of capital. The rate of return required by equity shareholders is generally higher than the rate of return required by other investors.

3. Debentures:

Debentures are certificates issued by the company acknowledging the debt due by to its holders with or without a charge on the assets of the company. A fixed interest has to be paid regularly till the principal has been fully repaid by the company.

4. Institutional Assistance:

The Government has set up certain special financial corporation with the object of stimulating industrial development in the country. These include IFC, SFC, ICICI, IDBI etc

5. Public Deposits:

Public deposits are the another important source for the firms. Companies prefer public deposits because, these deposits carry lower rate of interest

6. Lease Finance:

Lease financing involves the acquisition of the economic use of an asset through a contractual commitment to make periodic payments called lease rentals to the person who owns the asset. Thus this is a mode of financing to acquire the use of assets.

7. Hire Purchase:

Assets involving huge amounts if other sources of long-term finance are too costly may be acquired through hire purchase.

8. Government Assistance:

The government provides finance to companies in cash grants and other forms of direct assistance, as part of its policy of helping to develop the national economy, especially in high technology industries and in areas of high unemployment. Government subsidies and concessions are other modes of financing long-term requirement. Subject to the government regulations, subsidies and concessions are granted to business enterprises.

9. Mortgage Bonds:

It is a written promise given by the company to the investor to repay a specified sum of money at a specified rate of interest at a specified time

10. Venture capital

Venture capital is the Money provided by investors to startup firms and small businesses with perceived long-term growth potential. This is a very important source of funding for startups that do not have access to capital markets. It typically entails high risk for the investor, but it has the potential for above-average returns.

INTERNAL SOURCES

1. Retained Earnings :

A company out of its profits, a certain percentage is retained that amount is reinvested into the business for its development. This is also known ploughing back of profits

2. Provision for depreciation:

Depreciation means decrease in the value of the asset due to wear and tear, lapse of time and accident. Provision for depreciation considered as one of the source of financing to business.

B] SHORT TERM SOURCES

The sources of short-term funds used for financing variable part of working capital mainly include the following:

1. Loans from Commercial Banks:

Small-scale enterprises can raise loans from the commercial banks with or without security. This method of financing does not require any legal formality except that of creating a mortgage on the assets. Loan can be paid in lump sum or in parts

2. Public Deposits:

Often companies find it easy and convenient to raise short-term funds by inviting shareholders, employees and the general public to deposit their savings with the company. It is a simple method of raising funds from public for which the company has only to advertise and inform the public that it is authorised by the Companies Act 1956, to accept public deposits.

3. Trade Credit:

Just as the companies sell goods on credit, they also buy raw materials, components and other goods on credit from their suppliers. Thus, outstanding amounts payable to the suppliers i.e., trade creditors for credit purchases are regarded as sources of finance. Generally, suppliers grant credit to their clients for a period of 3 to 6 months. Thus, they provide, in a way, short-term finance to the purchasing company.

4. Discounting Bills of Exchange:

When goods are sold on credit, bills of exchange are generally drawn for acceptance by the buyers of goods. The bills are generally drawn for a period of 3 to 6 months. In practice, the writer of the bill, instead of holding the bill till the date of maturity, prefers to discount them with commercial banks on payment of a charge known as discount.

5. Factoring:

Factoring is a financial service designed to help firms in managing their book debts and

receivables in a better manner. The book debts and receivables are assigned to a bank called the 'factor' and cash is realised in advance from the bank. For rendering these services, the fee or commission charged is usually a percentage of the value of the book debts/receivables factored. This is a method of raising short-term capital and known as 'factoring'.

6. Bank Overdraft

Overdraft is a facility extended by the banks to their current account holders for a short-period generally a week. A current account holder is allowed to withdraw from its current deposit account up to a certain limit over the balance with the bank. The interest is charged only on the amount actually overdrawn. The overdraft facility is also granted against securities.

7. Cash Credit:

Cash credit is an arrangement whereby the commercial banks allow borrowing money up to a specified-limit known as 'cash credit limit.' The cash credit facility is allowed against the security. The cash credit limit can be revised from time to time according to the value of securities. The money so drawn can be repaid as and when possible. The interest is charged on the actual amount drawn during the period rather on limit sanctioned.

Arranging overdraft and cash credit with the commercial banks has become a common method adopted by companies for meeting their short- term financial, or say, working capital requirements.

8. Advances from Customers:

One way of raising funds for short-term requirement is to demand for advance from one's own customers. Examples of advances from the customers are advance paid at the time of booking a car, a telephone connection, a flat, etc. This has become an increasingly popular source of short-term finance among the small business enterprises mainly due to two reasons. The enterprises do not pay any interest on advances from their customers. Thus, advances from customers become one of the cheapest sources of raising funds for meeting working capital requirements of companies.

9. Accrual Accounts:

Generally, there is a certain amount of time gap between incomes is earned and is actually received or expenditure becomes due and is actually paid. Salaries, wages and taxes, for

example, become due at the end of the month but are usually paid in the first week of the next month. Thus, the outstanding salaries and wages as expenses for a week helps the enterprise in meeting their working capital requirements. This source of raising funds does not involve any cost.

1.10 FINANCIAL INFORMATION SYSTEM

Financial information system is a channel and carrying and providing information to the management. A financial information system is an organized approach to collecting and interpreting information, which is usually computerized. A well-run financial information system is essential to a business, since managers need the resulting information to make decisions about how to run the organization.

A financial information system is a type of business software used to input, accumulate, and analyze financial and accounting data. It produces reports such as accounting reports, cash flow statements, and financial statement. The output produced helps in making good financial management decisions thus helping the managers run the business effectively.

Uses Financial Information System:

- Planning and control: FIS increases your capacity to schedule and forecast. With that capability, the process of allocating financial resources become much more effective, and the targets set become more realistic.
- Reporting and interpreting: FIS device is a useful tool for compare actual performance with operating plans and to report and interpret the results of operations at all levels of management.
- Evaluating and advising: FIS is to evaluate the effectiveness of policies, organisational structure and procedures in attaining the business objectives. The information provided by the financial management information system has some important qualities: It is timely, reliable, accurate, and verifiable. That makes it much easier and faster to make decisions
- Tax administration: FIS helps in administration of tax policies and procedures FIS assists in supervising all matters relating to tax accounting.
- Government reporting: FIS is a tool for supervise and coordinate the preparation of reports to government agencies. FIS helps in submission of periodical statements to Government in appropriate time.

Disadvantages

- Danger of loss or fraudulent substitution of records
- High cost of maintenance or operations
- Regular back up of various storage devices has to be done

Tools For Financial Information System

1. Cash Management

Cash management system collects information on all cash receipts and payments of a company on a real time or periodic basis. This helps the business to deposit or invest excess funds quickly.

2. Investment management

Many businesses invest their excess cash in short-term low-risk marketable securities in higher return alternatives, so that investment income may earned until the funds are required. Investment information and securities trading are available from hundreds of online sources on the internet and other networks. online investment management services help a financial manager make buying , selling , or holding decisions for each type of security so that an optimum mix of securities is developed that minimizes risk and maximizes investment income for the business.

3. Capital budgeting

The capital budgeting process involves evaluating the profitability and financial impact of proposed capital expenditures. Long term expenditure proposals for plants and equipment

4. Financial forecasting and planning

Financial forecasts concerning the economic situation, business operations, type of financing available, interest rates, and stock and bond prices to develop an optimal financial performance of a business.

1.11 FINANCIAL FORECASTING

Financial Forecasting predicts how the business will look financially in the future. Financial forecasting is the process of estimating or predicting how a business will perform in the future. The most common type of financial forecast is an income statement, however, in a complete financial model, all three financial statements are forecasted.

Advantages

- (i) It can be used as a control device in order to fix the standard of performances and evaluating the results thereof
- (ii) It helps to explain the requirement of funds for the firm together with the funds of the suppliers
- (iii) It also helps to explain the proper requirements of cash and their optimum utilisation is possible and so surplus/excess cash, if any, invested otherwise.

Forecasting Techniques

1. Percentage of Sales Method

The Percentage of Sales Method is a Financial Forecasting approach which is based on the premise that most Balance Sheet and Income Statement Accounts vary with sales. Therefore, the key driver of this method is the Sales Forecast and based upon this, Pro-Forma Financial Statements (i.e., forecasted) can be constructed and the firms needs for external financing can be identified.

2. Time-Series Analysis

This is another popular quantitative method. It involves the gathering of data over different periods for identifying trends. Then, the forecaster analyzes the trends to derive the forecasts mainly for the short-term.

3. Regression Analysis

Simple Linear Regression Method

The simple linear regression focuses on the distribution of two variables. Here, the forecaster studies the bivariate distributions and calculates the estimated values of the dependent variable according to the values of the independent variable.

Multiple Regression Method

It is an extension of the simple regression method where a variable is dependent on more than one variable/factor. For instance, sales could depend on more than just one variable. The analysis of one or more of those factors determines the sales forecasts.

Questions:**PART A**

1. Elaborate three key activities of the Financial Management.
2. “The profit maximization is not an operationally feasible criterion”. Do you agree?
3. State the reasons why profit/EPS maximization fails to be consistent with wealth maximization.
4. Discuss briefly various short term sources of finance.
5. Elaborate on the emerging role of the finance manager in India.
6. Illustrate how the finance function is typically organized in the large Organisation.
7. Explain the concept of Financial Information System.
8. Describe the role of a treasurer in an organisation.
9. Enumerate the functions of a controller in an organisation.
10. Distinguish Financial Management from Financial Accounting

PART B

1. “The goal of profit maximization does not provide an operationally useful criterion”- Explain
2. Discuss briefly various sources of Long Term finance.
3. Elaborate the scope of financial management.
4. Discuss the objectives of financial management.
5. Explain the importance of financial management.
6. Outline the methods and tools of financial forecasting.

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II. TIME VALUE OF MONEY AND LEVERAGE

2.1 TIME VALUE OF MONEY

Let's start a discussion on Time Value of Money by taking a very simple scenario. If you are offered the choice between having Rs 10,000 today and having Rs 10,000 at a future date, you will usually prefer to have Rs 10,000 now. Similarly, if the choice is between paying Rs 10,000 now or paying the same Rs 10,000 at a future date, you will usually prefer to pay Rs 10,000 later. It is simple common sense. In the first case by accepting Rs 10,000 early, you can simply put the money in the bank and earn some interest. Similarly in the second case by deferring the payment, you can earn interest by keeping the money in the bank.

The idea that money available at the present time is worth more than the same amount in the future due to its potential earning capacity is called the time value of money. This core principle of finance holds that, provided money can earn interest, any amount of money is worth more the sooner it is received. Thus, at the most basic level, the time value of money demonstrates that, all things being equal, it is better to have money now rather than later.

2.1.2 RELATIONSHIP OF INTEREST, INFLATION AND TIME VALUE OF MONEY

Reasons Why Money Can Be More Valuable Today Than In The Future

(i) Preference for Present Consumption: Individuals have a preference for current consumption in comparison to future consumption. In order to forego the present consumption for a future one, they need a strong incentive. Say for example, if the individual's present preference is very strong then he has to be offered a very high incentive to forego it like a higher rate of interest and vice versa.

(ii) Inflation: Inflation means when prices of things rise faster than they actually should. When there is inflation, the value of currency decreases over time. If the inflation is more, then the gap between the value of money today to the value of money in future is more. So, greater the inflation, greater is the gap and vice versa.

(iii) Risk: Risk of uncertainty in the future lowers the value of money. Say for example, non-receipt of payment, uncertainty of investor's life or any other contingency which may result in non-payment or reduction in payment.

(iv) Time value of money results from the concept of interest. . This core principle of finance holds that provided money can earn interest, any amount of money is worth

more the sooner it is received.

2.1.3 COMPOUND VALUE CONCEPT

Future Value Of Single Amount

Simple Interest

It may be defined as Interest that is calculated as a simple percentage of the original principal amount

$$FV_n = P(1+r)^n$$

P = principal

r = interest rate

n = number of time periods

Illustration 1 : If you invest Rs 10,000 (p) in a bank at simple interest of 7% (r) per annum, what will be the amount at the end of three (n) years?

Given : P = 10000 , r = 7%, n = 3 years

$$FV_n = P(1+r)^n$$

$$\text{Future Value after 3 years} = 10000(1+.07)^3$$

$$= \text{Rs } 12,250$$

Compound Interest

If interest is calculated on original principal amount it is simple interest. When interest is calculated on total of previously earned interest and the original principal it compound interest.

Formula

$$FV = P\left(1 + \frac{r}{m}\right)^{n*m}$$

P = principal

r = interest rate

n = number of time periods

m = no of times compounded per year

Illustration 2 : Rs 5,000 is invested at annual rate of interest of 12%. What is the amount after 6 years if the compounding is done 4 times a year?

$$FV = P(1+r/m)^{n*m}$$

$$\begin{aligned}\text{Future Value after 6 years} &= 5000(1+0.12/4)^{6*4} \\ &= 5000(1.03)^{24} \\ &= 5000(2.033) \\ &= \text{Rs } 10163\end{aligned}$$

Future Value Of An Annuity:

An annuity is a stream of regular periodic payment made or received for a specified period of time. In an ordinary annuity, payments or receipts occur at the end of each period

Formula

$$FV_{AN} = A \left[\frac{(1+r)^n - 1}{r} \right]$$

A = Annuity Amount

r = interest rate

n = number of years

Illustration 3 : Four equal annual payments of Rs 2000 are made into deposit account that pays 8% interest per year. What is the future value of annuity at the end of 4th year.

$$\text{Solution : } FV_{AN} = A \left[\frac{(1+r)^n - 1}{r} \right]$$

Given : A = 2000, r = 8%, n = 4 years

$$\begin{aligned}\text{Future value of Annuity after 4 years} &= 2000 \left[\frac{(1+0.08)^4 - 1}{0.08} \right] \\ &= 2000 (0.360/0.08) \\ &= 2000 (4.506) \\ &= \text{Rs } 9012.22\end{aligned}$$

2.1.4 PRESENT VALUE CONCEPT

Simple definition is “Present Value” is the current value of a “Future Amount”. It can also be defined as the amount to be invested today (Present Value) at a given rate over specified period to equal the “Future Amount”. Compounding converts present value

amount into future value amount similarly discounting future amount converts it into present value amount.

The present value of a sum of money to be received at a future date is determined by discounting the future value at the interest rate that the money could earn over the period. This process is known as Discounting.

Formula for Present Value (PV)

$$PV = FV \frac{1}{(1+r)^n}$$

FV = Future Value

r = rate of return

n = number of periods

Present Value of Single Amount

Illustration 4: Find the present value of Rs 10,000 to be required after 5 years if the interest rate be 9 per cent.

Solution

$$\text{Present Value} = FV \left[\frac{1}{(1+r)^n} \right]$$

$$= 10000 \left[\frac{1}{(1+0.09)^5} \right]$$

$$= 10000 \left[\frac{1}{(1.539)} \right]$$

$$= 10000 [0.6499]$$

$$= \text{Rs } 6500$$

Present Value Of An Annuity

Sometimes instead of a single cash flow the cash flows of the same amount is received for a number of years. The present value of an annuity may be expressed as follows :

$$FV_{AN} = A \left[\frac{(1+r)^n - 1}{r(1+r)^n} \right]$$

A = Annuity Amount

r = interest rate

n = number of years

When cash flows are even

Illustration 5 : You are expected to receive Rs 1000 annually for 3 years each receipt accruing at the end of the year .what is the present value of benefit ,if the discount rate is 10%?

$$\text{Solution : } FV_{AN} = A \left[\frac{(1+r)^n - 1}{r(1+r)^n} \right]$$

$$A = 1000, r = 10\%, n = 3 \text{ years}$$

$$FV_{AN} = 1000 \left[\frac{(1+.10)^3 - 1}{.10(1+.10)^3} \right]$$

$$= 1000 \left[\frac{1.331-1}{.1331} \right]$$

$$= 1000 [2.486]$$

$$= \text{Rs } 2486.85$$

When cash flows are Uneven

Illustration 6: Given the time value of money as 10%.you are required to find the present value of future cash inflows that will be received over next four years

Year	Cash Inflows
1	1000
2	2000
3	3000
4	4000

Solution :

Year	Cash Inflows	PVF	PV of Cash inflows
1	1000	0.909	909
2	2000	0.826	1652
3	3000	0.751	2253
4	4000	0.683	2732
Total Present Value of Cash Inflows			7546

Time Value and Inflation

Inflation is “a persistent, substantial rise in the general level of prices related to an increase in the volume of money and resulting in the loss of value of currency.” In basic terms, inflation means that the things we purchase get more expensive as time passes. The time value of money is also related to the concepts of inflation and purchasing power. Both factors need to be taken into consideration along with whatever rate of return may be realized by investing the money. Inflation constantly erodes the value, and therefore the purchasing power, of money. It is best exemplified by the prices of commodities such as gas or food. If, for example, you were given a certificate for Rs 100 of free Petrol in 2000, you could have bought a lot more gallons of gas than you could have if you were given Rs 100 of free petrol in 2021.

Inflation and purchasing power must be considered when you invest money because to calculate your real return on an investment, you must subtract the rate of inflation from whatever percentage return you earn on your money. If the rate of inflation is actually higher than the rate of your investment return, then even though your investment shows a nominal positive return, you are actually losing money in terms of purchasing power. For example, if you earn a 10% on investments, but the rate of inflation is 15%, you’re actually losing 5% in purchasing power each year ($10\% - 15\% = -5\%$).

Time Value and Interest Rate

Compound interest is the interest calculated on the initial principal as well as on the accumulated interest of previous periods. It can be thought of as a cycle of earning interest on interest, which will quickly multiply your money. The time value of money (TVM) is the concept that money you have now is worth more than the identical sum in the future due to its potential earning capacity. This core principle of finance holds that provided money can earn interest, any amount of money is worth more the sooner it is received.

