

UNIT I

Goal of Financial Management – Fundamental Principles – Time value of money – Discounting, compounding - Risk-return trade off- Finance Function-Financial Decisions. Financial markets -intermediaries.

INTRODUCTION

Business concern needs finance to meet their requirements in the economic world. Any kind of business activity depends on the finance. Hence, it is called as lifeblood of business organization. Whether the business concerns are big or small, they need finance to fulfill their business activities.

In the modern world, all the activities are concerned with the economic activities and very particular to earning profit through any venture or activities. The entire business activities are directly related with making profit. (According to the economics concept of factors of production, rent given to landlord, wage given to labour, interest given to capital and profit given to shareholders or proprietors), a business concern needs finance to meet all the requirements. Hence finance may be called as capital, investment, fund etc., but each term is having different meanings and unique characters. Increasing the profit is the main aim of any kind of economic activity.

MEANING OF FINANCE

Finance may be defined as the art and science of managing money. It includes financial service and financial instruments. 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 concept of finance includes capital, funds, money, and amount. But each word is having unique meaning. Studying and understanding the concept of finance become an important part of the business concern.

DEFINITION OF FINANCE

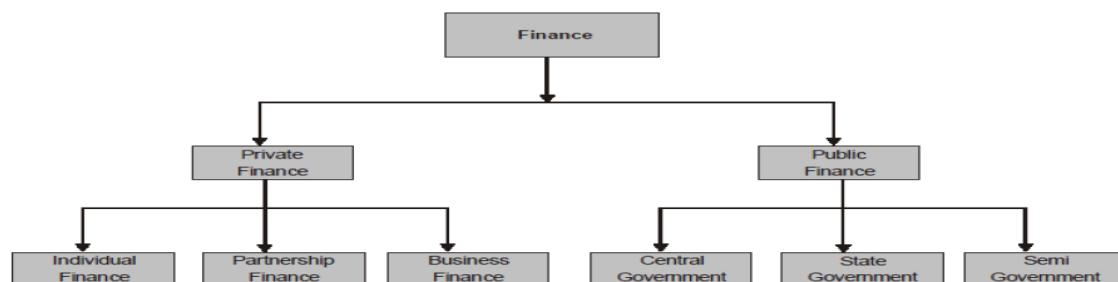
According to **Khan and Jain**, “Finance is the art and science of managing money”.

According to **Oxford dictionary**, the word ‘finance’ connotes ‘management of money’.

Webster’s Ninth New Collegiate Dictionary defines finance as “the Science on study of the management of funds’ and the management of fund as the system that includes the circulation of money, the granting of credit, the making of investments, and the provision of banking facilities.

TYPES OF FINANCE

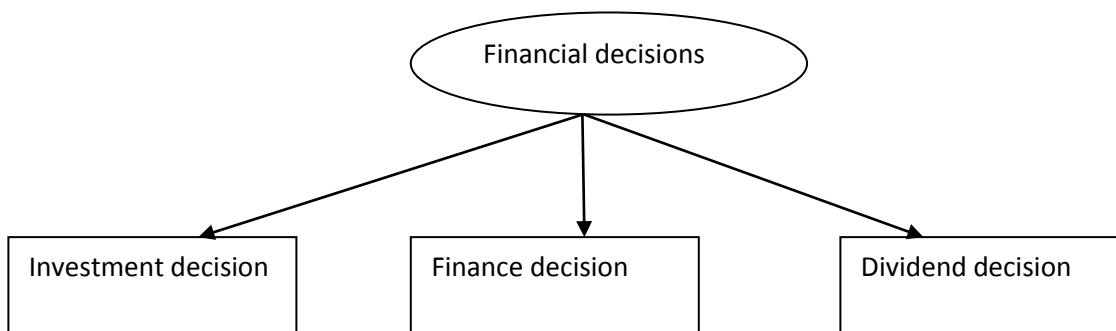
Finance is one of the important and integral part of business concerns, hence, it plays a major role in every part of the business activities. It is used in all the area of the activities under the different names. Finance can be classified into two major parts:



Private Finance, which includes the Individual, Firms, Business or Corporate Financial activities to meet the requirements. Public Finance which concerns with revenue and disbursement of Government such as Central Government, State Government and Semi-Government Financial matters.

FINANCIAL DECISIONS

As we have read above that financial management is concerned with the acquisition, financing and management of assets with some over all goals in mind. As mentioned in the contents of modern approach the discussions of financial management can be broken down into three major decisions, viz., (1) Investment decision; (2) Financing decision; and (3) Dividend decision (See Fig. 1.1). A firm takes these decisions simultaneously and continuously in the normal course of business. Firm may not take these decisions in a sequence, but decisions have to be taken with the objective of maximising shareholders' wealth.