Rule of 72/ Doubling Rule

The Rule of 72 is a quick, useful formula that is popularly used to estimate the number of years required to double the invested money at a given annual rate of return. Rule of 72 comes in handy for mental calculations to quickly gauge an approximate value. and given the annual rate of compounded return from an investment ,how many years it will take to

double the investment. The Rule of 72 is a simplified formula that calculates how long it'll take for an investment to double in value, based on its rate of return.

$$\text{Years to Double} = \frac{72}{\text{Interest Rate}}$$

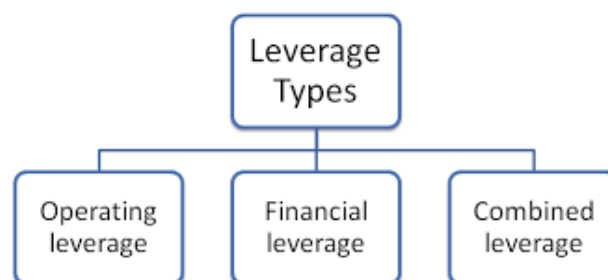
where: Interest Rate=Rate of return on an investment

2.2 LEVERAGE

In general, leverage means to use something that you already have in order to achieve something new or better. In financial terms leverage means influence of one financial variable over the other financial variable. James Horne has defined leverage as "the employment of funds which the firm has to pay a fixed cost or fixed return". If a firm is not required to pay fixed cost or fixed return there will be no leverage. The use of various financial instruments or borrowed capital, to increase the potential return of an investment is known as leverage.

- Leverage refers to the use of debt (borrowed funds) to amplify returns from an investment or project.
- Leverage is an investment strategy of using borrowed money specifically, the use of various financial instruments or borrowed capital to increase the potential return of an investment.
- Leverage is the use of debt (borrowed capital) in order to undertake investment or project. The result is to multiply the potential returns from a project.
- At the same time, leverage will also multiply the potential downside risk in case the investment does not get adequate returns.
- The company has to pay fixed cost (interest) which could still decline the company's profit. In other words increasing leverage increases the size of the return and increases the risk

2.2.2 TYPES OF LEVERAGE



OPERATING LEVERAGE:

Operating leverage arises from the existence of fixed operating expenses. So the degree of operating leverage depends upon the amount of fixed costs. If fixed costs are high even a small decline in sales can lead to a large decline in operating income. Operating leverage may be defined as the firm's ability to use fixed operating costs to magnify the effects of changes in Sales on its EBIT. Operating leverage is related with Investment activities. Operating leverage can be determined by means of cost volume analysis.

Significance of Operating Leverage:

1. It measures the sensitivity of EBIT to change in sales.
2. It is a measure of business risk.
3. It helps in studying the cost, volume and profit relationship.

Formula:

$$\text{Operating leverage} = \frac{\text{Contribution}}{\text{EBIT}}$$

Operating leverage also be defined as % of change in profits resulting from % change in sales.

$$\text{Degree of Operating leverage} = \frac{\% \text{ of change in EBIT}}{\% \text{ of change in sales}}$$

When Fixed and variable cost could not apportioned .The above formula could be used . This is a more practical formula

FINANCIAL LEVERAGE:

Financial leverage refers to the use of funds obtained by fixed cost or fixed return securities (preference and debentures) in the hope of increasing the return to equity shareholders. It may be defined as % return on equity to the percentage on capitalization. Financial leverage may be defined as the firm's ability to use fixed financial costs to magnify the effects of changes in EBIT on its EPS.

Significance of Financial Leverage:

1. It measures the sensitivity of EPS to change in EBIT.
2. It is a measure of financial risk.

3. It helps in studying the relationship between operating profit and earnings per share of the firm.

Formula:

1. If Preference Share dividend does not exist:

$$\text{Financial Leverage} = \frac{EBIT}{EBT}$$

2. If Preference Share dividend exists:

$$\text{Financial Leverage} = \frac{EBIT(1-T)}{EBIT - I(1-\text{Tax}) - D_p}$$

Financial leverage also can be defined as % of change in EPS resulting from % change in EBIT.

$$\text{Degree of Financial leverage} = \frac{\% \text{ of change in EPS}}{\% \text{ of change in EBIT}}$$

Trading on Equity

Trading on Equity is a financial process that involves taking more debt to boost the return of the shareholders. Trading on Equity occurs when a company takes new debt, in the form of bonds, preferred stock, or loans etc. The company uses those funds to acquire assets to generate a return greater than the interest cost of new debt. Trading on equity is also known as financial leverage is considered successful if the company generates a profit and a higher return on investment for the shareholders.

Benefits of Financial Leverage

The financial leverage has various advantages to the company, management, investors and financial companies. The following are some such benefits:

- **Economies of Scale:** The financial leverage helps the organizations to expand its production unit and manufacture goods on a large scale, reducing the fixed cost drastically.
- **Improves Credit Rating:** If the company take debts and can pay off these debts on time by generating a good profit from the funds availed, it secures a high credit rating and considered reliable by the lenders.

- **Favourable Cash Flow Position:** This additional capital provides an opportunity to increase the earning power of the company and hence to improve the cash flow position of the company.
- **Increases Shareholders' Profitability:** As the company expands its business through financial leverage, the scope for profitability also increases.
- **Tax Relaxation:** When the debts and liabilities burden the company, the government allows tax exemptions and benefits to it.
- **Expansion of Business Ventures:** The need for financial leverage arises when the company plans for growth and development, which is a positive step.

Limitations of Financial Leverage

There are certain drawbacks of the financial leverage which are mainly related to borrowings through debts. These are as follows:

- **High Risk:** There is always a risk of loss or failure in generating the expected returns along with the burden of paying interest on debts.
- **Adverse Results:** The outcome of such borrowings may be harmful at times if the business plan goes wrong.
- **Restrictions from Financial Institutions:** The lending financial institution usually restricts and controls the business operations to some extent.
- **High Rate of Interest:** The interest rates on the borrowed sum is generally high, which creates a burden on the company.
- **Benefits Limited to Stable Companies:** The financial leverage is a suitable option for only those companies which are stable and possess a sound financial position.
- **May Lead to Bankruptcy:** In case of unexpected loss or poor returns and huge debts or liabilities, the company may face the situation of bankruptcy.

A company must be careful while analyzing its financial leverage position because high leverage means high debts. Also, giving ownership may prove to be hazardous for the organization and even result in huge loss and business failure.

COMPOSITE LEVERAGE OR COMBINED LEVERAGE:

Combined leverage thus expresses the relationship between revenue on account Of sales and the taxable income. It helps in finding out the resulting percentage change in taxable income on account of percentage change in sales.

Formula:

$$\text{Composite leverage} = \text{Operating leverage} * \text{Financial leverage (or)} \frac{\text{Contribution}}{EBT}$$

$$\text{(or) Combined Leverage} = \frac{\text{Contribution}}{EBIT - I(1 - \text{Tax}) - Dp}$$

$$\text{(or) Combined Leverage} = \frac{\text{Contribution}(1 - T)}{EBIT(1 - T)Dp}$$

$$\text{(or) Degree of Combined Leverage} = \frac{\% \text{ of change in EPS}}{\% \text{ of change in sales}}$$

Significance of Combined Leverage:

1. It measures the sensitivity of EPS to change in sales.
2. It is a measure of both business and financial risk.
3. It helps in studying the relationship between EPS and Sales of the firm.

Favourable and Unfavourable Leverage:

When Sales minus (-) Variable Cost exceeds Contribution (or) EBIT exceeds Fixed cost bearing funds requirement, it is referred as Favorable leverage, When they do not, it is referred as Unfavorable leverage.

Illustration 7. Given the data below: Selling price per unit Rs.15, Variable cost per unit Rs.10, Fixed cost Rs.1,000, Number of units sold 800, Debenture Value is Rs 5,000 issued at 12%. Calculate the operating leverage, financial leverage and Combined Leverage.

Solution:

Particulars	Rs
Sales (15*800)	12,000
Less Variables Costs (10*800)	8,000
Contribution	4,000
Less – Fixed Costs	1,000
Earnings Before Interest and Tax	3,000
Less Interest	600
Earnings Before Tax	2,400

$$\text{Operating leverage} = \frac{\text{Contribution}}{\text{EBIT}}$$

$$= \frac{4000}{3000} = 1.33$$

$$\text{Financial Leverage} = \frac{\text{EBIT}}{\text{EBT}}$$

$$= \frac{3000}{2400} = 1.25$$

$$\text{Combined Leverage} = \frac{\text{Contribution}}{\text{EBT}}$$

$$= \frac{4000}{2400} = 1.67$$

$$\text{Combined Leverage} = \text{Operating Leverage} * \text{Financial Leverage}$$

$$= 1.33 * 1.25 = 1.67$$

2.2.4 BUSINESS RISK AND FINANCIAL RISK

Operating or Business Risk:

Risk that a business will not be able to cover its operating costs.

Operating risk is the risk associated with the operation of the firm. It refers to the chance a business's cash flows are not enough to cover its operating expenses like cost of goods sold, rent and wages. Operating cost is composed of fixed costs and variable costs. Existence of excessive fixed cost is disadvantageous to the firm. If the total revenue of a firm having a high fixed cost declines for any reason, the operating profit will reduce proportionately more.

Operating leverage refers to the percentage of fixed costs that a company has. If a business firm has more fixed costs as compared to variable costs, then the firm is said to have high operating leverage. Incurrence of fixed operating costs in the firm's income stream increases the business risk or operating risk. If a firm has high operating leverage, a small change in sales volume results in a large change in returns.

Financial Risk:

Risk that business will not be able to cover its financial costs/financial obligations. Financial risk is the risk associated with financing decisions of the firm i.e. how a company finances its

operations. The presence of debt in the capital structure creates fixed payments in the form of interest, which is a compulsory payment to be made whether the firm makes a profit or not. It increases the variability of the returns to the shareholders

When debt is used by the firm, the rate of return on equity increases because debt capital is generally cheaper. Therefore use of the debt capital has a magnifying effect on the earnings of the equity shareholders but it also adds financial risk. The variability in earnings of the equity shareholders due to presence of debt in the capital structure of a company is referred to as financial risk. The higher the amount of leverage a company has, the higher the financial risk which exists to stockholders of the company.

2.2.5 EBIT EPS ANALYSIS

EBIT (earnings before interest and taxes) is a company's net income before income tax expense and interest expenses are deducted.

EPS – Earnings per share is calculated by dividing earnings available to equity share holders with number of equity shares.

EBIT-EPS analysis examines the effect of financial leverage on the EPS with varying levels of EBIT or under alternative financial plans. It examines the effect of financial leverage on the behavior of EPS under different financing alternatives and with varying levels of EBIT. EBIT-EPS analysis is used for making the choice of the combination and of the various sources. It helps select the alternative that yields the highest EPS.

A scientific basis for comparison among various financial plans and shows ways to maximize EPS. A tool of financial planning that evaluates various alternatives of financing a project under varying levels of EBIT and suggests the best alternative having highest EPS and determines the most profitable level of EBIT’.

A firm has various options regarding the combinations of various sources to finance its investment activities. The firms may opt to be an

- i) all-equity firm (and having no borrowed funds) or
- ii) equity-preference firm (having no borrowed funds) or
- iii) any of the numerous possibility of combinations of equity, preference shares and borrowed funds.

Given a level of EBIT, a particular combination of different sources of finance will result in a particular EPS so, for different financing patterns, there would be different levels of EPS.

Statement Showing EPS

Particulars		
Sales (SPU*No of Units)		
Less Variables Costs (VC per unit * no of units)		
Contribution		
Less – Fixed Costs		
Earnings Before Interest and Tax (EBIT)		
Less Interest(I)		
Earnings Before Tax (EBT)		
Less Tax		
Earnings after Tax (EAT)		
Less Preference Dividend (Dp)		
Earnings Available to Equity Share Holders(EATES)		
No of Shares		
Earnings per Share (EPS)= EATES/No of Shares		

Illustration

Suppose, ABC Ltd. which is expecting the EBIT of Rs.1,50,000 per annum on an investment Rs.5,00,000, is considering the finalization of the capital structure or the financial plan. The company has access to raise funds of varying amounts by issuing equity share capital, 12% preference share and 10% debenture or any combination thereof. Suppose, it analyzes the following four options to raise the required funds of Rs.5,00,000.

1. By issuing equity share capital at par.
2. 50% funds by equity share capital and 50% funds by preference shares.

3. 5% funds by equity share capital, 25% by preference shares and 25% by issue of 10% debentures.

4. 25% funds by equity share capital, 25% as preference share and 50% by the issue of 10% debentures.

Assuming that ABC Ltd. belongs to 50% tax bracket, the EPS under the above four options can be calculated as follows:

Equity share capital	Rs.5,00,000	Rs.2,50,000	Rs.2,50,000	Rs.1,25,000
Preference share capital	---	2,50,000	1,25,000	1,25,000
10% Debentures	---	---	1,25,000	2,50,000
Total Funds	<u>5,00,000</u>	<u>5,00,000</u>	<u>5,00,000</u>	<u>5,00,000</u>
EBIT	1,50,000	1,50,000	1,50,000	1,50,000
- Interest	---	---	12,500	25,000
Profit before Tax	1,50,000	1,50,000	1,37,500	1,25,000
- Tax @ 50%	75,000	75,000	68,750	62,500
Profit after Tax	75,000	75,000	68,750	62,500
- Preference Dividend	---	30,000	15,000	15,000
Profit for Equity shares	75,000	45,000	53,750	47,500
No. of Equity shares (of Rs.100 each)	5000	2500	2500	1250
EPS (Rs.)	15	18	21.5	38

17

In this case, the financial plan under option 4 seems to be the best as it is giving the highest EPS of Rs.38.

Advantages

- Financial planning. Applying EBIT-EPS analysis allows earnings per share to be maximized for any given value of earnings before interest and taxes. It helps to choose the best financing plan.
- Comparative analysis. Such analysis is possible not only for a company as a whole but also for a specific product, project, department, or market.

- Determination of target capital structure. Depending on the expected EBIT, management of a company is able to determine the target capital structure for maximizing EPS.

Disadvantages

- Risk is not taken into account. EBIT-EPS analysis does not take into account the risks associated with debt financing. In other words, a higher EPS associated with using financial leverage implies a higher risk that has to be taken into account by management.
- Complexity. The more alternative financing plans are considered, the higher the complexity of the calculations.
- Limitations. The technique does not account for limitations in raising various sources of financing.

Questions:

PART A

1. How do you compute the Present Value (PV) of a Single Cash Flow?
2. Describe the concept of Time Value of Money.
3. Justify why money has time value.
4. Compare the discounting and compounding technique of Time Value of Money.
5. Assess the relationship between risk and returns
6. Discuss the significance of financial Leverage.
7. Elaborate trading on equity.
8. State the prerequisites on trade on equity.
9. Operating leverage and financial leverage are not interdependent. Comment.
10. A firm sold 20,000 units at Rs.10 per unit, the variable cost is Rs.2.5 per unit and the fixed cost is Rs.50, 000 per annum. Calculate operating leverage.

PART B

11. As a financial analyst how would you analyse the types of leverage from the point of view of financial decision.
12. Analyse the financial implication of operating financial and combined leverage.
13. Explain EBIT – EPS analysis.
14. From the following information calculate Operating leverage, financial leverage and combined leverage. Sales Rs.10,00,000, variable cost 40% on sales, fixed cost

Rs.2,00,000, Debt of Rs.10,00,000 @ 10%, 12% preference shares for Rs.10,00,000 and equity shares Rs.1,00,000. What happens if the sales increase by 40%.

15. From the following information, calculate EPS and financial BEP. The face value of share is Rs.10. The share issued at a premium of Rs.10. The firm wants to raise the funds of Rs.2, 00, 000. Debenture on 8%, Preference shares @ 8%. Income tax rate is 35%. Expected EBIT is Rs.80, 000.

Capital Structure	Financial plan I	Financial plan II	Financial plan III
Equity shares	100%	50%	50%
Debentures	-	50%	-
Preference shares	-	-	50%

16. Calculate 3 types of leverage, when fixed cost Rs.5, 000 and Rs.10, 000 respectively. Total asset Rs.30, 000, Asset Turnover ratio is two times. Variable cost is 60% on sales.

Capital Structure	Financial plan I	Financial plan II
Equity shares	Rs.30, 000	Rs.10, 000
10% Debentures	Rs.10, 000	Rs.30, 000

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III. CAPITAL BUDGETING AND COST OF CAPITAL

3.1 CAPITAL BUDGETING

The term capital budgeting or investment decision means planning for capital assets. Capital budgeting decision means the decision as to whether or not to invest in long-term projects such as setting up of a factory or installing a machinery etc. It includes the financial analysis of the various proposals regarding capital expenditure to evaluate their impact on the financial condition of the company for the purpose to choose the best out of the various alternatives.

Capital expenditure is the expenditure is incurred at one point of time where as the benefits of the expenditure are realized over a period of time. Capital budgeting can be defined as the process of deciding whether or not to commit resources to projects whose cost and benefits are spread over time periods.

Definition Of Capital Budgeting

According to Charles T. Horngren, “Capital Budgeting is long-term planning for making and financing proposed capital outlays.”

According to L.J. Gitman, “Capital Budgeting refers to the total process of generating, evaluating, selecting and following up on capital expenditure alternatives.”

Nature Of Capital Budgeting

- It is a long-term investment decision.
- It is irreversible in nature.
- It requires a large amount of funds.
- It is most critical and complicated decision for a finance manager.
- It involves an element of risk as the investment is to be recovered in future.

Importance of Capital Budgeting

All capital expenditure projects involve heavy investment of funds ,the firm from various external and internal sources raises these funds .hence it is important for a firm to plan its capital expenditure.

1. Permanent commitment of funds

The funds capital expenditure projects are not only huge but more or less permanently blocked. These are long term decision. The longer the time the greater the risk is involved. Hence careful planning is essential.

2. Irreversible in nature

In most cases, capital budgeting decision are irreversible. Once the decision for acquiring a permanent asset is taken, it is very difficult to reverse the decision. This is because it is difficult to dispose the assets without incurring heavy losses.

3. Growth and Expansion

Business firm grow, expand, diversify and acquire stature in the industry through their capital budgeting activities. The success of mobilization and deployment of funds determines the future of a firm.

4. Multiplicity of variables

Large number of factors affect the decision on capital expenditure. They make the capital expenditure decision the most difficult to make.

5. Top management activity

The net result of capital expenditure decisions automatically trusts them on the top management. Only senior managerial personnel can take these decisions and bear responsibility for them.

Factors (Criteria) Influencing Capital Expenditure Decisions:

1. Availability of funds:

This is the crucial factor affecting all capital expenditure decisions. However attractive, some projects cannot be taken up if they are too big for a firm to mobilize the needed funds.

2. Future earnings:

Every project has to result in cash inflows. The extent of the revenue's anticipated is the most significant factor which affects the choice of a project.

3. Degree of uncertainty or risk:

This level of risk involved in a project is vital for deciding its desirability.

4. Urgency :

Projects which are to be immediately taken up for firm's survival have to be treated differently from optional projects.

5. Obsolescence:

If obsolete machinery and plant exist in a firm, their replacement becomes a compulsion.

6. Competitors activities

When competitors perform certain activities, they compel a firm to undertake similar activities to withstand competition.

7. Intangible Factors:

Firm's prestige, workers' safety, social welfare etc, influence Capital budgeting which may be deemed as emotional factors.

Advantages of Capital Budgeting

1. Evaluates Investment Plans

Capital budgeting is a key tool used by management for the evaluation of investment projects. It assists in taking decisions regarding long term investments by properly analyzing investment opportunities. Using the capital budgeting techniques-risk, return and investment amount of each project is examined.

2. Identify Risk

It enables in identifying the risk associated with investment plans. Capital budgeting examines the project from different aspects to find out all possible losses and risks. It studies how these risks affect the return and growth of the business which are helpful in making an appropriate decision.

3. Chooses Investment Wisely

Capital budgeting plays an effective role in selecting a profitable investment project for the business. It is the one that decides whether a particular project is beneficial to take or not. This technique considers cash flows of investment proposal during its entire life for finding out its profitability. Companies are able to choose investment wisely by analyzing different factors in a competitive market using capital budgeting techniques.

4. Avoid Over and Under Investment

Managers use capital budgeting techniques to determine the appropriate investment amount for the business. The right amount of investment is a must for every business for earning better returns and avoiding losses. Capital budgeting analyses the firm capability and objectives for determining the right investment accordingly.

5. Maximize Shareholder's Wealth

Capital budgeting assists in maximizing the overall value of shareholders. It is a tool that enables companies to deploy their funds in the most effective way possible thereby earning huge profits. Companies are able to select investments with higher returns and lower costs which eventually raises the shareholder's wealth.

6. Control Project Expenditure

Capital budgeting focuses on minimizing the expenditure of investment projects. While examining the investment proposals, it ensures that the project has an adequate amount of inflows for meeting out its expenses and provide an anticipated return. The selection of effective investment projects helps companies in controlling their expenditure and earning better profits.

Disadvantages / Limitations of Capital Budgeting

1. Irreversible Decisions

The major limitation with capital budgeting is that the decisions taken through this process are long-term and irreversible in nature. Decisions have an impact on the long term durability of the company and require the utmost care while taking them. Any wrong capital budgeting decision would have an adverse effect on profitability and continuity of business.

2. Rely on Assumptions and Estimations

Capital budgeting techniques rely on different assumptions and estimations for analyzing investment projects. Annual cash flow and life of project estimated is not always true and may increase or decrease than the anticipated values. Decisions taken on the basis of these untrue estimations may lead businesses to losses.

3. Higher Risk

Capital budgeting decisions are riskier in nature as it involves a large amount of capital expenditure. These decisions require the utmost care as it affects the success or failure of

every business. Any wrong decisions regarding allotment of funds may lead the business to substantial losses or eventually cause a complete shutdown.

4. Uncertainty

This process is dependent upon futuristic data which is uncertain for analyzing the investment proposals. Capital budgeting anticipates the future cash inflows and outflows of the project for determining its profitability. The future is always uncertain and data may prove untrue which leads to wrong decisions.

5. Ignores Non-Financial Aspects

Capital budgeting technique considers only financial aspects and ignores all non-financial aspects while analyzing the investment plans. Non-financial factors have an efficient role in the success and profitability of the project. The real profitability of the project cannot be determined by ignoring these factors

3.1.1 CAPITAL BUDGETING TECHNIQUES

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

- I. Traditional methods
- II. Discounted Cash flow methods

I. Traditional methods

These methods are based on the principles to determine the desirability of an investment project on the basis of its useful life and expected returns. These will not take into account the concept of 'time value of money', which is a significant factor to determine the desirability of a project in terms of present value.

A) PAY-BACK PERIOD METHOD:

It is the most popular and widely recognized traditional method of evaluating the investment proposals. It can be defined, as 'the number of years required to recover the original cash out lay invested in a project'. According to Weston & Brigham, "The pay back period is the

number of years it takes the firm to recover its original investment by net returns before depreciation, but after taxes".According to James. C. Vanhorne, "The payback period is the number of years required to recover initial cash investment.

If the annual cash Inflows are constant or uniform, the pay back period can be computed by dividing cash outlay by annual cash Inflows.

$$\text{Payback Period} = \frac{\text{Initial Investment or Original Cost of the Asset}}{\text{Cash Inflows}}$$

If the cash Inflows are not uniform: Pay back period is calculated by computing cumulative cash inflows . Payback period is the period when net cash Inflows is equal to initial investment

Merits:

- It is one of the earliest methods of evaluating the investment projects.
- It is simple to understand and to compute.
- It is one of the widely used methods in small scale industry sector
- It can be computed on the basis of accounting information available from the books.

Demerits

- It does not take into account the life of the project, depreciation, scrap value Interest factor etc.
- It completely ignores cash inflows after the pay back period.
- The profitability of the project is completely ignored
- It ignores the time value of money; cash Inflows received in different years are treated equally.

B) ACCOUNTING OR AVERAGE RATE OF RETURN

Accounting Rate of Return (ARR) is the average net income an asset is expected to generate divided by its average capital cost, expressed as an annual percentage. They typically include situations where companies are deciding on whether or not to proceed with a specific investment (a project, an acquisition, etc.) based on the future net earnings expected compared to the capital cost. This method called accounting rate of return method because it fees the accounting concept of profit. i.e. income after depreciation and tax as the criterion for calculation of return.

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

Accounting Rate of return (on Original Investment)

ARR = Average Annual Profit / Initial Investment

Average Annual Profit =
$$\frac{\text{Total Profit after Depreciation and Tax}}{\text{No of Years}}$$

Accounting Rate of return (on Average Investment)

ARR = Average Annual Profit / Average Investment

Average Investment = Initial Investment/2

In terms of decision making, if the ARR is equal to or greater than the required rate of return, accept the project. If the ARR is less than the required rate of return, the project should be rejected. Higher ARR indicates higher profitability.

Merits:

- This method is easy to understand and simple to calculate.
- This method takes into account the earnings over the entire economic life of the project.
- It is really a profitability concept since it considers net earnings after depreciation.
- This method is in consistent with the conventional accounting system and easy to comprehend as it based on percentages.

Demerits:

- It ignores time value of money.
- This method ignores the risk and uncertainty factors
- It uses accounting profits and not the cash inflows in appraising the project.
- It considers only the rate of return and not the life of the project.
- Two formulas are used to compute this method. Each method gives different results. This reduces the reliability of the method.

II: Discounted cash flow methods:

The traditional method does not take into consideration the time value of money. They give equal weight age to the present and future flow of incomes. The DCF methods are based on the concept that a rupee earned today is more worth than a rupee earned tomorrow. These methods take into consideration the profitability and also time value of money. Discounted Cash flow techniques includes

- Net present value method
- Profitability Index method
- Internal rate of return method
- Modified Internal rate of return method

A) NET PRESENT VALUE METHOD:

The NPV takes into consideration the time value of money. The cash flows of different years are valued differently and made comparable in terms of present values for this the net cash inflows of various periods are discounted using required rate of return which is predetermined.

According to Ezra Solomon, “It is a present value of future returns, discounted at the required rate of return minus the present value of the cost of the investment.” NPV is the difference between the present value of cash inflows of a project and the initial cost of the project. If NPV is positive (i.e. greater than 0) Accept the project. If NPV is negative (i.e. less than 0) Reject the project. When comparing NPV values of two or more projects always select a project with greater NPV. While comparing different NPV values a high NPV value indicates higher profitability.

$$NPV = \sum \frac{CF_n}{(1 + i)^n} - \text{Initial Investment}$$

Merits:

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

Demerits:

- It is different to understand and use.
- The NPV is calculated by using the cost of capital as a discount rate. But the concept of cost of capital. If self is difficult to understood and determine.
- It does not give solutions when the comparable projects are involved in different amounts of investment.

B) PROFITABILITY INDEX METHOD:

Profitability Index (PI) or Benefit-cost ratio (B/C) is similar to the NPV approach. PI approach measures the present value of returns per rupee invested. It is observed in shortcoming of NPV that, being an absolute measure, it is not a reliable method to evaluate projects requiring different initial investments. The PI method provides solution to this kind of problem.

It can be defined as the ratio which is obtained by dividing the present value of future cash inflows by the present value of cash outlays

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

Using the PI ratio, Accept the project when $PI > 1$ Reject the project when $PI < 1$

Merits:

- PI considers the time value of money as well as all the cash flows generated by the project.
- At times it is a better evaluation technique than NPV in a situation of capital rationing especially. For instance, two projects may have the same NPV of Rs. 20,000 but project A requires an initial investment of Rs. 1, 00,000 whereas B requires only Rs. 50,000. The NPV method will give identical ranking to both projects, whereas PI will suggest project B should be preferred. Thus PI is better than NPV method as former evaluate the worth of projects in terms of their relative rather than absolute magnitude.
- It is consistent with the shareholders' wealth maximization.

Demerits:

- Though PI is a sound method of project appraisal and it is just a variation of the NPV, it has all those limitation of NPV method too

C) INTERNAL RATE OF RETURN METHOD:

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

According to Weston and Brigham "The internal rate is the interest rate that equates the present value of the expected future receipts to the cost of the investment outlay. The IRR is not a predetermined rate, rather it is to be trial and error method. It implies that one has to start with a discounting rate to calculate the present value of cash inflows. If the obtained present value is higher than the initial cost of the project one has to try with a higher rate. Like wise if the present value of expected cash inflows obtained is lower than the present value of cash flow. Lower rate is to be taken up. The process is continued till the net present value becomes Zero. As this discount rate is determined internally, this method is called internal rate of return method.

Steps

Step 1: Select 2 discount rates for the calculation of NPVs

You can start by selecting any 2 discount rates on a random basis that will be used to calculate the net present values in Step 2.

Step 2: Calculate NPVs of the investment using the 2 discount rates

You shall now calculate the net present values of the investment on the basis of each discount rate selected in Step 1.

Step 3: Calculate the IRR

Using the 2 net present values derived in Step 2, you shall calculate the IRR by applying the IRR Formula

$$IRR = r_a + \frac{NPV_a}{NPV_a - NPV_b} (r_b - r_a)$$

r_a = lower discount rate chosen
 r_b = higher discount rate chosen
 N_a = NPV at r_a
 N_b = NPV at r_b

Step 4: Interpretation

The decision rule for IRR is that an investment should only be selected where the cost of capital (WACC) is lower than the IRR.

Merits:

- It considers the time value of money
- It takes into account the cash flows over the entire useful life of the asset.
- It always suggests accepting projects with maximum rate of return.
- It is in conformity with the firm's objective of maximum owner's welfare.

Demerits:

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

Compare and Contrast NPV And IRR Methods:

Similarities Between NPV and IRR

- Both are the modern techniques of capital budgeting.
- Both are considering the time value for money.
- Both take into consideration the cash flow throughout the life of the project.

Difference between NPV and IRR

- Concept : Net Present value (NPV) discounts the stream of expected cash flows associated with a proposed project to their current value, which presents a cash surplus or loss for the project. IRR where as, the Internal Rate of Return (IRR) calculates the percentage rate at which those same cash flows result in a Net Present Value of Zero.
- Purpose: The NPV Method focuses on project surpluses .While the IRR Method focuses on the breakeven cash flow of a project.
- Expressed in: NPV is expressed in Absolute terms. Whereas, IRR is expressed in percentage terms.
- Decision Making: Decision making is easy in Net present value but not in IRR.

D) MODIFIED INTERNAL RATE OF RETURN METHOD:

The modified internal rate of return (MIRR) is the return on an investment, considering not only the cash flows of the investment, but the earnings on these cash flows based on a specific reinvestment rate. Modified internal rate of return (MIRR) is a capital budgeting tool which allows a project cash flows to grow at a rate different than the internal rate of return. Internal rate of return is the rate of return at which a project's net present value (NPV) is zero. MIRR is similar to IRR in that it also causes NPV to be zero. MIRR addresses the most significant flaw with the IRR approach i.e. that it overstates the return on a project because the IRR calculation inherently assumes that the project net cash flows are reinvested at the rate at which they are generated which is rarely the case because alternate reinvestment opportunities are not readily available. Alternatively, the MIRR considers that the proceeds from the positive cash flows of a project will be reinvested at the external rate of return. Frequently, the external rate of return is set equal to the company's cost of capital.

Decision Rule

- In case of independent projects, projects whose MIRR is greater the project's hurdle rate should be accepted.
- In case of mutually exclusive projects, the project with higher MIRR should be preferred.

Calculation

Calculating the MIRR considers three key variables:

- (1) the future value of cash in flows discounted at the reinvestment rate
- (2) the present value of cash outflows discounted at the financing rate
- (3) the number of periods.

$$\text{MIRR} = \sqrt[n]{\frac{\text{FVCF}}{\text{PVCF}}} - 1$$

Where:

- FVCF – the future value of positive cash flows discounted at the reinvestment rate
- PVCF – the present value of negative cash flows discounted at the financing rate
- n – the number of periods

Advantages

- MIRR overcomes 2 major drawbacks of IRR including the elimination of multiple IRRs in case of investments with unusual timing of cash flows and secondly the re-investment problem discussed earlier.
- Helps in the measurement of sensitivity of an investment towards variation in the cost of capital.

Limitations

- The disadvantage of MIRR is that it asks for two additional decisions i.e. determination of financing rate and cost of capital. These can be estimates again and the managers in real life may hesitate in involving these two additional estimates
- MIRR can be hard to understand for people belonging from a non-financial background. The theoretical basis for MIRR is also disputed among academics.

3.1.2 CAPITAL RATIONING:

Capital rationing is a situation where a firm has more investment proposals than it can finance. Many concerns have limited funds. Therefore, all profitable investment proposals may not be accepted at a time. In such event the firm has to select from amongst the various competing proposals, those which give the highest benefits. There comes the problem of rationing them. Thus capital rationing may be define as a situation where the management has more profitable Investment proposal requiring more amount of finance than the funds available to firms. In such a situation the firm has not only to rank the project from the highest to lowest priority

3.2 COST OF CAPITAL

Cost of capital for a firm may be defined as the cost of obtaining funds i.e.; The average rate of return that the investors in a firm would expect for supplying funds to the firm. According to Solomon Ezva,” cost of capital to the minimum required rate of earnings or the cut- off rate of capital expenditure.

Uses of Cost of Capital in Financial Decision Making

1. CAPITAL BUDGETING DECISION:

In various methods of capital budgeting, cost of capital is the key factor in deciding the project out of various proposals pending before the management.

2. DESIGNING OF CAPITAL MIX:

The mix of debt and equity increased the rate of return on equity capital, other things remaining the same. But use of debt increases, the financial risks also. The situation results in a higher cost of capital for the firm. Thus cost of capital affects the capital structure.

3. DECIDING ABOUT THE METHOD OF FINANCING:

Whenever additional finance requires, he may have a better choice of the source of finance, which bears the minimum cost of capital.

4. PERFORMANCE OF TOP MANAGEMENT: The performance of top management should be evaluated by comparing actual profitability of projects, with (a) the projected overall cost of capital and (b) the actual costs of funds raised to finance the projects.

5. OTHER AREAS:

The concept of cost of capital is also important in many other areas of decision making, such as dividend decision and working capital policy.

Specific Cost and Weighted Cost

Specific cost refers to the cost which is associated with the particular sources of capital. E.g.- Cost of Equity Weighted/ Composite cost is the combined cost of different sources of capital taken together. E.g.- Cost of debt, cost of equity & Cost of pref.shares.

3.2.1 MEASUREMENT OF SPECIFIC COST OF DIFFERENT SOURCES:

I. COST OF DEBT: (K_d)

The cost of debt is defined in terms of the required rate of return that the debt investment must yield to protect the shareholders interest.