1. INVESTMENT DECISION

It is more important than the other two decisions. It begins with a determination of the total amount of assets needed to be held by the firm. In other words, investment decision relates to the selection of assets, on which a firm will invest funds. The required assets fall into two groups:

(I) Long-term Assets (fixed assets: plant & machinery land & buildings, etc.), which involve huge investment and yield a return over a period of time in future. Investment in long-term assets is popularly known as “*capital budgeting*”. It may be defined as the firm’s decision to invest its current funds most efficiently in fixed assets with an expected flow of benefits over a series of years. It is discussed in detail under the Chapter Capital Budgeting.

(ii) Short-term Assets (current assets: raw materials, work-in-process, finished goods, debtors, cash, etc.) that can be converted into cash within a financial year without diminution in value. Investment in current assets is popularly termed as “*working capital management*”. It relates to the management of current assets. It is an important decision of a firm, as short-survival is the prerequisite for long-term success. Firm should not maintain more or less assets. More assets reduce return and there will be no risk, but having fewer assets is more risky and more profitable. Hence, the main aspects of working capital management are the trade-off between risk and return. Management of working capital involves two aspects. *One* determination of the amount required for running of business and *second* financing these assets. It is discussed in detail in the Working Capital Management Chapter.

2. FINANCING DECISION

After estimation of the amount required and the selection of assets required to be purchased, the next financing decision comes into the picture. Financial manager is concerned with makeup of the right hand side of the balance sheet. It is related to the financing mix or capital structure or leverage. Financial manager has to determine the proportion of debt and equity in capital structure. It should be on optimum

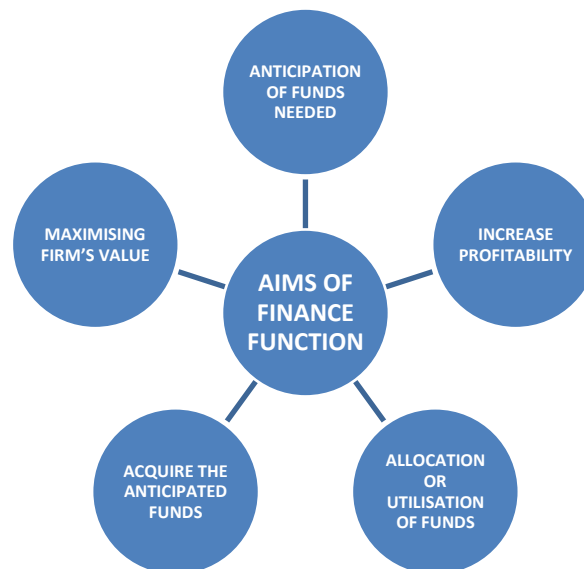
finance mix, which maximises shareholders' wealth. A proper balance will have to be struck between risk and return. Debt involves fixed cost (interest), which may help in increasing the return on equity but also increases risk. Raising of funds by issue of equity shares is one permanent source, but the shareholders will expect higher rates of earnings. The two aspects of capital structure are: *One* capital structure theories and *two* determination of optimum capital structure. Capital structure theories are out of the scope of this book, but optimal capital structure is discussed in detail under the Chapter Capital Structure.

3. DIVIDEND DECISION

This is the third financial decision, which relates to dividend policy. Dividend is a part of profits, which are available for distribution to equity shareholders. Payment of dividends should be analysed in relation to the financial decision of a firm. There are two options available in dealing with net profits of a firm, viz., distribution of profits as dividends to the ordinary shareholders where there is no need of retention of earnings or they can be retained in the firm itself if they are required for financing of any business activity. But distribution of dividends or retaining should be determined in terms of its impact on the shareholders' wealth. Financial manager should determine the optimum dividend policy, which maximises market value of the share thereby market value of the firm. Considering the factors to be considered while determining dividends is another aspect of dividend policy.

AIMS OF FINANCE FUNCTION

As we have seen that financial management is concerned with acquisition, financing and management of assets. And we have seen that there are three financial decisions. While making these decisions, an organization tries to balance cash inflows and cash outflows, which is called the liquidity decision. The following points bring out the aims of finance function.



1. ANTICIPATION OF FUNDS NEEDED: In the series of financial decisions, investment decision takes first place, but before going to identify the investment assets or projects, there is a need to evaluate available investment assets or projects. Selection of assets or projects takes place only after proper evaluation, which is helpful to anticipate the funds required for financing the selected assets or projects.

2. ACQUIRE THE ANTICIPATED FUNDS: The main aim of the finance function is to assess the required needs of a firm and then arrange the funds needed by rising from suitable sources of finance. The total required funds can be raised by different sources, viz., long-term sources and short-term sources. If the funds are needed for long-period then the funds need to be raised only from long-term sources of finance, like share capital, bonds/debenture, capital and long-term loans from financial institutions. If the organisation is an old company, which is running with profit track record, it can use profit by retaining them in business. Short-term (capital) finance needs can be raised mainly from the bank by way of short-term loans.