Cost of Irredeemable Debentures Before Tax – Issued at Par, Premium or Discount

$$K_i = I/NP \times 100$$

Cost of Irredeemable Debentures After Tax – Issued at Par, Premium or Discount

$$K_d = I/NP \times 100(1-t) \text{ or } K_d = r(1-t)$$

Cost of Redeemable Debentures Before Tax – Issued at Par, Premium or Discount

$$K_i = \frac{I + \frac{1}{n}(P-NP)}{\frac{1}{2}(P + NP)}$$

Cost of Redeemable Debentures After Tax – Issued at Par, Premium or Discount

$$K_d = \frac{[I + \frac{1}{n}(P-NP)] \times (1-t)}{\frac{1}{2}(P + NP)}$$

I = Interest

NP = Net Proceeds

n = Number of years for maturity

P = Redeemable value of debentures

II. COST OF PREFERENCE SHARES (K_p):

Cost of preference shares are the fixed cost bearing securities. The dividend rate is fixed well in advance at the time of their issue

Irredeemable Preference Shares

$$K_p = D/NP$$

Redeemable Preference Shares

$$K_p = \frac{D + \frac{1}{n}(P-NP)}{\frac{1}{2}(P+NP)}$$

D = Dividend for preference share holder

NP = Net Proceeds per share = Face value + Premium – Discount – Cost of issue (if any)

n = Number of years for maturity

P = Redeemable value of Preference shares

III. COST OF EQUITY SHARES (K_e):

The cost of equity capital is the minimum rate of return that the firm must earn on the equity financed portion of an investment project in order to leave unchanged the market price of the stock.

(a) Dividend / Price Approach:

According to this approach the value of an equity share is equivalent to the present value of future dividends plus the present value of the price expected to be realized.

$$K_e = D/NP \text{ or } D/MP$$

D = Dividend Per share

NP = Net Proceeds per share = Face value + Premium – Discount – Cost of issue (if any)

MP = Market Price Per Share

(b) Dividend / Price + growth rate Approach:

This approach takes into account dividend as well as rate of growth in the dividend, which is assumed to be equal to the growth rate in earnings per share and market price per share.

$$K_e = D/NP + G$$

D = Dividend Per share

NP = Net Proceeds per share = Face value + Premium – Discount – Cost of issue (if any)

MP = Market Price Per Share

G = Growth Rate of Dividends

(c) Earnings Price ratio Approach:

This ratio establishes the relationship between earnings and market price of the shares. Shareholders capitalize a stream of unchanged earnings by the capitalization ratio of E / P in order to evaluate their holdings.

$$K_e = E / NP \text{ or } MP$$

$NP = \text{Net Proceeds per share} = \text{Face value} + \text{Premium} - \text{Discount} - \text{Cost of issue (if any)}$

$MP = \text{Market Price Per Share}$

$E = \text{Earnings Per Share}$

(d) Realised Yield Approach:

This approach is based on the rate of return actually realized for a period of time by investors in a company. Under this approach, the realized yield is discounted at the present value factor and then compared with the value of investment.

$K_e = E / NP \text{ or } MP$

IV. Cost of Retained Earnings:

Retained earnings also have opportunity cost. Opportunity cost of retained earnings is other rate of return which they can get by investing the after tax dividends in other alternative opportunities. It can be expressed as:

$K_r = K_e (1 - T) (1 - B)$

$T = \text{tax rate}$

$B = \text{Brokerage rate}$

3.2.3 WEIGHTED AVERAGE COST OF CAPITAL

Weighted average is an average of the costs of specific sources of capital employed in a business, properly weighted by the proportion, they hold in the firm's capital structure.

Book Value Weights and Market Value Weights:

The weighted cost of capital can be computed by using the book value or the market value weights. Book value weight will be understated if the market value of the share is higher than the book value and vice-versa.

Steps involved in computation of WACC

- Calculate the cost of each of the sources of finance is ascertained.
- Assigning weights to specific costs.
- Multiplying the cost of each source by the appropriate weights.
- Dividing the total weighted cost by the total weights.

Questions:**PART A**

1. Elucidate the significance of capital budgeting for a firm.
2. Despite its weaknesses, the payback period method is popular in practice. State the reasons for its popularity.
3. Demonstrate the steps included to calculate the accounting rate of return.
4. Choose which is a superior ranking criterion, profitability index or the net present value.
5. 'Debt is the cheapest source of funds.' Explain.
6. Explain the significance of cost of capital in financial decision making.
7. Differentiate explicit cost and real cost of capital.
8. "The equity capital is cost free". Do you agree?
9. Enumerate the problems in determinations of cost of capital.
10. The expected average earnings per share of a company are Rs.12.5 and current market price of share is Rs.90. What is cost of equity capital?

PART B

11. Explain the merits and demerits of the time-adjusted methods of evaluating the investment projects.
12. Examine the various Techniques of evaluating Capital Expenditure Proposals
13. Explain the need and importance of capital budgeting.
14. Determine the factors influencing capital budgeting decision.
15. Compare and Contrast NPV And IRR Methods
16. Explain the various relevant Costs in the Cost of Capital and their measurement.
17. Describe the approaches for estimating cost of equity.
18. Are retained earnings less expensive than the new issue of ordinary shares? Give your views.
19. The Ess Kay Refrigerator Company is deciding to issue 2,000,000 of Rs1,000, 14 per cent, 7 year debentures. The debentures will have to be sold at a discount rate of 3 per cent. Further, the firm will pay an underwriting fee of 3 per cent of the face value. Assume a 35 per cent tax rate. Calculate the after-tax cost of the issue. What would be the after-tax cost if the debenture were sold at a premium of Rs 30?

20. Alpha Ltd is considering a purchase of new machine. There are two alternatives Machine A and Machine B are available in the market. Each machine having initial investment Rs. 4, 00,000 The expected earnings after the tax are as follows:

Year	Machine A	Machine B
I	40,000	1,20,000
2	1,20,000	1,60,000
3	1,60,000	2,00,000
4	2,40,000	1,20,000
5	1,60,000	80,000

The company has a target of return on capital at 10%. You are required to compare the profitability of two machines and suggest your choice by using NPV method.

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IV. CAPITAL STRUCTURE AND DIVIDEND POLICY

4.1 CAPITAL STRUCTURE.

Capital structure is the mix of different sources of long-term sources such as equity shares, preference shares, debentures, long-term loans and retained earnings. The term capital structure refers to the relationship between the various long-term sources financing such as equity capital, preference share capital and debt capital. Deciding the suitable capital structure is the important decision of the financial management because it is closely related to the value of the firm. Capital structure is the permanent financing of the company represented primarily by long-term debt and equity.

Definition Of Capital Structure

- According to the definition of **Gerestenbeg**, “Capital Structure of a company refers to the composition or make up of its capitalization and it includes all long-term capital resources”.
- According to the definition of **James C. Van Horne**, “The mix of a firm’s permanent long-term financing represented by debt, preferred stock, and common stock equity”.
- According to the definition of **Prasanna Chandra**, “Capital structure is essentially concerned with how the firm decides to divide its cash flows into two broad components, a fixed component that is earmarked to meet the obligations toward debt capital and a residual component that belongs to equity shareholders. It is the composition of a firm’s financing consists of equity, preference, and debt”..

It represents the mix of different sources of long term funds such as equity shares, preference shares and long term loan, retained earnings etc. The company should select a capital structure, which will help in attaining the objectives of maximization of the shareholders wealth.

Patterns Of Capital Structure

The capital structure of a company may be of any one of the following four patterns:

- i) issuing only equity shares
- ii) issuing equity and preference shares
- iii) issuing equity and debentures
- iv) issuing equity, preference and debentures

Which of the above patterns would be most suited to the firm is dependent upon internal and external factors within which the firm operates but the main idea behind the decision is maximization of shareholders' wealth.

Objectives of Capital Structure

Decision of capital structure aims at the following two important objectives:

1. Maximize the value of the firm.
2. Minimize the overall cost of capital.

4.1.1 FACTORS DETERMINING CAPITAL STRUCTURE

- 1. Trading on Equity-** The word "equity" denotes the ownership of the company. Trading on equity means taking advantage of equity share capital to borrowed funds on reasonable basis. It refers to additional profits that equity shareholders earn because of issuance of debentures and preference shares. It is based on the thought that if the rate of dividend on preference capital and the rate of interest on borrowed capital is lower than the general rate of company's earnings, equity shareholders are at advantage which means a company should go for a judicious blend of preference shares, equity shares as well as debentures. Trading on equity becomes more important when expectations of shareholders are high.
- 2. Degree of control-** In a company, it is the directors who are so called elected representatives of equity shareholders. These members have got maximum voting rights in a concern as compared to the preference shareholders and debenture holders. Preference shareholders have reasonably less voting rights while debenture holders have no voting rights. If the company's management policies are such that they want to retain their voting rights in their hands, the capital structure consists of debenture holders and loans rather than equity shares.
- 3. Flexibility of financial plan-** In an enterprise, the capital structure should be such that there is both contractions as well as relaxation in plans. Debentures and loans can be refunded back as the time requires. While equity capital cannot be refunded at any point which provides rigidity to plans. Therefore, in order to make the capital structure possible, the company should go for issue of debentures and other loans.
- 4. Choice of investors-** The company's policy generally is to have different categories of investors for securities. Therefore, a capital structure should give enough choice to all kind of investors to invest. Bold and adventurous investors generally go for equity

shares and loans and debentures are generally raised keeping into mind conscious investors.

5. **Capital market condition-** In the lifetime of the company, the market price of the shares has got an important influence. During the depression period, the company's capital structure generally consists of debentures and loans. While in period of boons and inflation, the company's capital should consist of share capital generally equity shares.
6. **Period of financing-** When company wants to raise finance for short period, it goes for loans from banks and other institutions; while for long period it goes for issue of shares and debentures.
7. **Cost of financing-** In a capital structure, the company has to look to the factor of cost when securities are raised. It is seen that debentures at the time of profit earning of company prove to be a cheaper source of finance as compared to equity shares where equity shareholders demand an extra share in profits.
8. **Stability of sales-** An established business which has a growing market and high sales turnover, the company is in position to meet fixed commitments. Interest on debentures has to be paid regardless of profit. Therefore, when sales are high, thereby the profits are high and company is in better position to meet such fixed commitments like interest on debentures and dividends on preference shares. If company is having unstable sales, then the company is not in position to meet fixed obligations. So, equity capital proves to be safe in such cases.
9. **Sizes of a company-** Small size business firms capital structure generally consists of loans from banks and retained profits. While on the other hand, big companies having goodwill, stability and an established profit can easily go for issuance of shares and debentures as well as loans and borrowings from financial institutions. The bigger the size, the wider is total capitalization.

4.1.2 OPTIMAL CAPITAL STRUCTURE

Optimal capital structure refers to the combination of debt and equity in total capital that maximizes the value of the company. An optimal capital structure is designated as one at which the average cost of capital is the lowest which produces an income that leads to maximization of the market value of the securities.

E. F. Brigham defines—”the optimum capital structure strikes that balance between risk and return which maximises the price of the stock and simultaneously minimizes the firm’s overall cost of capital.”

A sound optimum capital structure is one which:

- (i) Maximises the worth or value of the firm
- (ii) Minimizes the cost of capital
- (iii) Maximises the benefit to the shareholders by giving best earning per share and maximum market price of the shares in the long-run
- (iv) Is fair to employees, creditors and others.

Features Of Optimal Capital Structure

The salient features of an optimal capital structure are described below:

- a) The relationship of debt and equity in an optimal capital structure is made in such a manner that the market value per equity share becomes maximum.
- b) Optimal capital structure maintains the financial stability of the firm.
- c) Under optimal capital structure the finance manager determines the proportion of debt and equity in such a manner that the financial risk remains low.
- d) The advantage of the leverage offered by corporate taxes is taken into account in achieving the optimal capital structure.
- e) Borrowings help in increasing the value of company leading towards optimal capital structure.
- f) The cost of capital reaches at its minimum and market price of share becomes maximum at optimal capital structure.

4.1.3 CAPITAL STRUCTURE THEORIES

- 1. Net Income Approach (NI)
- 2. Net operating income Approach (NOI)
- 3. Traditional Approach
- 4. Modigliani-Miller Approach (Modi-Miller Approach or MM Approach)

Definitions & Symbols

S = Total Market Value of Equity

B = Total Market Value of Debt

I = Interest

V = Total Market Value Of The Firm ($V=S+B$)

NI = Net Income Available To Equity Holders

Cost Of Debt (K_i) = I/B

$B=I/K_i$

Cost of Equity Capital (K_e) = $(D_1 \text{ Or } E_1)/P_0$

Overall Cost of Capital, K_o = $EBIT/V$

$EBIT = V \times K_o$

$K_e = K_o + (K_o - K_i) B/S$

Assumptions to all the Approaches:

1. There are only two sources of financing only equity and debentures
2. Taxes do not exists.
3. The total financing remains constant. i.e. one source can be substituted for the other but there is no additional financing.
4. The total assets of the organization remain constant.
5. All money available to equity shareholders will be distributed as dividends i.e.there are no retained earnings
6. EBIT are not expected to grow
7. Business risk remains constant
8. Firm has perpetual life

Net Income Approach (NI)

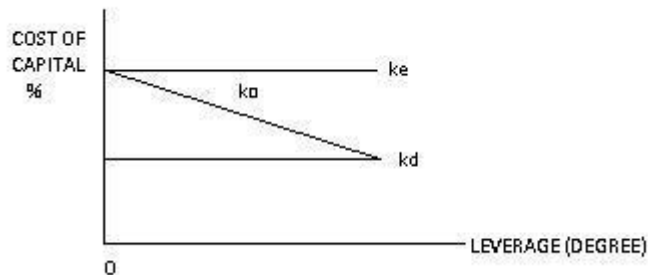
Theory: Changes in capital structure will affect the value of the firm.

Net income approach was proposed by David Durand. Net Income approach proposes that there is a definite relationship between capital structure and value of the firm. The capital structure of a firm influences its cost of capital (WACC), and thus directly affects the value of the firm. The significance of the NI approach is that a firm can lower its overall cost of capital continuously by increasing the proportion of cheaper debt capital in its capital

structure. It leads to an increase in the total value of the firm. If this process continues, the firm will be able to achieve the optimum capital structure.

Assumptions

- Cost of debt is less than cost of equity ($K_i < K_e$)
- Cost of debt remains constant
- Cost of equity remains constant



As per NI approach, higher use of debt capital will result in reduction of cost of capital. As a consequence, value of firm will be increased.

NET OPERATING INCOME THEORY

Theory : The change in the capital structure will NOT affect the value of the firm.

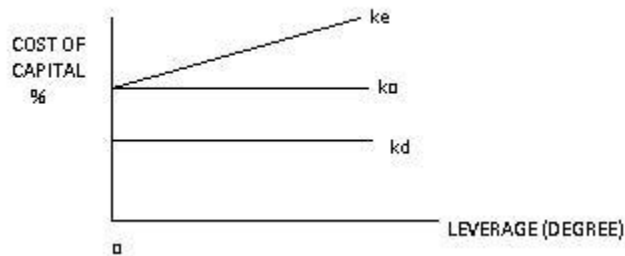
Net Operating Income Approach was advocated by David Durand in 1959. In addition to the list of common assumptions described earlier this theory is based on different set of further assumptions

Assumptions:

- There are no corporate taxes.
- The cost of debt (K_i) remains constant.
- Cost of debt is less than cost of equity ($K_i < K_e$)
- Debt increases, leverage increases. K_e starts increasing if the value of debt increases

The use of higher debt component (borrowing) in the capital structure increases the risk of shareholders. Increase in shareholders' risk causes the equity capitalization rate to increase, i.e. higher cost of equity (K_e). A higher cost of equity (K_e) nullifies the advantages gained due to cheaper cost of debt (K_d). This approach implies that there is no one optimum capital structure as the cost of capital remains the same for all debt-equity ratios. In other words, this

means that as the cost of capital is the same at all capital structures, every capital structure are optimal.



Under the NOI approach, the cost of equity, K_e , increases but the cost of debt, K_d decreases the weighted average cost of capital, K_o , and the total value of the firm, V all remain constant as leverage is changed. Thus the advantage of having cheaper debt capital is lost to the company as there will be an offsetting increasing in its cost of equity.

TRADITIONAL APPROACH THEORY

According to the NI approach, the use of the debt capital in the capital structure always affects the overall cost of capital as well as the total value of the firm whereas the NOI approach advocates that the capital structure decision is totally irrelevant to the overall cost of capital and the total value of the firm. However, the Traditional Approach is midway between the NI and NOI approaches. It, in fact, adopts some features of both the NI and NOI approaches. It compromise between the two approaches, therefore it is known as Intermediate Approach.

This approach subscribes to the view of the NI approach that cost of capital and total value of the firm are not independent of the capital structure. But it disagrees with the view of the NI approach that a firm can continuously enjoy a higher market value by increasing its debt-equity ratio. On the other hand, the traditional approach shares a feature with the NOI approach that beyond a certain value of debt-equity (or a certain degree of financial leverage), the overall cost of capital increases which results in a decrease in the total value of the firm. However, at the same time, the traditional approach disagrees with the proposition of the NOI approach that the overall cost of capital is constant for all degrees of leverage (all values of debt-equity ratio)

According to traditional approach, through judicious use of debt, the value of firm increases and overall cost of capital decreases. The rationale behind it is debt are cheaper source of finance than equity. But if debt equity ratio is further raised firm would become more risky and investors demand higher equity returns hence k_e increases. But increase in k_e may not be so high to neutralise the benefit of cheaper debt. Hence benefit of cheaper debt is still available. Value of firm is increased and over all cost is also reduced. But when debt further raises two things likely to happen owing to increased financial risk k_e will substantially rise and the firm will become very risky and creditors will also demand higher returns, so k_i will also rise. When debt is used beyond a certain point , overall cost (k_o) rise. In simple words use of debts up to a certain level is favourable and value of firm increases but beyond a level of use of debt will adversely affect it.

Stage I:

The first stage starts with introduction of debt in the firm's capital structure. As a result of the use of low cost debt the firm's net income tends to rise; cost of equity capital (K_e) rises with addition of debt but the rate of increase will be less than the increase in net earnings rate. Cost of debt (K_i) remains constant. Combined effect of all these will be reflected in increase in market value of the firm and decline in overall cost of capital (K_o).

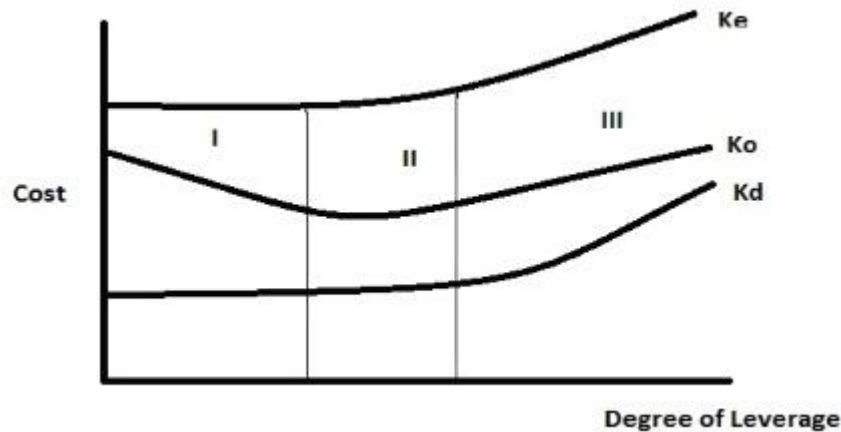
Stage II:

In the second stage further application of debt will raise costs of debt and equity capital so sharply as to offset the gains in net income. Hence the total market value of the firm would remain unchanged.

Stage III:

After a critical turning point any further dose of debt to capital structure will prove fatal. The costs of both debt and equity rise as a result of the increasing riskiness of each resulting in an increase in overall cost of capital which will be faster than the rise in earnings from the introduction of additional debt. As a consequence of this market value of the firm will tend to depress.

The overall effect of these stages suggests that the capital structure decision has relevance to valuation of firm and cost of capital. Up to favorably affects the value of a firm. Beyond that point value of the firm will be adversely affected by use of debt.



MODI GILIANI AND MILLER APPROACH (MM APPROACH)

Theory: Changes in capital structure will not affect the value of the firm.

Franco Modigliani and Merton H. Miller developed this theory, which supports the NOI approach. They argue that there is no influence of the capital structure of a firm on its cost of capital and market value. In other words, the overall cost of capital and the value of the firm are independent of the capital structure.

Assumptions

1. Capital markets are perfect.

It implies that-

(a) There is no transaction cost.

(b) There is no bankruptcy cost.

(c) Investors are free to buy, sell & switch between securities

(d) Securities are infinitely divisible.

(e) Individual investors can borrow without restrictions on the same terms and conditions as firms can.

(f) Investors are rational and behave accordingly.

2. Investors have identical expectations about future operating earnings. That is, investors have homogenous expectations.

3. Firms operate in similar business conditions and have similar business risk. All firms can be classified into homogeneous risk classes.

4. The dividend payout ratio is 100%. It implies that all earnings are distributed among shareholders as dividend.

5. There is no corporate tax. However, this assumption is removed later on.

Based on the above assumptions, M-M developed two propositions which are discussed as follows:

HOME MADE LEVERAGE:

An investor may like to shift from one firm to the other firm due to economic benefits. In case the investor wants to maintain secured ownership but runs with short of funds, it is assumed that the investor would borrow money and invest in the company which is more secured and beneficial.

According to MM approach if two companies under the same business environment have the same EBIT but have different capital structure(one may be levered and un levered) yet the value of the two firms will be equal. But if there is a small difference in the value, it will be for a temporary period only. The investors will analyse the investment and returns they get in two different companies. They would find some economic benefits if they shift from high value firm to low value firm. The process of shifting from one firm to the other is called arbitrage process.

Due to this arbitrage process, demand of shares for higher value firm will decrease. And also its value and price will decrease. On other hand the value and price of the lower firm will increase. So because of arbitrage process the value of both the firms become equal. Hence the changes in capital structure does not affect the value of the firm.

Limitations of MM Approach:

1. Perfect market conditions need not exist:

- All investors are not rational.
- Complete information may not be available to all investors
- Transaction cost will exist

- Flotation cost will exist.
2. Investors may not like to borrow money for making investment on securities.
 3. In practice the investors borrow money for the interest rate which would definitely more than the company's borrowing rate.
 4. There need not be only equity and debentures for financing. Preference shares will also exist.
 5. Taxes may exist.
 6. The total financing need not be constant

4.2 DIVIDEND DECISIONS

4.2.1 INTRODUCTION

Once a company makes a profit, it must decide on what to do with those profits. They could continue to retain the profits within the company, or they could pay out the profits to the owners of the firm in the form of dividends. The dividend policy decision involves two questions:

- 1) What fraction of earnings should be paid out, on average, over time? And,
- 2) What type of dividend policy should the firm follow? I.e. issues such as whether it should maintain steady dividend policy or a policy increasing dividend growth rate etc.

On the other hand Management has to satisfy various stakeholders from the profit. Out of the Stakeholders priority is to be given to equity share - holders as they are being the highest risk.

Definition

According to the Institute of Chartered Accountants of India, dividend is "a distribution to shareholders out of profits or reserves available for this purpose." "The term dividend refers to that portion of profit (after tax) which is distributed among the owners / shareholders of the firm."

"Dividend may be defined as the return that a shareholder gets from the company, out of its profits, on his shareholdings." In other words, dividend is that part of the net earnings of a corporation that is distributed to its stockholders. It is a payment made to the

equity shareholders for their investment in the company.

Features of Dividend

- Dividends are distributed to equity share holders.
- Dividends are variable in nature.
- Dividends are optional payments there is no legal obligations on the part of the company to pay them any fixed dividend.
- Dividends are decided by board of directors
- Equity share holders have the last claim on income(they are paid after paying interest to debentures and pref.dividend to pref sh.holders)
- Dividends cannot be paid out of depreciation reserve or any other capital reserve
- Dividend can be paid only after providing depreciation
- It can be paid in the form of cash or bonus shares

Dividend Decision:-

The finance manager has to determine the amount of profit to be distributed as dividend and the amount of profit to be retained in the business for financing its long term growth

4.2. 2 DIVIDEND THEORIES:-

It attempts to explain the (Relationship between the dividends and market value of the firm

According to one school of thought

Dividend Decision does not affect the share holders wealth and value of firm [irrelevance concept of dividend]

❖ Modigliani Miller's approach:

According to another school of thought Dividend decision affects the value of the firm and share holders' wealth [relevance concept of dividend]

❖ Walter's approach

❖ Gordon's approach

I .RELEVANCE CONCEPT OF DIVIDEND

A) WALTER'S MODEL:

Prof James. E Walter strongly supports the doctrine that the dividend decision affects the value of the firm

According to Prof. James E. Walter, in the long run, share prices reflect the present value of future+ dividends. According to him investment policy and dividend policy are inter related and the choice of a appropriate dividend policy affects the value of an enterprise.

Statement:

Changes in dividend will affect the value of the firm. The Walter's model is based on relationship between (internal rate of return)

- **If $r > k$:** The firm can earn higher profits than what a share holders can earn from their investment. Such firms are termed as growth firms.

Optimum Dividend policy: Plough back the entire earnings

Dividend payment ratio=0

Entire amount is kept as retained earnings no dividends

- **If $r < k$:** The firm earns a lower profit than what the share holders can earn from their investment they are termed as declining firm.

Optimum dividend policy: To distribute entire earning as dividend.

Dividend payment ratio:100% Entire earnings is distributed as dividend no retained earnings

- **If $r = k$:** The firm earnings is equal to the expectations of the share holders they are termed as normal firm

Optimum dividend policy: No optimum dividend policy. It does not matter whether the firm retains or distribute.

Assumptions:

- The firm will not go for external finance such as debt or fresh issue of shares. It does the entire finance through retained earnings.
- The rate of return (r) and cost of capital (k) remains constant.
- The dividend declared by the firm and earnings per share remains constant.
- The firm has a very long life.

Mathematical formula:

P_0 = Market value of the share

$$P_0 = \frac{D + \frac{r(E - D)}{k}}{k}$$

Where D = Dividend per share.

R = Rate of return

K = Cost of capital

E = Earning per share

Criticism:

Walter's model has subject to various criticisms many of its assumptions are unrealistic.

- Walter's assumption that financial requirements of a firm are met only by retained earnings is seldom true in real world situations. Firms do raise funds by debentures, eq.sha whenever they are in need of money.
- R may not constant:- The firm tend to choose more profitable projects, hence in real life r also changes.
- Similarly k may also not remain constant. The cost of capital may vary based on market conditions
- The firm may not have a perpetual life .The firm may wind up due to external and internal reasons.

B) GORDONS MODEL:

The value of a share, like any other financial asset, is the present value of the future cash flows associated with ownership. On this view, the value of the share is calculated as the present value of an infinite stream of dividends.

Myron Gordon's Dividend Growth Model explains how dividend policy of a firm is a basis of establishing share value. Gordon's model uses the dividend capitalization approach for stock valuation. Myron Gordon relates the market value of the firm to the dividend policy.

Assumptions:

- No external financing:- The firm does not go for external financing.
- Constant return:- Rate of return(R) remains constant.
- Constant cost of capital:- K remains constant.
- Perpetual firm:- The firm has perpetual life.
- The firm is an all equity firm & it has no debt.
- No taxes:- Corporate taxes do not exist.
- Constant retention:- The retention ratio once decided remains constant. Thus growth rate is constant forever.
- Cost of capital is greater than growth rate $K > br=g$.
K = cost of capital
g = growth rate

Statement:

According to this model change in dividend will affect the value of the firm.

Value of firm

$$P_0 = \frac{E(1-b)}{k-g}$$

Where P_0 is market price of the share.

E = earnings per share.

b = retention ratio.

g = growth rate ($g=b*r$).

k = cost of capital.

r = rate of return.

There are 3 kinds of firm

- Growth firm($r>k$).
- Normal firm($r=k$).
- Declining firm($k<r$).

Criticism:

- Firms may raise funds by external sources also.
- R may not be constant always.
- K may not be constant always.
- Firm might not have perpetual life.
- Growth in dividend is not constant.
- Meaningful value is obtained when $k > g$. In other situations value of firm cannot be calculated.

REVISED GORDON'S MODEL**The bird in the hand augments:**

Gordon concludes that in a normal firm where $r=k$. Dividend policy does not effect value of shares. But in revised model Gordon states that dividend will effect the value of the firm even in normal firm. Investors behaving rationally are risk averse Prefer easily dividend which are certain than the rate dividends which are uncertain hence the investors prefer to avoid uncertainty and willing to pay higher price for the shares which gives greater current dividend other things held constant.

To conclude Gordon: A normal firm($r=k$) must also payout dividends to get a higher market price.

II. IRRELEVANCE CONCEPT OF DIVIDEND**C) MODIGLIANI AND MILLER APPROACH (MM APPROACH):**

Modigliani and miller states that the price of shares of a firm is determined by its earning capacity and investment decision and never by its dividend decision.

According to the MM hypothesis, market value of a share before dividend is declared is equal to the present value of dividends paid plus the market value of the share after dividend is declared.

1.3.1 Assumptions:

- Capital markets are perfect.
- Investors behave rationally.
- There is no flotation or transaction costs.

- There are either no taxes or no difference between tax rates applicable to capital gains or dividends.
- Information is freely available to investors.
- The firm has a fixed investment policy.
- Risk or uncertainty does not exist. Investors are able to forecast future prices and dividends with certainty.
- Shares are infinitely divisible.

Statement:-

Payment of dividends will not affect the value of shares.

Formulae:-

$$1) \quad P_0 = \frac{D_1 + P_1}{1 + K_e}$$

$$2) \quad P_1 = P_0 (1 + K_e) - D_1$$

$$3) \quad \text{No of shares to be issued}$$

$$\Delta n P_1 = I - (E - nD_1)$$

Where E = earnings, nD_1 = Dividend \times no. of shares, I = investment

$$4) \quad \text{Value of firm}$$

$$nP_0 = \frac{P_1 (n + \Delta n) - I + E}{1 + K_e}$$

$$P_0 = \frac{D_1 + P_1}{1 + K_e}$$

Where P_0 :- Prevailing market value of share

D_1 :- Dividend after one year

P_1 :- market value of share after one year

K_e :- Cost of capital

$$P_1 = P_0 (1 + K_e) - D_1$$

Computation of no. of shares to be issued

$$m \cdot P_1 = I - (X - nD_1)$$

m:- no of shares to be issued

P₁:- Price at which new shares to be made

I:- amount of investment required

X:- Total net profit of the firm during the period

nD₁:- Total dividends paid during the period after problems

PROOF:

Step1:-

MKT value of the shares in the beginning of the period is equal to the present value of dividend at end and mkt value of shares at end

$$P_0 = \frac{D_1 + P_1}{1 + K_e} = \frac{P_1}{1 + K_e} + \frac{D_1}{1 + K_e}$$

D₁:- Dividend at end

P₁:- mkt value of share at end

K_e:- Cost of capital

1+k_e:- Since taken after one year present value of money is considered

Step2:- Value of firm would be = no. of shares * mkt values of shares.

$$n \cdot P_0 = nP_0 = \frac{n(D_1 + P_1)}{1 + K_e}$$

$$nP_0 = \frac{nD_1 + nP_1}{1 + K_e}$$

Step 3:- Assuming that there is no external financing. The firm's internal source of finance also falls short hence fresh issue of shares has to be made

Δn=no of new shares issued at the end of period 1/Additional shares issue

$$nP_0 = \frac{nD_1 + nP_1 + \Delta n P_1}{1 + K_e} - \Delta n P_1$$

$$nP_0 = \frac{nD_1 + (n + \Delta n) P_1 - \Delta n P_1}{1 + K_e} \quad \text{Eqn (1)}$$

Step 4:

$\Delta n P_1$ = No. of new shares * MV of shares at end

$$\Delta n P_1 = I - (E - nD_1)$$

$$\Delta n P_1 = I - e + nD_1 \quad \text{Eqn (2)}$$

I:- Investment required

E:- Earnings/net profit

nD_1 :- Total dividend

$E - nD_1$ = Retained earnings.

Sub (2) in (1)

$$nP_0 = \frac{nD_1 + (n + \Delta n) P_1 - (I - e + nD_1)}{1 + K_e}$$

$$nP_0 = \frac{\cancel{nD_1} + (n + \Delta n) P_1 - I + e - \cancel{nD_1}}{1 + K_e}$$

$$nP_0 = \frac{(n + \Delta n) P_1 - I + e}{1 + K_e}$$

Since D_1 is not found in the formula of value of shares / firm . It is evident that dividend has no effect in the valuation of shares. Thus MM approach concludes that dividend has no effect in the valuation of share price.

Criticism:-

- 1) Perfect capital market does not exist for the following reasons.
 - All investors are not logical while making investment.
 - Shares are not infinitely divisible (they are available in market lots).
 - Transaction cost exists.
 - Flotation cost exists.

- Financial institutions are able to influence market decisions and investors buy & sell when FI's buy and sell.
 - All investors do not get perfect information. FI's get better information compared to individual investors.
 - Taxation Exists: Different rates of taxes on capital gains and dividend. Capital gains are charged at a lower rate than dividend.
- 2) The investment policy of the firm changes due to changes in return costs and market conditions.
 - 3) Business risk of the firm will change because of changes in investment policies.

4.2.3 DIVIDEND POLICIES:-

"Dividend policy means the practice that management follows in making dividend payout decisions, or in other words, the size and pattern of cash distributions over the time to shareholders.". In other words, dividend policy is the firm's plan of action to be followed when dividend decisions are made. It is the decision about how much of earnings to pay out as dividends versus retaining and reinvesting earnings in the firm.

Types of dividend policy

There are 4 types of dividend policy

- a. Regular dividend policy
- b. Stable dividend policy
- c. Irregular dividend
- d. Zero dividend policy

Regular dividend policy: In this type of dividend policy the investors get dividend at usual rate. Here the investors are generally retired persons or weaker section of the society who want to get regular income. This type of dividend payment can be maintained only if the company has regular earning.

Merits of Regular dividend policy:

- It helps in creating confidence among the shareholders.
- It stabilizes the market value of shares.

- It helps in maintaining the goodwill of the company.
- It helps in giving regular income to the shareholders.

Stable dividend policy/ stability of dividends: Here the payment of certain sum of money is regularly paid to the shareholders.

Merits of stable dividend policy:

- It helps in creating confidence among the shareholders.
- It stabilizes the market value of shares.
- It helps in maintaining the goodwill of the company.
- It helps in giving regular income to the shareholders.

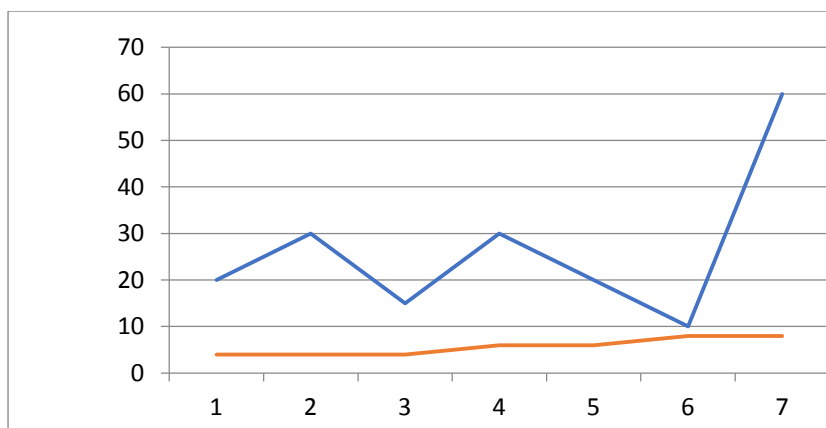
Forms of stability of dividend:-(or) Policies for declaring dividend

- 1) Constant dividend per share.
- 2) Constant payout.
- 3) Constant dividend per share plus extra dividend.

i) Constant dividend per share:-

The policy of paying a fixed amount per share as dividend irrespective of fluctuations in the earnings. The policy does not imply that DPS will never increase. When the earnings increases and expects to maintain that level, the annual dividend may also increased.