3. ALLOCATION OR UTILISATION OF FUNDS: Acquisition of funds needed by a firm is a prime objective of traditional finance function, but efficient allocation or utilization of funds is the objective of modern finance function. Efficient allocations among investment avenues mean investing funds on profitable projects. Profitable project means a project or asset that provides return, which is higher than the cost of funds. For example, there are three projects, X, Y and Z, which are identified as profitable in terms of ROI (%) with 10, 20 and 30 returns on investment, respectively. The cost of raised funds is 20%. Here, the project 'Z' is only eligible to invest because its (30) return on investment (ROI) is higher than cost of funds (20), i.e., it is able to provide 10 (30 - 20) profit, but the project X's ROI is less than cost of funds, i.e., 10 loss (10 - 20). The project Y is considerable but not preferable; its ROI is equal to cost of funds, which means there is no profit. So, project Y is not helpful to maximize shareholders' wealth. Hence, the finance manager should allocate funds among profitable investment assets and operations that help to maximize shareholders' wealth.

4. INCREASE PROFITABILITY: Planning and control are the twin functions of management that help to increase profits by reducing costs or minimizing waste or effective utilization of available resources. In the same way, proper planning and control of finance function aim at increasing profitability of the firm. Proper planning of anticipation of funds, selection of investment avenues, acquiring and allocations of funds helps to increase profits, by way of arranging sufficient funds at least at right time, investing on right asset. Control of operations like cash receipts and payments also helps to increase profits. Hence, the finance function needs to match the costs and returns from the funds.

5. MAXIMISING FIRM'S VALUE: The prime objective of any function in any organization is to maximize firm's value by taking right decisions so as to finance function. But maximization of shareholders' wealth is possible only when the firm is able to increase profits. Hence, whatever decision a financial manager takes should be with the objective of maximization of owners' wealth.

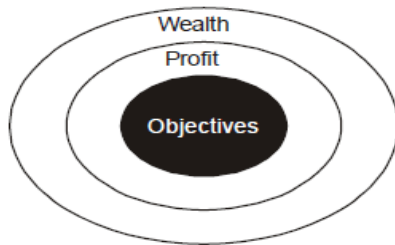
GOALS OR OBJECTIVES OF FINANCIAL MANAGEMENT

Equity shareholders are the owners' of a company. Any person becomes the owner of any company by purchasing (in primary market or secondary market) stocks and he/she expects financial return in the form of dividends and increase in stock price (capital gain). Shareholders elect directors, who then hire managers to run the company on day-to-day basis. Financial manager requires the existence of some objectives or goals without which judgment as to whether or not a financial decision is efficient must be made in the light of some standard.

Although various goals or objectives are possible, we assume in this book that the management's prime goal is stockholders wealth maximisation, since the managers are working on behalf of the shareholders. This objective translates into maximising the price of the firm's equity stock. Maximisation of shareholders' wealth is possible only when the decisions of the managers' are helpful to increase profit. Effective procurement and efficient use of finance lead to proper utilization of the finance by the business concern. It is the essential part of the financial manager. Hence, the financial manager must determine the

basic objectives of the financial management. Objectives of Financial Management may be broadly divided into two parts such as:

1. Profit maximization
2. Wealth maximization.



1. PROFIT MAXIMIZATION

Main aim of any kind of economic activity is earning profit. A business concern is also functioning mainly for the purpose of earning profit. Profit is the measuring techniques to understand the business efficiency of the concern. Profit maximization is also the traditional and narrow approach, which aims at, maximizes the profit of the concern. Profit maximization consists of the following important features.

1. Profit maximization is also called as cashing per share maximization. It leads to maximize the business operation for profit maximization.
2. Ultimate aim of the business concern is earning profit; hence, it considers all the possible ways to increase the profitability of the concern.
3. Profit is the parameter of measuring the efficiency of the business concern. So it shows the entire position of the business concern.
4. Profit maximization objectives help to reduce the risk of the business.

Favourable Arguments for Profit Maximization

The following important points are in support of the profit maximization objectives of the business concern:

- (i) Main aim is earning profit.
- (ii) Profit is the parameter of the business operation.
- (iii) Profit reduces risk of the business concern.
- (iv) Profit is the main source of finance.
- (v) Profitability meets the social needs also.

Unfavourable Arguments for Profit Maximization

The following important points are against the objectives of profit maximization:

- (i) Profit maximization leads to exploiting workers and consumers.
- (ii) Profit maximization creates immoral practices such as corrupt practice, unfair trade practice, etc.
- (iii) Profit maximization objectives leads to inequalities among the stake holders such as customers, suppliers, public shareholders, etc.

Drawbacks of Profit Maximization

Profit maximization objective consists of certain drawback also:

(I) **it is vague:** In this objective, profit is not defined precisely or correctly. It creates some unnecessary opinion regarding earning habits of the business concern.

(ii) **It ignores the time value of money:** Profit maximization does not consider the time value of money or the net present value of the cash inflow. It leads certain differences between the actual cash inflow and net present cash flow during a particular period.

(iii) **It ignores risk:** Profit maximization does not consider risk of the business concern. Risks may be internal or external which will affect the overall operation of the business concern.