Year	EPS	DPS
1	20	4
2	30	4
3	15	4
4	30	6
5	20	6
6	10	8
7	60	8
8	40	8



Advantages:

- Dividends are stable.
- Preferred by FIs.
- Mkt price would be stable to certain extent.

Disadvantages:

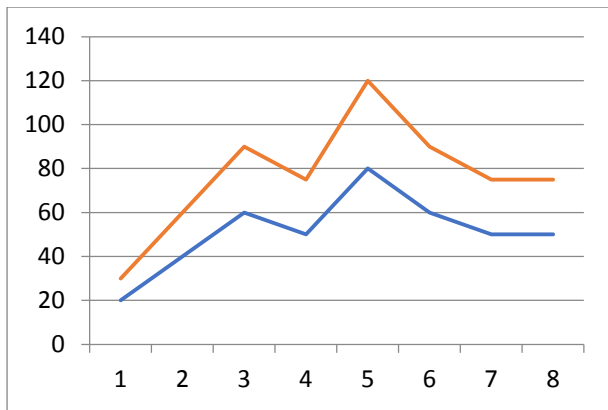
- Difficult to maintain such policy from earnings fluctuating year to year.
- Investors feel they don't get dividend proportionate to earnings.
- When earnings are high, but proportionate dividends were not given it declines market price. In practice when a company has good earnings in a year it earmarks the surplus into dividend equalization reserve so that they can easily payout the constant dividend even in bad time.

ii) Constant payout ratio:-

A certain percentage of net earnings is paid by way of dividends to share holders every year. In such a policy amount of dividend fluctuates in direct proportion with earnings of the company.

Illustration:- Assume 50% payout ratio

year	EPS	DPS
1	20	10
2	40	20
3	60	30
4	50	25
5	80	40
6	60	30
7	50	25
8	50	25



Advantages:

- No boredom dividends are existing.
- Dividend equalization need not be maintained.
- Dividends are proportionate to earnings.

Disadvantages:

- No stability in dividends.
- Financial institutions do not prefer.
- Market price will also fluctuate.

iii) Constant DPS + extra dividend :-

In this policy, the firm usually pays fixed dividend per share holders. However in period of market prosperity additional dividend is paid over the regular dividend. The extra dividend is cut by the firm as soon as the normal conditions return

Advantages:-

- No boredom excitement in dividends

Disadvantages:-

- Uncertainty about the extra dividends for which investors are generally not prepared.

c) Irregular dividend policy: as the name suggests here the company does not pay regular dividend to the shareholders. The company uses this practice due to following reasons:

- Due to uncertain earning of the company.
- Due to lack of liquid resources.
- The company sometime afraid of giving regular dividend.
- Due to not so much successful business.

d) Zero dividend policy

All surplus earnings are invested back into the business. Such a policy is common during the growth phase. It should be reflected in increased share price.

When growth opportunities are exhausted (no further positive NPV projects are available):

- cash will start to accumulate
- a new distribution policy will be required.

Dividend is paid only if no further positive NPV projects available. This may be popular for firms in the growth phase or without easy access to alternative sources of funds.

However: cash flow is unpredictable for the investor and gives constantly changing signals regarding management expectations.

4.2.4 FACTORS AFFECTING DIVIDENDS:

- 1) External factors
- 2) Internal factors

EXTERNAL FACTORS:-

- 1) **General state of economy:-** In case of uncertain economic conditions management may like to retain the whole or part of firm earnings to preserve firm's liquidity similarly even during periods of periods firm would like to retain if the firm has larger investment opportunity
- 2) **State of capital market:-** If the firm has easy access to the capital market it would follow a liberal dividend policy. If it doesn't have a easy access to capital market then it is likely to adopt a more conservative policy.
- 3) **Legal Restrictions:-** A firm has certain legal restriction as per company acts regarding payment of dividend. Some of the restrictions are
 - Dividend can be paid out of the current profits only after paying to debenture holders & preference share holders.
 - A company is not entitled to pay dividends unless providing for depreciation.
 - Depreciation reserve or general reserve can't be used to pay dividends.
- 4) **Contractual Restrictions:-** Lenders of the firm generally restrict the dividend payments in order to protect their interest, esp. when the firm is experiencing profitability or liquidity problems.

- 5) **Tax policy:-** Tax policy followed the govt. also affects the dividend policy for eg. If the govt. provides tax incentives for retaining longer share of dividends then the management may be inclined to retain a larger amount of firm earnings.

INTERNAL FACTORS:

- 1) **Desire of share holders:** The desire of share holders plays a major role in determining dividend policies. Wealthy investors (capital gains)(low pay out ratio retain). Investors like institutional, retired persons, small investors expect a regular dividend
- 2) **Financial needs of the company:-** If profitable investment opportunities exist it is better to retain earnings. In case of no good opportunities for investment the firm can distribute higher dividends.
- 3) **Nature of earnings:-** Firms have less competition (monopoly) earning a stable income can have a higher payout ratio as compared to firms having higher competition and fluctuating earnings
- 4) **Desire of control:-** In the firms desire for control then it should have a low dividend payout ratio. If the firm has higher dividend payout ratio it would affect firms ability to invest in profitable opportunity, in such a situation the firm has to go for fresh issue or loans from FIs in both the cases firm control is diluted. Hence if a firm desires for a higher control, it has to retain and distribute low dividends
- 5) **Liquidity position:-** If the firm's liquidity position is good it can afford to pay higher dividends. If the firm's liquidity is low then it has to pay either low dividends or distribute bonus shares.

4.2.5 FORMS OF DIVIDENDS

1) Cash Dividend:-

The dividend is paid in the cash. Adequate cash resources are required to pay in form of cash dividend most popular.

2) Property Dividend:-

In such a case it is paid in the form of assets other than cash generally companies products are distributed as dividends. This is not popular in India.

3) Stock Dividend:-

This is next to cash dividend in popularity. The company issues its own shares to share holders in addition to cash dividends. This is popularly known as “Issue of bonus shares”.

4) Bond Dividend:-

In case the company does not have sufficient funds to pay it pays dividend in the form of bonds. The bond holders get regular interest on their bonds as well as bond money on due date. Not popular in India.

BONUS SHARES:

Bonus means extra dividend paid when this dividend is paid in form of shares it is termed as bonus shares. Issue of bonus shares does not affect the capital structure of the company.

Benefits of bonus shares:-

(A) For Investors

- 1) Immediately Realizable: Bonus shares can be sold in the market immediately after a shareholder gets it.
- 2) Not taxable: Bonus shares are not taxable.
- 3) Increase in future Income: Shareholders will get dividend on more shares than earlier in future.
- 4) Good Image increases the value in market: Bonus shares create very good image of the company and the shares. Thereby it results into increase in the value of the share in the market.

(B) For Company:

- 1) Economical: It is an inexpensive mode of raising capital by which cash resources of company can be used for some other expansion project.
- 2) Wider Marketability: When bonus shares are issued, market price of share is automatically reduced which increases its wider marketability.
- 3) Increase in Credit Worthiness: Issuing bonus shares mean capitalisation of profits and capitalisation of profits always increases the credit worthiness of the company to borrow funds.
- 4) More realistic Balance Sheet: Balance Sheet of the company will reveal more realistic picture after the issue of bonus shares.

- 5) **More Capital Availability:** After issuing bonus shares, more capital will be available and hence more capital can be utilised for more expansion works.
- 6) **Unaltered Liquidity Position:** Liquidity cash position of the company will remain unaltered with the issue of bonus shares because issue of bonus shares does not result into inflow or outflow of cash.

Disadvantages of Issue of Bonus Shares:

- 1) **Rate of dividend decline:** The rate of dividend in future will decline sharply, which may create confusion in the minds of the investors.
- 2) **Speculative dealing:** It will encourage speculative dealings in the company's shares.
- 3) **Forgoes Cash equivalent:** When partly paid up shares are converted into fully paid-up shares, the company forgoes cash equivalent to the amount of bonus so applied for this purpose.
- 4) **Lengthy Procedure:** Prior approval of central government through SEBI must be obtained before the bonus share issue. The lengthy procedure, sometime may delay the issue of bonus shares.

4.2.6 LEGAL AND PROCEDURAL ASPECTS OF PAYMENT OF DIVIDEND:

1. Right to Recommend the Dividend

The right to recommend a dividend lies with the Board of directors. Only when the Board recommends a dividend, the shareholders can declare a dividend in the general meeting.

2. Right to Declare a Dividend

Only the shareholders in the Annual General Meeting can declare the dividend.. The shareholders, by passing a resolution in the general meeting, can declare the dividend.

3. Payable out of Profits Only

The company can declare and pay a dividend only where there is a profit. In other words, dividend is payable only out of profits. If there is no profit, there can be no distribution of dividend. The Companies Act provides that a dividend can be paid only

- Out of the profits of the Current financial year, or.
- Out of the profits of the previous years, or
- Out of moneys provided by the Central or State Governments for the purpose of paying a dividend.

4. Provision for Depreciation

It is already stated that a dividend can be declared only out of profits after providing for depreciation for the current year and also for all the arrears of depreciation or loss in any previous year [Sec. 205 of Companies Act].

5. Setting off the Previous Losses

If any loss is incurred in any previous year after 1960, such loss should be set off against the profits of the current year before declaring a dividend [Sec. 205(1)(b)].

6. Payable Only in Cash

The dividend is payable only in cash. However, a company is not prohibited from capitalizing its profits or reserves by the issue of bonus shares or by making partly paid up shares into fully paid up shares.

7. Transfer to Reserves

It is also provided in the Companies Act that every company before declaring any dividend should transfer a certain percentage not exceeding 10% of the profit, to the reserves of the company.

8. Time Limit for Payment

When a dividend is declared, it should be paid within 30 days from the date of declaration. The dividend when declared shall become a debt due from the company. If the company does not pay the dividend within the period, every person who is a party to the default is punishable with simple imprisonment up to seven days and also with a fine.

9. Unpaid Dividend Account

If a dividend is declared but not paid within 7 days from the date of expiry of the 30 days, should transfer the amount of unpaid dividend to a separate account with any Scheduled Bank opened under the style “Unpaid Dividend Account of.....Company Ltd“.

10. Transfer to General Revenue Account :

Any amount transferred to the Unpaid Dividend Account, which remains unpaid or unclaimed for a period of three years, should be transferred by the company to the General Reserve Account of the Central Government.

Questions:

PART A

1. Elaborate the Arbitrage process with an illustration.
2. Elucidate the features of an optimum capital structure.
3. Enumerate the essentials of a sound capital mix.
4. Differentiate Net Income approach and Net Operating Income approach.
5. “There is nothing like an optimal capital structure for the firm.” Comment.
6. Discuss the bird-in-the-hand argument for paying current dividends.
7. Explain how high payout and low payout policies affect future earnings, dividends and growth.
8. Describe the types of Dividend Policies.
9. Determine the factors influencing dividend payments of a firm.
10. State the advantages of issuing bonus shares

PART B

11. Critically examine the Net Income and Net Operating Income approaches of capital structure.
12. Describe traditional approach on the relationship between capital structure and value of firm.
13. “The total value of firm remains unchanged regardless of the variation in its financial mix”. Discuss the statement and point out the role of arbitraging process and homemade leverage.
14. Assume EBIT Rs.50,000, value of debt is Rs.2 00,000, K_i is 10%, K_e is 15%.
What will be the impact on the value of the firm and overall cost of capital in the following cases assuming when K_i and K_e remains the same?
 - a) When the debt raises to Rs.3,00,000
 - b) When the debt decreases to Rs 1,00,000
15. “Walter’s and Gordan’s models are essentially based on the same assumptions. Thus, there is no basic difference between the two models.” Do you agree or not? Why?
16. “According to Walter’s model the optimum payout ratio can be either zero or 100 per cent.” Explain the circumstances when this is true.
17. Explain Miller–Modigliani’s dividend irrelevance hypothesis.
18. Discuss the legal and procedural aspects of payment of dividend.

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V. WORKING CAPITAL MANAGEMENT

5.1 INTRODUCTION

Working capital management is the fund available for meeting day-to-day requirements of an enterprise. It is a fact that a part of the fixed or permanent capital is invested in assets, which are kept in the business permanently or for a longer period, for the purpose of earning profit. Similarly, yet another part of permanent capital available for supporting the day-to-day normal operations, is known as working capital. The working capital produces various costs namely materials, wages and expenses. These costs usually lead to production and sales in case of manufacturing concerns and sales alone in others. In accounting, 'working capital is the difference between the inflow and outflow of funds' or it denotes excess amount of current assets over the value of current liabilities.

5.2 CONCEPTS OF WORKING CAPITAL:

Gross concept:

Gross (concept) working capital is the amount of funds invested in the various components of current assets. Current assets includes cash in hand, cash at bank, short term investments, debtors, bills receivable, stock of raw materials, work in progress, stock of finished goods, prepaid expenses and advance payment of expenses and other assets which are converted into cash within one year.)

Net concept:

Net working capital refers to the excess of current assets over its current liabilities. Current liabilities are those liabilities, which are expected to mature for payment within an accounting year. Current liabilities includes creditors, bills payable, outstanding expenses and income received in advance.

Types of working capital

1. Permanent working capital
2. Temporary working capital.
3. Gross working capital
4. Net working capital

Gross Working Capital

According to this concept, whatever funds are invested are only in the current assets. This concept expresses that working capital is an aggregate of current assets. The amount of current liabilities is not deducted from the total current assets. This concept is also referred to as “Current Capital” or “Circulating Capital”.

Net Working Capital

Net working capital refers to the excess of current assets over its current liabilities. Current liabilities are those liabilities, which are expected to mature for payment within an accounting year. Current liabilities includes creditors, bills payable, outstanding expenses and income received in advance. Net working capital can be positive or negative. A positive net working capital will arise when current assets exceed current liabilities. A negative net working capital will arise when current liabilities exceed current assets.

Net Working Capital = Current assets – Current liabilities.

Permanent working capital

This refers to minimum amount of investment required in all current assets at all times to carryout minimum level of activity. In other words, it represents the current assets required over the entire life of the business. Tandon committee has referred to this type of working capital as ‘Core current assets’ or ‘Hard-core working capital’. The need for investment in current assets may increase or decrease over a period of time according to the level of production. Some amount of permanent working capital remains in the business in one form or another.

Temporary Working Capital

Depending upon the production and sales, the need for working capital over and above permanent working capital will change. The changing working capital may also vary on account of seasonal changes or price level changes or unanticipated conditions. For example, raising the prices of materials, labour rate and other expenses may lead to an increase in the amount of funds invested in the stock of raw materials, work-in-progress as well as in finished goods. Sometimes additional working capital may be required to face the cut-throat competition in the market. Sometimes when the company is planning for special advertisement campaigns organised for promotional activities or increasing the sales,

additional working capital may have to be financed. All these extra capital needed to support the changing business activities are called temporary, fluctuating or variable working capital.

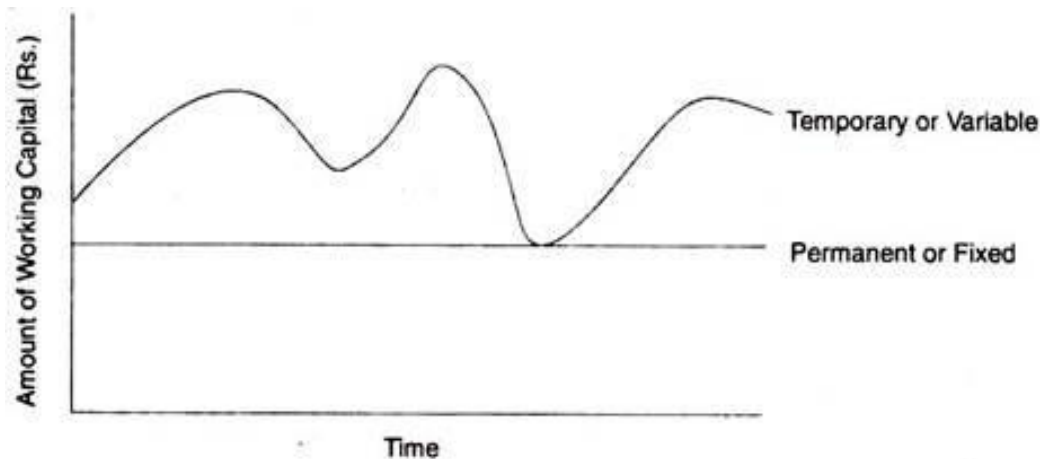


Fig. 3.1 : Permanent and Temporary Working Capital

5.3 NEED FOR WORKING CAPITAL

The basic objective of financial management is to maximize the shareholders' wealth. This is possible only when the company increases the profit. Higher profits are possible only by way of increasing sales. However sales do not convert into cash instantaneously. So some amount of funds is required to meet the time gap arrangement in order to sustain the sales activity, which is known as working capital. In case adequate working capital is not available for this period, the company will not be in a position to sustain stocks as it is not in a position to purchase raw materials, pay wages and other expenses required for manufacturing goods to be sold. Working capital, thus, is a life-blood of a business. As a matter of fact, any organization, whether profit oriented or otherwise, will not be able to carry on day-to-day activities without adequate working capital.

Problems of inadequate working capital

Proper management of working capital is very important for the success of an enterprise. It should be neither large nor small, but at the optimum level. In case of inadequate working capital, a business may suffer the following problems.

1. Purchase of Raw Materials

Availing the cash discount from the suppliers (creditors) or on favourable credit terms may not be available from creditors due to shortage of funds. For e.g. This situation arises when the suppliers supply the goods on two months credit allowing 5% cash discount, if it is payable within the 30 days. In the above situation, if a person buys material for Rs. 10,000 by availing the cash discount, he has to pay only Rs 9500 [10,000 – 500]. This is possible only with the help of adequate working capital.