2. Wealth Maximization

Wealth maximization is one of the modern approaches, which involves latest innovations and improvements in the field of the business concern. The term wealth means shareholder wealth or the wealth of the persons those who are involved in the business concern. Wealth maximization is also known as value maximization or net present worth maximization. This objective is a universally accepted concept in the field of business.

Favourable Arguments for Wealth Maximization

(I) Wealth maximization is superior to the profit maximization because the main aim of the business concern under this concept is to improve the value or wealth of the shareholders.

(ii) Wealth maximization considers the comparison of the value to cost associated with the business concern. Total value detected from the total cost incurred for the business operation. It provides exact value of the business concern.

(iii) Wealth maximization considers both time and risk of the business concern.

(iv) Wealth maximization provides efficient allocation of resources.

(v) It ensures the economic interest of the society.

Unfavourable Arguments for Wealth Maximization

(I) Wealth maximization leads to prescriptive idea of the business concern but it may not be suitable to present day business activities.

(ii) Wealth maximization is nothing, it is also profit maximization, and it is the indirect name of the profit maximization.

(iii) Wealth maximization creates ownership-management controversy.

(iv) Management alone enjoy certain benefits.

(v) The ultimate aim of the wealth maximization objectives is to maximize the profit.

(vi) Wealth maximization can be activated only with the help of the profitable position of the business concern.

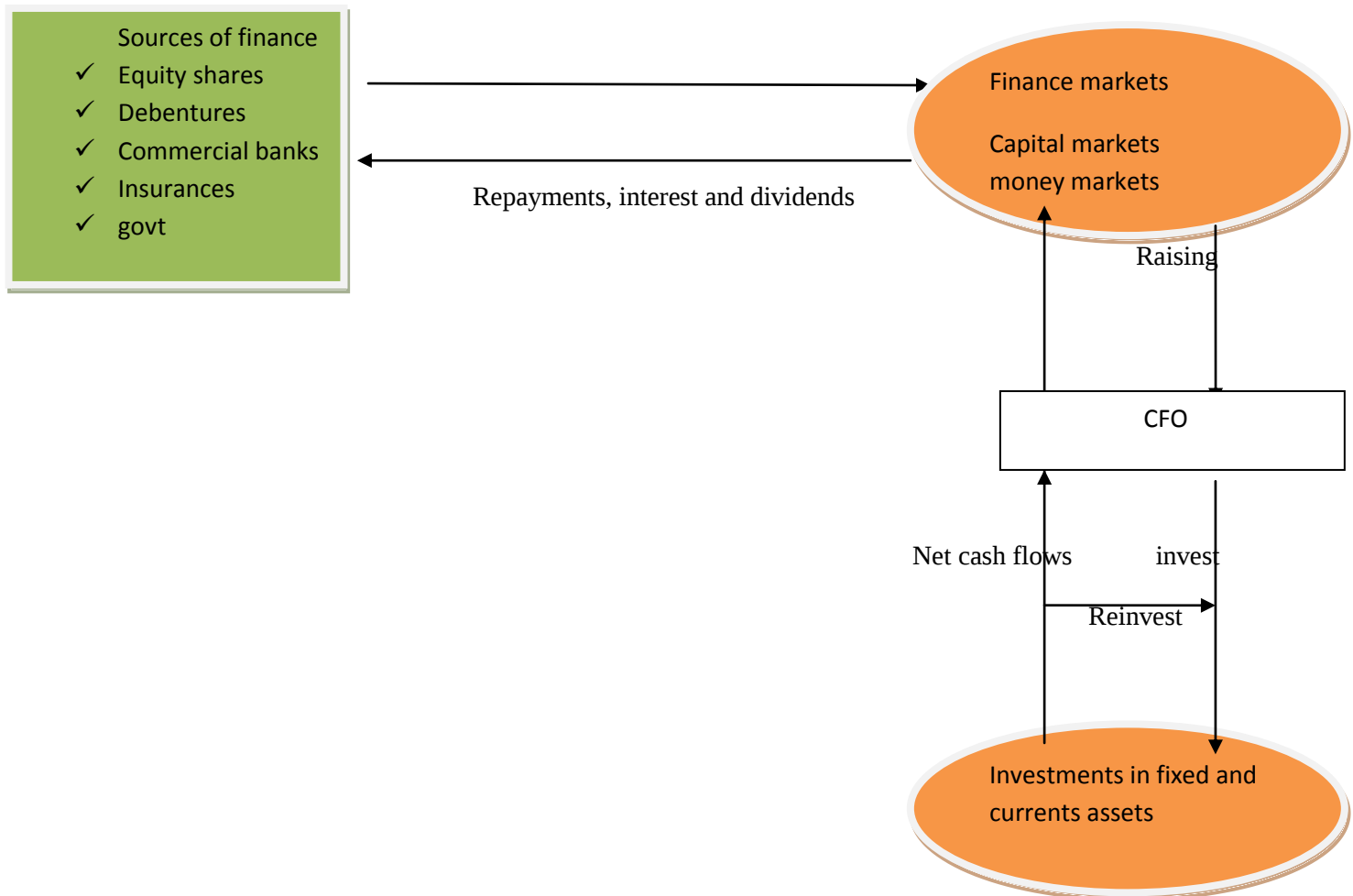
ROLE OF FINANCIAL MANAGEMENT IN CONTEMPORARY SCENARIO:

The role of finance (manager) is no longer confined to accounting; number crunching, financial reporting and risk management and finance manager, once considered as an executive with proficiency in figures, is no longer confined to the game of numbers. Having undergone changes over the period of time, they now play a major role in driving the business for their organisation by acting as a strategic business partner of the chief executive officer (CEO). Put in simple words, the role and responsibilities of finance manager have become complex and demanding and require constant reinvention of the role.

The following are the new functions of finance (manager):

- Continuous focus on margins and ensure that the organisation stays committed to value creation.
- Work across the functional divide of the company and exhibit leadership skills.

- Understand what's driving the numbers and provide operation insights, including a sense of external market issues and internal operating trends, and become key strategy player.
- A ware and use the highly innovative financial instruments.
- Know the emergence of capital market as central stage for raising money.



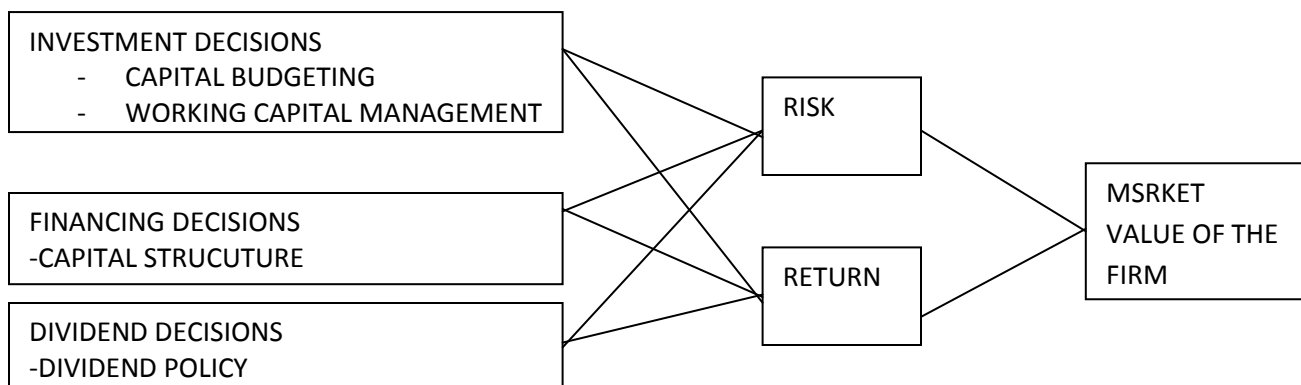
- Adding more value to the business through innovations in impacting human capital.
- Must balance the need to cut overhead with the need to create a finance organisation able to meet long-term goals by — designing financial processes, systems and organisation that can support the business in the future and initiating cost reductions that further cut organisational fat, but not operational muscle.
- Liaison to the financial community, investors and regulators (rating agencies, investment and commercial bankers and peers), which are valuable information sources for strategic and tactical decisions.

S.NO.	PROFITMAXIMIZATION	WEALTH MAXIMIZATION	WELFARE MAXIMIZATION
1)	Profits are earned maximized, so that firm can over-come future risks which are uncertain.	Wealth is maximized, so that wealth of share-holders can be maximized.	Welfare maximization is done with the help of micro economic techniques to examine locative distribution.
2)	Profit maximization is a yards stick for calculating efficiency and economic prosperity of the concern.	In wealth maximization stockholders current wealth is evaluated in order to maximize the value of shares in the market.	In welfare maximization, social welfare is evaluated by calculating economic activities of individuals in the society.
3)	Profit is measured in terms of efficiency of the firm.	Wealth is measured in terms of market price of shares.	Welfare can be measured in two ways, either by pare to efficiency or in units or dollars.
4)	Profit maximization involves problem of uncertainty because profits are uncertain.	Wealth maximization involves problems related to maximizing shareholder's wealth or wealth of the firm	Wealth maximization involves problem of combining the utilities of different people.

RISK RETURN TRADE-OFF

The Risk-Return Trade-Off is an essential concept in finance theory. Risk implies the changes in expected return like sales, profits or cash flow and it also includes probability that problem.

Risk analysis is a procedure of calculating and examining the risk which is related to financial and investment decision of the company. Finance managers must focus on expected rate of return by comparing the level of risks involved in investment decision. When it is expected that rate of return will be high then it involves high level of risk and vice versa



(RISK –RETURN TRADE OFF)

The decisions which involve risk-return trade off are explained below:

1) CAPITAL BUDGETING DECISIONS: Capital budgeting decision is important, as it involves proper allocation of funds. These decisions are made considerably for long period of time in order to get benefits in future. While taking capital budgeting decision, finance manager needs to evaluate the cost of capital and risk involved in it. Finance manager must have complete knowledge about the techniques

used for evaluating such as Net Present Value (NPV), IRR, discounted cash flow, etc. Finance manager must have the capability of combining risk with returns in order to evaluate the potential of investment appropriately.