2. Credit Rating

When the financial crisis continues due to shortage of funds [working capital], the credit worthiness of the company may be lost, resulting in poor credit rating.

3. Seizing Business Opportunity

Due to lack of adequate working capital, the company is not in a position to avail business opportunity during boom period by increasing the production. This opportunity can be availed only if it is having sufficient amount of working capital. This will result in loss of opportunity profit.

4. Duration of Operating Cycle

The duration of operating cycle is to be extended due to inadequate working capital. E.g. If the company's duration of operating cycle is 45 days when a company is having sufficient amount of working capital, due to delay in getting the material from the suppliers and delay in the production process, it will have to extend the duration of operating cycle. Consequently, this results in low turnover and low profit.

5. Maintenance of plant and machinery

Due to lack of adequate working capital, plant and machinery and fixed assets cannot be repaired, renovated, maintained or modernized in an appropriate time. This results in non-utilisation of fixed assets. Moreover, inadequate cash and bank balances will curtail production facilities.

6. Higher Interest

In order to account for the emergency working capital fund, the company has to pay higher rate of interest for arranging either short-term or long-term loans.

7. Low Return on Investment (ROI)

Inadequate working capital will reduce the working capital turnover, which results in low return on investment.

8. Liquidity verses profitability

Inadequate working capital may result in stock out of cost, reduced sales, loss of future sales, loss of customers, and loss of goodwill, down time cost, idle labour, idle production and finally results in lower profitability.

9. Dividend policy

A study of dividend policy cannot be possible unless and otherwise the organization has sufficient available funds. In the absence of proper planning and control, the company's inadequate working capital will cause the above said problems.

Dangers of Excessive Working capital:

Excessive working capital raises the following problems:

1. A Company may be tempted to overtrade and lose heavily.
2. A Company may keep very big inventories and tie up its funds unnecessarily.
3. There may be an imbalance between liquidity and profitability.
4. A Company may enjoy high liquidity and, at the same time, suffer from low profitability.
5. High liquidity may induce a company to undertake greater production, which may not have a matching demand.
6. A Company may invest heavily in its fixed equipment, which may not be justified by actual sales or production. This may result in over-capitalization.
7. Large volume of funds not being used productively.
8. The availability of excess working capital may lead to carelessness about costs and therefore, to inefficiency of operations.

5.4 DETERMINANTS OF WORKING CAPITAL

There are no uniform rules or formulae to determine the working capital requirements in a firm. A firm should not plan its working capital neither too much nor too low. If it is too high it will affect profits. On the other hand if it is too low, it will have liquidity problems. The

total working capital requirements is determined by a wide variety of factors. They also vary from time to time. Among the various factors, the following are necessary.

1. Nature of business

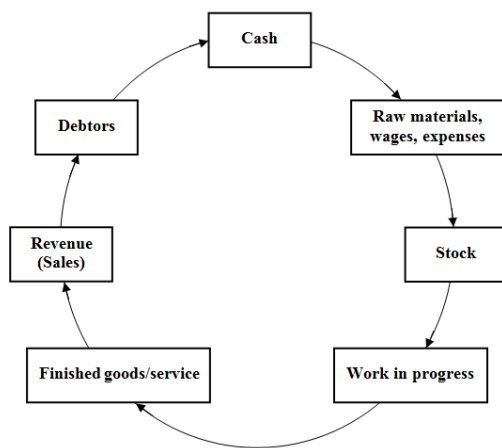
Business depending upon its nature classified in to Manufacturing, Trading and Financial Institutions. The working capital requirements of an organization are basically influenced by the nature of its business. The trading and financial institutions require more working capital rather than fixed assets because these firms usually keep more varieties of stock to satisfy the varied demands of their customers. The public utility service organisations require more fixed assets rather than working capital because they have cash sales only and they supply only services and not products. Thus, the amounts tied up with stock and debtors are almost zero. Generally, manufacturing business needs, more fixed assets rather than working capital. Further, the working capital requirements also depend on the seasonal products.

2. Size of the business

Another important factor is the size of the business. Size of the business means scale of operation. If the operation is on a large scale, it will need more working capital than a firm that has a small-scale operation.

3. Operating cycle

The term “production cycle” or “manufacturing cycle” refers to the time involvement from cash to purchase of raw materials and completion of finished goods and receipt of cash from sales. If the operating cycle requires a longer time span between cash to cash, the requirement of working capital will be more because of larger tie up of funds in all the processes. If there is any delay in a particular process of sales or collection there will be further increase in the working capital requirements. A distillery is to make a relatively heavy investment in working capital. A bakery will have a low working capital.



Operating cycle

$$O = (R + W + F + D) - C$$

Where

O = Duration of operating cycle

R = Raw material average storage period

W = Average period of work-in-progress

F = Finished goods average storage period

D = Debtors Collection period

C = Creditors payment period

4. Production policy

The requirements of working capital are also determined by production policy. When the demand for the product is seasonal, inventory must be accumulated during the off-season period and this leads to more cost and risks. These firms, which manufacture variety of goods, will have advantages of keeping low working capital by adjusting the production according to season.

5. Turnover of Working capital

The speed of working capital is also influenced by the requirements of working capital. If the turnover is high, the requirement of working capital is low and vice versa.

6. Credit Terms

The level of working capital is also determined by credit terms, which is granted to customers as well as available from its creditors. More credit period allowed to debtors will result in high book debts, which leads to high working capital and more bad debts. On the other hand liberal credit terms available from creditors will lead to less working capital.

7. Growth and Expansion

As a company grows and expands logically, it requires a larger amount of working capital. Other things remaining same, growing industries need more working capital than those that are static.

8. Price level changes

Rising prices would necessitate the organization to have more funds for maintaining the same level of activities. Raising the prices in material, labour and expenses without proportionate changes in selling price will require more working capital. When a company raises its selling prices proportionally there will be no serious problem in the working capital.

9. Operating efficiency

Though the company cannot control the rising price in material, labour and expenses, it can make use of the assets at a maximum utilisation with reduced wastage and better coordination so that the requirement of working capital is minimised.

10. Other factors

Level of taxes: In this respect the management has no option. If the government increases the tax liability very often, taxes have to be paid in advance on the basis of the profit on the current year and this will need more working capital.

Dividend policy: Availability of working capital will decrease if it has a high dividend payout ratio. Conversely, if the firm retains all the profits without dividend, the availability of working capital will increase. In practice, although many firms earn profit, they do not declare dividend to augment the working capital.

5.5 SOURCES OF WORKING CAPITAL

The sources of short-term funds used for financing variable part of working capital mainly include the following:

1. Loans from Commercial Banks:

Small-scale enterprises can raise loans from the commercial banks with or without security. This method of financing does not require any legal formality except that of creating a mortgage on the assets. Loan can be paid in lump sum or in parts. Bank finance is made available to small- scale enterprises at concessional rate of interest. Hence, it is generally a

cheaper source of financing working capital requirements of enterprise. However, this method of raising funds for working capital is a time-consuming process.

2. Public Deposits:

Often companies find it easy and convenient to raise short-term funds by inviting shareholders, employees and the general public to deposit their savings with the company. It is a simple method of raising funds from public for which the company has only to advertise and inform the public that it is authorised by the Companies Act 1956, to accept public deposits. The main merit of this source of raising funds is that it is simple as well as cheaper. But, the biggest disadvantage associated with this source is that it is not available to the entrepreneurs during depression and financial stringency.

3. Trade Credit:

Just as the companies sell goods on credit, they also buy raw materials, components and other goods on credit from their suppliers. Thus, outstanding amounts payable to the suppliers i.e., trade creditors for credit purchases are regarded as sources of finance. Generally, suppliers grant credit to their clients for a period of 3 to 6 months. Thus, they provide, in a way, short-term finance to the purchasing company.

4. Discounting Bills of Exchange:

When goods are sold on credit, bills of exchange are generally drawn for acceptance by the buyers of goods. The bills are generally drawn for a period of 3 to 6 months. In practice, the writer of the bill, instead of holding the bill till the date of maturity, prefers to discount them with commercial banks on payment of a charge known as discount.

5. Factoring:

Factoring is a financial service designed to help firms in managing their book debts and receivables in a better manner. The book debts and receivables are assigned to a bank called the 'factor' and cash is realised in advance from the bank. For rendering these services, the fee or commission charged is usually a percentage of the value of the book debts/receivables factored. This is a method of raising short-term capital and known as 'factoring'. On the one hand, it helps the supplier companies to secure finance against their book debts and receivables, and on the other, it also helps in saving the effort of collecting the book debts.

6. Bank Overdraft

Overdraft is a facility extended by the banks to their current account holders for a short-period generally a week. A current account holder is allowed to withdraw from its current deposit account up to a certain limit over the balance with the bank. The interest is charged only on the amount actually overdrawn. The overdraft facility is also granted against securities.

7. Cash Credit:

Cash credit is an arrangement whereby the commercial banks allow borrowing money up to a specified-limit known as 'cash credit limit.' The cash credit facility is allowed against the security. The cash credit limit can be revised from time to time according to the value of securities. The money so drawn can be repaid as and when possible. The interest is charged on the actual amount drawn during the period rather on limit sanctioned.

Arranging overdraft and cash credit with the commercial banks has become a common method adopted by companies for meeting their short- term financial, or say, working capital requirements.

8. Advances from Customers:

One way of raising funds for short-term requirement is to demand for advance from one's own customers. Examples of advances from the customers are advance paid at the time of booking a car, a telephone connection, a flat, etc. This has become an increasingly popular source of short-term finance among the small business enterprises mainly due to two reasons. The enterprises do not pay any interest on advances from their customers. Thus, advances from customers become one of the cheapest sources of raising funds for meeting working capital requirements of companies.

9. Accrual Accounts:

Generally, there is a certain amount of time gap between incomes is earned and is actually received or expenditure becomes due and is actually paid. Salaries, wages and taxes, for example, become due at the end of the month but are usually paid in the first week of the next month. Thus, the outstanding salaries and wages as expenses for a week help the enterprise in meeting their working capital requirements. This source of raising funds does not involve any cost.

5.6 APPROACHES FOR DETERMINING AN APPROPRIATE WORKING CAPITAL FINANCE MIX

Hedging Approach

Hedging Approach is also known as matching approach. This approach classifies the requirements of total working capital into two categories:

- (i) Permanent or fixed working capital which is the minimum amount required to carry out the normal business operations. It does not vary over time.
- (ii) Temporary or seasonal working capital which is required to meet special exigencies. It fluctuates over time.

The hedging approach suggests that the permanent working capital requirements should be financed with funds from long-term sources while the temporary or seasonal working capital requirements should be financed with short-term funds.

Conservative Approach:

This approach suggests that the entire estimated investments in current assets should be financed from long-term sources and the short-term sources should be used only for emergency requirements. According to this approach, the entire estimated requirements will be financed from long-term sources. The short-term funds will be used only to meet emergencies.

The distinct features of this approach are:

- (i) Liquidity is severally greater;
- (ii) Risk is minimized; and
- (iii) The cost of financing is relatively more as interest has to be paid even on seasonal requirements for the entire period.

Trade off Between the Hedging and Conservative Approaches:

The hedging approach implies low cost, high profit and high risk while the conservative approach leads to high cost, low profits and low risk. Both the approaches are the two extremes and neither of them serves the purpose of efficient working capital management. A trade-off between the two will then be an acceptable approach. The level of trade off may differ from case to case depending upon the perception of risk by the persons involved in

financial decision-making. However, one way of determining the trade off is by finding the average of maximum and the minimum requirements of current assets or working capital. The average requirements so calculated may be financed out of long-term funds and the excess over the average from the short-term funds.

Aggressive Approach:

The aggressive approach suggests that the entire estimated requirements of current asset should be financed from short-term sources and even a part of fixed assets investments be financed from short-term sources. This approach makes the finance-mix more risky, less costly and more profitable.

5.7 MANAGEMENT OF WORKING CAPITAL

5.7.1 CASH MANAGEMENT

Cash is a key part of working capital management. Companies need to carry sufficient levels of cash in order to ensure they can meet day-to-day expenses. Cash is also required to be held as a cushion against unplanned expenditure, to guard against liquidity problems. It is also useful to keep cash available in order to be able to take advantage of market opportunities. The cost of running out of cash may include not being able to pay debts as they fall due which can have serious operational repercussions, including the winding up of the company if it consistently fails to pay bills as they fall due. However, if companies hold too much cash then this is effectively an idle asset, which could be better invested and generating profit for the company. The firm faces a balancing act between liquidity and profitability.

Objectives of Cash Management

1. **Fulfil Working Capital Requirement:** The organization needs to maintain ample liquid cash to meet its routine expenses which possible only through effective cash management.
2. **Planning Capital Expenditure:** It helps in planning the capital expenditure and determining the ratio of debt and equity to acquire finance for this purpose.
3. **Handling Unorganized Costs:** There are times when the company encounters unexpected circumstances like the breakdown of machinery. These are unforeseen expenses to cope up with; cash surplus is a lifesaver in such conditions.
4. **Initiates Investment:** The other aim of cash management is to invest the idle funds in the right opportunity and the correct proportion.

5. **Better Utilization of Funds:** It ensures the optimum utilization of the available funds by creating a proper balance between the cash in hand and investment.
6. **Avoiding Insolvency:** If the business does not plan for efficient cash management, the situation of insolvency may arise. It is either due to lack of liquid cash or not making a profit out of the money available.

Functions of Cash Management

1. **Investing Idle Cash:** The company needs to look for various short term investment alternatives to utilize surplus funds.
2. **Controlling Cash Flows:** Restricting the cash outflow and accelerating the cash inflow is an essential function of the business.
3. **Planning of Cash:** Cash management is all about planning and decision making in terms of maintaining sufficient cash in hand and making wise investments.
4. **Managing Cash Flows:** Maintaining the proper flow of cash in the organization through cost-cutting and profit generation from investments is necessary to attain a positive cash flow.
5. **Optimizing Cash Level:** The organization should continuously function to maintain the required level of liquidity and cash for business operations.

Cash Flow Management Techniques

1. **Accelerating Collection of Accounts Receivable:** One of the best ways to improve cash inflow and increase liquid cash by collecting the debts and dues from the debtors readily.
2. **Stretching of Accounts Payable:** On the other hand, the company should try to extend the payment of dues by acquiring an extended credit period from the creditors.
3. **Cost Cutting:** The company must look for the ways of reducing its operating cost to maintain a good cash flow in the business and improve profitability.
4. **Regular Cash Flow Monitoring:** Keeping an eye on the cash inflow and outflow, prioritizing the expenses and reducing the debts to be recovered, makes the organization's financial position sound.
5. **Wisely Using Banking Services:** The services such as a business line of credit, cash deposits, lockbox account and sweep account should be used efficiently and intelligently.
6. **Upgrading with Technology:** Digitalization makes it convenient for the organizations to maintain the financial database and spreadsheets to be assessed from

anywhere anytime.

Limitations of Cash Management

1. Cash management is a very time consuming and skilful activity which is required to be performed regularly.
2. As it requires financial expertise, the company may need to hire consultants or other experts to perform the task by paying administrative and consultation charges.
3. Small business entities which are managed solely, face problems such as lack of skills, knowledge, time and risk-taking ability to practice cash management.

Cash Management Strategies

1. Business Line of Credit: The organization should opt for a business line of credit at an initial stage to meet the urgent cash requirements and unexpected expenses.
2. Money Market Fund: While carrying on a business, the surplus fund should be invested in the money market funds. These are readily convertible into cash whenever required and yield a considerable profit over the period.
3. Lockbox Account: This facility provided by the banks enable the companies to get their payments mailed to its post office box. This lockbox is managed by the banks to avoid manual deposit of cash regularly.
4. Sweep Account: The organizations should avail the facility of sweep accounts which is a mix of savings and fixed deposit account. Thus, the minimum balance of the savings account is automatically maintained, and the excess sum is transferred to the fixed deposit account.
5. Cash Deposits (CDs): If the company has a sound financial position and can predict the expenses well along with availing of a lengthy period, it can invest the surplus cash in the cash deposits. These CDs yield good interest, but early withdrawals are liable to penalties.

Cash management models

Cash management models are aimed at minimising the total costs associated with movements between a company's current account (very liquid but not earning interest) and their short-term investments (less liquid but earning interest).

The models are devised to answer the questions:

- at what point should funds be moved?
- how much should be moved in one go?

Baumol cash management model

Baumol noted that cash balances are very similar to inventory levels, and developed a model based on the economic order quantity (EOQ).

Assumptions:

- Cash use is steady and predictable
- Cash inflows are known and regular
- Day-to-day cash needs are funded from current account
- Buffer cash is held in short-term investments.

The formula calculates the amount of funds to inject into the current account or to transfer into short-term investments at one time:

$$Q = \sqrt{\frac{2C_0D}{C_H}}$$

where:

C_0 = transaction costs (brokerage, commission, etc.)

D = demand for cash over the period

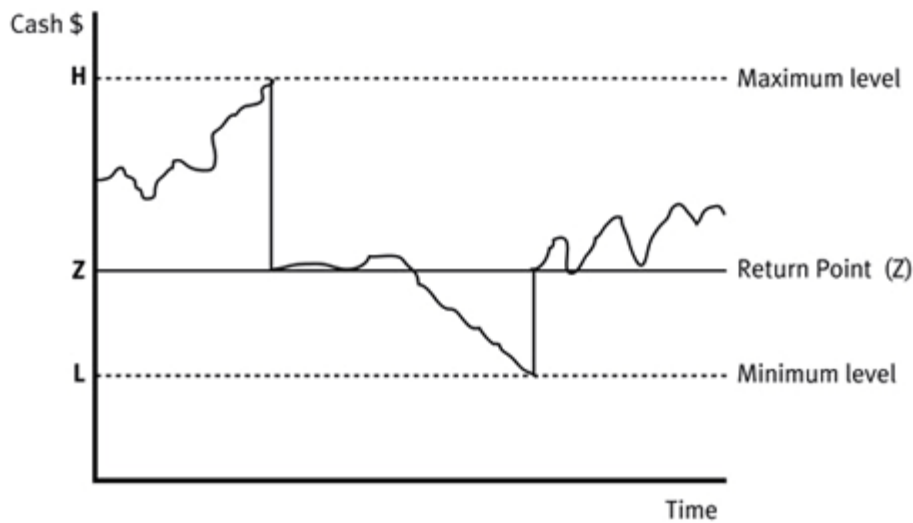
C_H = cost of holding cash.