2) CAPITAL STRUCTURE DECISIONS: Capital structure decisions play an important role in designing the capital structure which is suitable for the company. It is the duty of finance manager to develop an optimum capital structure which involves less amount of cost of capital, less amount of risk but which can generate huge amount of returns. While developing capital structure, finance managers must also consider the financial and operating leverages of the firm.

3) DIVIDEND DECISIONS: Dividend decision is also important for organization to design the dividend policy. Dividend policy involves the amount of profits to pay as dividend to shareholders or reinvested in the organizations. Shareholders emphasize on getting higher amount of dividend, whereas management of company tries to maintain profits to face uncertainties in future. The dividend policy of the firm mainly depends of profitability.

4) WORKING CAPITAL DECISIONS: Working capital management is an addition of fixed capital investment. Working capital management is an important element of every organization, as it helps in continuing the business processes. Decisions related to working capital are known as working capital decisions. The essential elements of working capital are cash, accounts receivable and inventory. Each element of working capital involves some kind of risk in it.

Hence, it is clear that each every decision related to finance involves risk-return trade-off. So, it is the responsibility of finance managers to consider both risk and return, while making these decisions.

FINANCIAL MARKET:

REFERE TO PPT AT END OF THE MATERIAL

UNIT – II

Financial Statement Analysis (Numerical Problems): Analysis of Balance Sheet; Profit & Loss Account, Ratio analysis (Numerical Problems), common size analysis, cash flow statement, operating, financial, and combined leverage.

INTRODUCTION

A financial statement is an official document of the firm, which explores the entire financial information of the firm. The main aim of the financial statement is to provide information and understand the financial aspects of the firm. Hence, preparation of the financial statement is important as much as the financial decisions.

MEANING AND DEFINITION

According to Hamptors John, the financial statement is an organized collection of data according to logical and consistent accounting procedures. Its purpose is to convey an understanding of financial aspects of a business firm. It may show a position at a moment of time as in the case of a balance-sheet or may reveal a service of activities over a given period of time, as in the case of an income statement.

Financial statements are the summary of the accounting process, which, provides useful information to both internal and external parties. **John N. Nyer** also defines it “Financial statements provide a summary of the accounting of a business enterprise, the balance-sheet reflecting the assets, liabilities and capital as on a certain data and the income statement showing the results of operations during a certain period”.

Financial statements generally consist of two important statements:

- (i) The income statement or profit and loss account.
- (ii) Balance sheet or the position statement.

A part from that, the business concern also prepares some of the other parts of statements, which are very useful to the internal purpose such as:

- (i) Statement of changes in owner’s equity.
- (ii) Statement of changes in financial position.

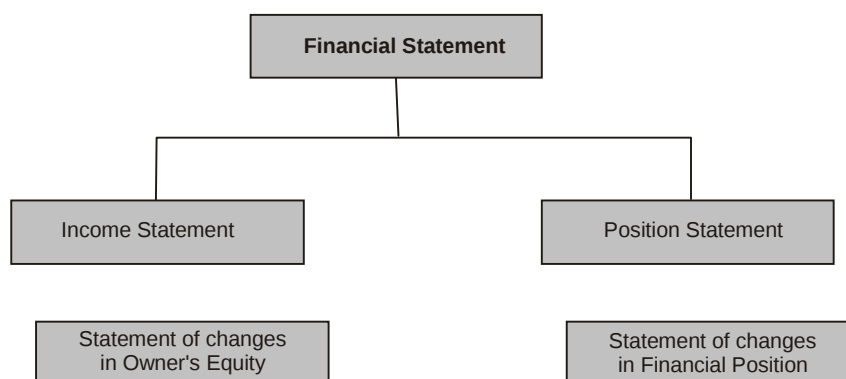


Fig. 2.1 Financial Statement

Income Statement

Income statement is also called as profit and loss account, which reflects the operational position of the firm during a particular period. Normally it consists of one accounting year. It determines the entire operational performance of the concern like total revenue generated and expenses incurred for earning that revenue.

Income statement helps to ascertain the gross profit and net profit of the concern. Gross profit is determined by preparation of trading or manufacturing a/c and net profit is determined by preparation of profit and loss account.

Position statement is also called as balance sheet, which reflects the financial position of the firm at the end of the financial year.

Position statement helps to ascertain and understand the total assets, liabilities and capital of the firm. One can understand the strength and weakness of the concern with the help of the position statement.

Statement of Changes in Owner's Equity

It is also called as statement of retained earnings. This statement provides information about the changes or position of owner's equity in the company. How the retained earnings are employed in the business concern. Nowadays, preparation of this statement is not popular and nobody is going to prepare the separate statement of changes in owner's equity.