The model suggests that when interest rates are high, the cash balance held in non-interest-bearing current accounts should be low. However its weakness is the unrealistic nature of the assumptions on which it is based.

Miller-Orr cash management model

The Miller-Orr model is used for setting the target cash balance for a company. The diagram below shows how the model works over time.

- The model sets higher and lower control limits, H and L , respectively, and a target cash balance, Z .
- When the cash balance reaches H , then $(H-Z)$ dollars are transferred from cash to marketable securities, i.e. the firm buys $(H-Z)$ dollars of securities.
- Similarly when the cash balance hits L , then $(Z-L)$ dollars are transferred from marketable securities to cash.



5.7.2 STOCK / INVENTORY MANAGEMENT

Inventory may be defined a stock of goods, commodities or other economic resources that are stored or reserved for smooth and efficient running of business. The inventory may be kept in any one of the following forms:

1. Raw material
2. Work-in progress
3. Finished goods

If an order for a product is receive, we should have sufficient stock of materials required for manufacturing the item in order to avoid delay in production and supply. Also there should not be over stock of materials and goods as it involves storage cost and wastage in storing. Therefore inventory control is essential to promote business. Maintaining inventory helps to run the business smoothly and efficiently and also to provide adequate service to the customer. Inventory control is very useful to reduce the cost of transportation and storage.

A good inventory system, one hasto address the following questions quantitatively and qualitatively.

- What to order?
- When to order?
- How much to order?
- How much to carry in an inventory?

Objectives of inventory management/Significance of inventory management

- To maintain continuity in production.
- To provide satisfactory service to customers.
- To bring administrative simplicity.
- To reduce risk.
- To eliminate wastage.
- To act as a cushion against high rate of usage.
- To avoid accumulation of inventory.
- To continue production even if there is a break down in few machinery.
- To ensure proper execution of policies.
- To take advantages of price fluctuations and buy economically.

Costs involved in inventory

1. Holding Cost (Carrying or Storage Cost):

It is the cost associated with the carrying or holding the goods in stock. It includes storage cost, depreciation cost, rent for godown, interest on investment locked up, record keeping and administrative cost, taxes and insurance cost, deterioration cost, etc.

2. Ordering Cost:

Ordering cost is associated with cost of placing orders for procurement of material or finished goods from suppliers. It includes, cost of stationery, postage, telephones, travelling expenses, handling of materials, etc.

3. Purchase Cost/Production Cost:

When the organization purchases materials from other suppliers, the actual price paid for the material will be called the purchase cost. When the organization produces material in the factory, the cost incurred for production of material is called as production cost

4. Shortage Cost:

If the inventory on hand is not sufficient to meet the demand of materials or finished goods, then it results in shortage of supply. The cost may include loss of reputation, loss of customer, etc.

Inventory Control Techniques:

- A. Economic order quantity
- B. Fixation of stock levels
- C. ABC Analysis
- D. Just in Time (JIT)

A. Economic order quantity

The EOQ is a company's optimal order quantity that minimizes its total costs related to ordering, receiving, and holding inventory. It is the optimum order quantity for which total inventory cost is minimum. The EOQ formula is best applied in situations where demand, ordering, and holding costs remain constant over time. One of the important limitations of the economic order quantity is that it assumes the demand for the company's products is constant over time.

The formula for EOQ is:

$$\text{Economic Order Quantity} = \sqrt{\frac{2SD}{H}}$$

where:

Q=EOQ units

D=Demand in units (typically on an annual basis)

S=Order cost (per purchase order)

C=Holding costs (per unit, per year)

B. Fixation of stock levels

Fixation of various inventory levels facilitates initiating of proper action in respect of the movement of various materials in time so that the various materials may be controlled in a proper way. However, the following levels would be fixed

- **Maximum level :** It indicates the level above which the actual stock should not exceed. If it exceeds, it may involved unnecessary blocking of funds in inventory

Maximum Inventory = EOQ + Buffer stock

- **Minimum Level** : It indicates the level below which the actual stock not reduce, If it reduces, it may involve the risk of non-availability of material whenever it is required.
Minimum Inventory level = Buffer stock
Buffer stock: To face the uncertainties in consumption rate and lead time, an extra stock is maintained
- **Reorder level**: It is the level between maximum and minimum inventory at which purchasing or manufacturing activities must start from replenishment.
Reorder level = Buffer stock+ Lead time demand
Lead time is the time taken by supplier to supply goods . Lead time demand it is the demand for goods in the organization during lead time.
Buffer stock = (Maximum Lead time – Average Lead time) x Demand per month
- **Danger Level**: This is the level fixed below minimum level. If the stock reaches this level, it indicates the need to take urgent action in respect of getting the supply. At this stage, the company may not be able to make the purchases in the systematic manner but may have to make rush purchases which may involve higher purchase cost.

C.ABC Analysis (Always Better Control)

- A - High value items
- B - Moderate value items
- C - Low value items

ABC analysis is one of the methods for classification of materials. It is based on Parelo's law that a few high usage value items constitute a major part of the inventory while a large bulk of items constitute to very low usage value.

Significance of ABC analysis

ABC analysis is a very useful technique to classify the materials.

- The control procedure is based on which category the item belongs to.
A = Tight control
B = Moderate control
C = Very little control.
- The inventory to be maintained is again based on the category
A = Low Inventory
B = Moderate Inventory

C = High Inventory.

- The number of suppliers is also based on the category to which it belongs.

A = Many suppliers

B = Moderate No. of suppliers

C = Few suppliers.

D. Just in Time (JIT) systems

JIT is a series of manufacturing and supply chain techniques that aim to minimise inventory levels and improve customer service by manufacturing not only at the exact time customers require, but also in the exact quantities they need and at competitive prices. In JIT systems the balancing act is dispensed with. Inventory is reduced to an absolute minimum or eliminated altogether. Aims of JIT are:

- a smooth flow of work through the manufacturing plant
- a flexible production process which is responsive to the customer's requirements
- reduction in capital tied up in inventory.

This involves the elimination of all activities performed that do not add value = waste. JIT attempts to eliminate waste at every stage of the manufacturing process.

A JIT manufacturer looks for a single supplier who can provide high quality, frequent and reliable deliveries, rather than the lowest price. In return, the supplier can expect more business under long-term purchase orders, thus providing greater certainty in forecasting activity levels. Very often the suppliers will be located close to the company. Smaller, more frequent deliveries are required at shorter notice. JIT therefore has inventory holding costs which are close to zero, however, inventory ordering costs are high.

5.7.3 DEBTORS/RECEIVABLES MANAGEMENT

Managing debtors / receivables is a key aspect of working capital management. The objectives of accounts receivable management are to ascertain the optimum level of trade credit to offer customers and to manage that credit. The amount of credit represents a balance between two factors: profit improvement from sales obtained by allowing credit and the cost of credit allowed.

Importance of receivables management

Allowing credit to customers will encourage sales, or at least the absence of the availability

of credit will encourage customer to select an alternative supplier offering more favourable credit terms. On the contrary, Allowing too much credit, or not managing the credit policy carefully enough, could result in irrecoverable debts. This represents a loss of income to the company, affecting both profitability and cash flow.

Credit Policy

As part of the management of accounts receivable, a company must establish a credit policy. This policy will be influenced by:

- Demand for the company's products
- Competitors' terms
- Risk of irrecoverable debts
- Financing costs
- Costs of credit control.

A firm must establish a policy for credit terms given to its customers. Ideally the firm would want to obtain cash with each order delivered, but that is impossible unless substantial settlement (or cash) discounts are offered as an inducement. It must be recognised that credit terms are part of the firm's marketing policy. If the trade or industry has adopted a common practice, then it is probably wise to keep in step with it.

A credit policy has four key aspects:

- (1)Assess creditworthiness.
- (2)Credit limits.
- (3)Invoice promptly and collect overdue debts.
- (4)Monitor the credit system.

- **Assess creditworthiness**

To minimise the risk of irrecoverable debts occurring, a company should investigate the creditworthiness of all new customers immediately and should continue to assess existing customers periodically. Information for assessing creditworthiness may come from a variety of sources, such as bank references, trade references, competitors, published information, credit reference agencies. company sales records or credit scoring.

- **Credit limits**

Credit limits should be set for each customer to reflect both the amount of credit available and the length of time allowed before payment is due. A ledger account should be set up and

monitored for each customer.

- **Invoicing and collecting overdue debts**

A credit period only begins once an invoice is received so prompt invoicing is essential. If debts are allowed to go overdue, the risk of default increases, therefore a system of follow-up procedures is required.

- **Monitoring the system**

The position of receivables should be regularly reviewed as part of managing overall working capital and corrective action taken when needed. Methods used in monitoring the credit system would include aged debt analysis, financial ratios and statistical data.

Cost associated with extension of credit(receivables)

1. Capital costs: Maintenance of accounting receivables results in blocking for the firm's financial resources in them. This is because there is a time lag between the sale of goods to customers and the payment by them. The firm has, therefore, to arrange for additional funds to meet its own obligations such as payment to employees, suppliers of raw materials etc. While waiting for payments from its customers. Additional funds may either be raised from outside or out of profits retained in the business. In both cases the firm incurs a cost. In the former case, the firm has to pay interest to the outsider while in the latter case, there is opportunity cost to the firm.

2. Administrative cost: The firm has to incur additional administrative costs for maintaining accounts receivables in the form of salaries to the staff kept for maintains accounting records relating to customers, cost of conducting investigations regarding potential credit customers to determine their credit worthiness, etc.

3. Collection cost: The firm has to incur costs for collecting payments from its credit customers. Sometimes, additional steps may have to be taken to recover money from defaulting customers.

4. Defaulting cost: Sometimes after making all serious efforts to collect money from defaulting customers, the firm may not be able to recover the overdue because of the inability of the customers. Such debts are treated as bad debts and have to be written off since they can not be realised.

5. Other cost: If the extension of credit through receivables worked out to the firm, its

production and sales volume will be increases. Those will makes the firm to incur additional production and selling cost

5.8 FINANCING WORKING CAPITAL BY BANKS:

The following points highlight committees involved in financing working capital by banks,

1. Dehejia Committee
2. Tandon Committee
3. Chore Committee
4. Marathe Committee

5.8.1 . DEHEJIA COMMITTEE REPORT:

National Credit Council constituted a committee under the chairmanship of Shri V.T. Dehejia in 1968 to ‘determine the extent to which credit needs of industry and trade are likely to be inflated and how such trends could be checked’ and to go into establishing some norms for lending operations by commercial banks.

- The committee was of the opinion that there was also a tendency to divert short-term credit for long-term assets.
- Although committee was of the opinion that it was difficult to evolve norms for lending to industrial concerns, the committee recommended that the banks should finance industry on the basis of a study of borrower’s total operations rather than security basis alone.
- The Committee further recommended that the total credit requirements of the borrower should be segregated into ‘Hard Core’ and ‘Short-term’ component. The ‘Hard Core’ component which should represent the minimum level of inventories which the industry was required to hold for maintaining a given level of production should be put on a formal term loan basis and subject to repayment schedule.
- The committee was also of the opinion that generally a customer should be required to confine his dealings to one bank only.

5.8.2. TANDON COMMITTEE REPORT:

Reserve Bank of India set up a committee under the chairmanship of Shri P.L. Tandon in July 1974. The terms of reference of the Committee were:

- (1) To suggest guidelines for commercial banks to follow up and supervise credit from the point of view of ensuring proper end use of funds and keeping a watch on the safety of advances;
- (2) To suggest the type of operational data and other information that may be obtained by banks periodically from the borrowers and by the Reserve Bank of India from the leading banks;
- (3) To make suggestions for prescribing inventory norms for the different industries, both in the private and public sectors and indicate the broad criteria for deviating from these norms ;
- (4) To make recommendations regarding resources for financing the minimum working capital requirements;
- (5) To suggest criteria regarding satisfactory capital structure and sound financial basis in relation to borrowings;
- (6) To make recommendations as to whether the existing pattern of financing working capital requirements by cash credit/overdraft system etc., requires to be modified, if so, to suggest suitable modifications.

The committee was of the opinion that:

- (i) Bank credit is extended on the amount of security available and not according to the level of operations of the customer,
- (ii) Bank credit instead of being taken as a supplementary to other sources of finance is treated as the first source of finance.

Although the Committee recommended the continuation of the existing cash credit system, it suggested certain modifications so as to control the bank finance. The banks should get the information regarding the operational plans of the customer in advance so as to carry a realistic appraisal of such plans and the banks should also know the end-use of bank credit so that the finances are used only for purposes for which they are lent. The recommendations of the committee regarding lending norms have been suggested under three alternatives. According to the first method, the borrower will have to contribute a minimum of 25% of the working capital gap from long-term funds, i.e., owned funds and term borrowing; this will give a minimum current ratio of 1.17: 1.

Under the second method the borrower will have to provide a minimum of 25% of the total current assets from long-term funds; this will give a minimum current ratio of 1.33: 1. In the

third method, the borrower's contribution from long-term funds will be to the extent of the entire core current assets and a minimum of 25% of the balance current assets, thus strengthening the current ratio further.

5.8.3 . CHORE COMMITTEE REPORT:

The Reserve Bank of India in March, 1979 appointed another committee under the chairmanship of Shri K.B. Chore to review the working of cash credit system in recent years with particular reference to the gap between sanctioned limits and the extent of their utilization and also to suggest alternative type of credit facilities which should ensure greater credit discipline.

The important recommendations of the Committee are as follows:

- (i) The banks should obtain quarterly statements in the prescribed format from all borrowers having working capital credit limits of Rs 50 lacs and above.
- (ii) The banks should undertake a periodical review of limits of Rs 10 lacs and above.
- (iii) The banks should not bifurcate cash credit accounts into demand loan and cash credit components.
- (iv) If a borrower does not submit the quarterly returns in time the banks may charge penal interest of one per cent on the total amount outstanding for the period of default.
- (v) Banks should discourage sanction of temporary limits by charging additional one per cent interest over the normal rate on these limits.
- (vi) The banks should fix separate credit limits for peak level and non-peak level, wherever possible.
- (vii) Banks should take steps to convert cash credit limits into bill limits for financing sales.

5.8.4 MARATHE COMMITTEE REPORT:

The Reserve Bank of India, in 1982, appointed a committee under the chairmanship of Marathe to review the working of Credit Authorisation Scheme (CAS) and suggest measures for giving meaningful directions to the credit management function of the Reserve Bank. The recommendations of the committee have been accepted by the Reserve Bank of India with minor modifications.

The principal recommendations of the Marathe Committee include:

(i) The committee has declared the Third Method of Lending as suggested by the Tanden Committee to be dropped. Hence, in future, the banks would provide credit for working capital according to the Second Method of Lending.

(ii) The committee has suggested the introduction of the 'Fast Track Scheme' to improve the quality of credit appraisal in banks. It recommended that commercial banks can release without prior approval of the Reserve Bank 50% of the additional credit required by the borrowers (75% in case of export oriented manufacturing units) where the following requirements are fulfilled:

(a) The estimates/projections in regard to production, sales, chargeable current assets, other current assets, current liabilities other than bank borrowings, and net working capital are reasonable in terms of the past trends and assumptions regarding most likely trends during the future projected period.

(b) The classification of assets and liabilities as 'current' and 'non-current' is in conformity with the guidelines issued by the Reserve Bank of India.

(c) The projected current ratio is not below 1.33 : 1.

(d) The borrower has been submitting quarterly information and operating statements (Form I, II and III) for the past six months within the prescribed time and undertakes to do the same in future also.

(e) The borrower undertakes to submit to the bank his annual account regularly and promptly, further, the bank is required to review the borrower's facilities at least once in a year even if the borrower does not need enhancement in credit facilities.

Questions:

PART A

1. Explain the concept of working capital.
2. Illustrate the process of operating cycle.
3. Describe the significance of working capital management
4. State the objectives of working capital management.
5. Classify gross and net concepts of working capital.
6. Elaborate the various approaches for financing the working capital requirements.
7. State the objectives of inventory management.
8. Evaluate various inventory control techniques.

9. Identify the Cost associated with extension of credit.
10. Explain the techniques of cash management.

PART B

1. Discuss the various sources of financing the long and short term working capital requirements.
2. Describe the various components of working capital management
3. Discuss the changes in cash credit policy of commercial banks give the recommendations of various committees.
4. “Working capital has to be adequate but not excessive” criticize.
5. Determine the various factors influencing working capital requirements.
6. While preparing a project report on behalf of client, you have collected the following facts. Estimate net working capital required for the project. Add 10% to your computed figure for contingencies.

Particulars	Cost per unit
Raw Material	25
Direct Labour	5
Overheads	10
Total cost	35

Additional Information

- i. Minimum Cash Balance Rs 20,000
- ii. Raw materials are held in stock on an average for 2 months
- iii. Work in progress (50% completion) will approximately take $\frac{1}{2}$ a month
- iv. Finished goods: 1 month
- v. Suppliers of Materials 1 month lag
- vi. Debtor lag in payment 2 months
- vii. Cash sales 25% of total sales
- viii. There is a time lag of 1 month in payment of wages and $\frac{1}{2}$ a month in case of any overheads

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