Statement of Changes in Financial Position

Income statement and position statement shows only about the position of the finance, hence it can't measure the actual position of the financial statement. Statement of changes in financial position helps to understand the changes in financial position from one period to another period.

Statement of changes in financial position involves two important areas such as fund flow statement which involves the changes in working capital position and cash flow statement which involves the changes in cash position.

TYPES OF FINANCIAL STATEMENT ANALYSIS

Analysis of Financial Statement is also necessary to understand the financial positions during a particular period. According to Myres, "Financial statement analysis is largely a study of the relationship among the various financial factors in a business as disclosed by a single set of statements and a study of the trend of these factors as shown in a series of statements".

Analysis of financial statement may be broadly classified into two important types on the basis of material used and methods of operations.

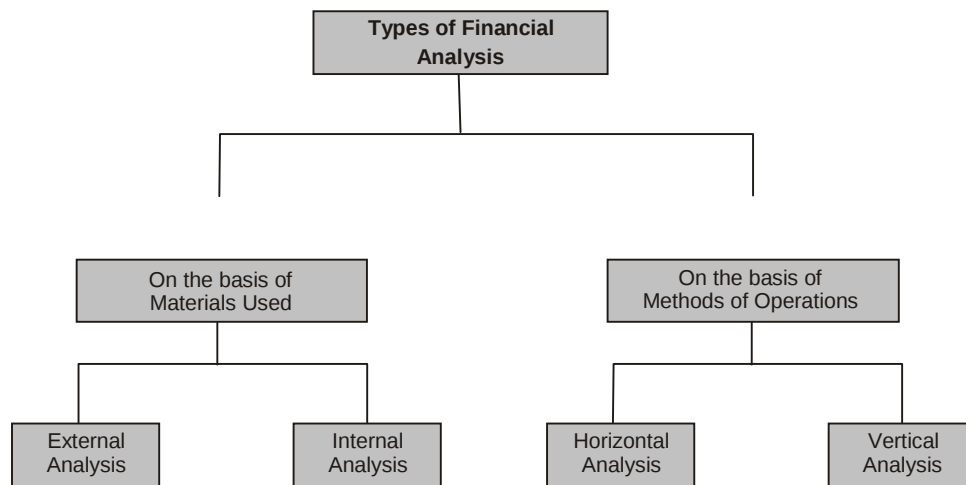


Fig. 2.2 Types of Financial Statement Analysis

1. Based on Material Used

Based on the material used, financial statement analysis may be classified into two major types such as External analysis and internal analysis.

A. External Analysis

Outsiders of the business concern do normally external analyses but they are indirectly involved in the business concern such as investors, creditors, government organizations and other credit agencies. External analysis is very much useful to understand the financial and operational position of the business concern. External analysis mainly depends on the published financial statement of the concern. This analysis provides only limited information about the business concern.

B. Internal Analysis

The company itself does disclose some of the valuable informations to the business concern in this type of analysis. This analysis is used to understand the operational performances of each and every department and unit of the business concern. Internal analysis helps to take decisions regarding achieving the goals of the business concern.

2. Based on Method of Operation

Based on the methods of operation, financial statement analysis may be classified into two major types such as horizontal analysis and vertical analysis.

A. Horizontal Analysis

Under the horizontal analysis, financial statements are compared with several years and based on that, a firm may take decisions. Normally, the current year's figures are compared with the base year (base year is consider as 100) and how the financial information are changed from one year to another. This analysis is also called as dynamic analysis.

B. Vertical Analysis

Under the vertical analysis, financial statements measure the quantities relationship of the various items in the financial statement on a particular period. It is also called as static analysis, because, this analysis helps to determine the relationship with various items appeared in the financial statement. For example, a sale is assumed as 100 and other items are converted into sales figures.

TECHNIQUES OF FINANCIAL STATEMENT ANALYSIS

Financial statement analysis is interpreted mainly to determine the financial and operational performance of the business concern. A number of methods or techniques are used to analyse the financial statement of the business concern. The following are the common methods or techniques, which are widely used by the business concern.

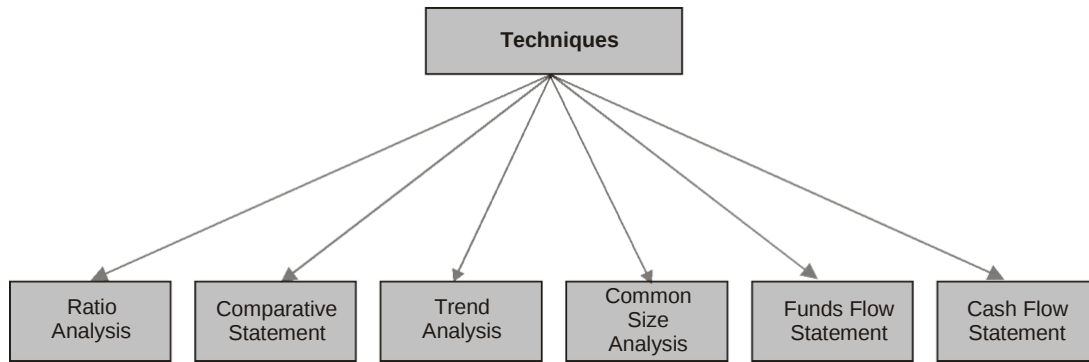


Fig. 2.3 Techniques of Financial Statement Analysis

1. Comparative Statement Analysis
 - A. Comparative Income Statement Analysis
 - B. Comparative Position Statement Analysis
2. Trend Analysis
3. Common Size Analysis
4. Fund Flow Statement
5. Cash Flow Statement
6. Ratio Analysis

Comparative Statement Analysis

Comparative statement analysis is an analysis of financial statement at different period of time. This statement helps to understand the comparative position of financial and operational performance at different period of time.

Comparative financial statements again classified into two major parts such as comparative balance sheet analysis and comparative profit and loss account analysis.

Comparative Balance Sheet Analysis

Comparative balance sheet analysis concentrates only the balance sheet of the concern at different period of time. Under this analysis the balance sheets are compared with previous year's figures or one-year balance sheet figures are compared with other years. Comparative balance sheet analysis may be horizontal or vertical basis. This type of analysis helps to understand the real financial position of the concern as well as how the assets, liabilities and capitals are placed during a particular period.

Common Size Analysis

Another important financial statement analysis techniques are common size analysis in which figures reported are converted into percentage to some common base. In the balance sheet the total assets figures is assumed to be 100 and all figures are expressed as a percentage of this total. It is one of the simplest methods of financial statement analysis, which reflects the relationship of each and every item with the base value of 100%.

Common size balance sheet of Tamilnadu Mercantile Bank Ltd., as on 31st March 2003 and 2004.

Particulars	31st March 2003 Amount	Percentage	31st March 2004 Amount	Percentage
Fixed Assets	2,14,21,060	45.37	2,35,37,098	46.25
Investments	1,95,99,764	41.51	2,11,39,869	41.54
Advances	4,93,996	1.05	5,36,442	1.05
Fixed Assets	18,58,064	3.94	18,35,883	3.61
Other Assets				
Total Fixed Assets	4,33,72,884	91.86	4,70,49,292	94.44
Current Assets				
Cash and Balance with RBI	27,06,808	5.73	22,37,601	4.40
Balance with banks and money at call and short notice	11,36,781	2.41	16,07,975	3.20
Total Current Assets	38,43,589	8.14	38,45,576	7.60
Total Assets	4,72,16,473	100.00	5,08,94,868	100.00
Fixed Liabilities				
Capital	2,845	0.01	2,845	0.01
Reserve and Surplus	39,66,009	8.40	47,65,406	9.36
Deposits	4,08,45,783	86.50	4,40,42,730	86.54
Total Fixed Liabilities	4,48,14,637	94.91	4,88,10,981	95.91
Current Liability				
Borrowings	7,27,671	1.54	2,84,690	0.56
Other Liabilities	16,74,165	3.55	17,99,197	3.53
Provisions				
Total Current Liability	24,01,836	5.09	20,83,887	4.09
Total Liabilities	4,72,16,473	100.00	5,08,94,868	100.00

FUNDS FLOW STATEMENT

Funds flow statement is one of the important tools, which is used in many ways. It helps to understand the changes in the financial position of a business enterprise between the beginning and ending financial statement dates. It is also called as statement of sources and uses of funds.

Institute of Cost and Works Accounts of India, funds flow statement is defined as “a statement prospective or retrospective, setting out the sources and application of the funds of an enterprise. The purpose of the statement is to indicate clearly the requirement of funds and how they are proposed to be raised and the efficient utilization and application of the same”.

CASH FLOW STATEMENT

Cash flow statement is a statement which shows the sources of cash inflow and uses of cash out-flow of the business concern during a particular period of time. It is the statement, which involves only short-term financial position of the business concern. Cash flow statement provides a summary of operating, investment and financing cash flows and reconciles them with changes in its cash and cash equivalents such as marketable securities. Institute of Chartered Accountants of India issued the Accounting Standard (AS-3) related to the preparation of cash flow statement in 1998.

Difference Between Funds Flow and Cash Flow Statement

Funds Flow Statement	Cash Flow Statement
1. Funds flow statement is the report on the movement of funds or working capital 2. Funds flow statement explains how working capital is raised and used during the particular 3. The main objective of fund flow statement is to show the how the resources have been balanced mobilized and used. 4. Funds flow statement indicates the results of current financial management. 5. In a funds flow statement increase or decrease in working capital is recorded. 6. In funds flow statement there is no opening and closing balances.	1. Cash flow statement is the report showing sources and uses of cash. 2. Cash flow statement explains the inflow and out flow of cash during the particular period. 3. The main objective of the cash flow statement is to show the causes of changes in cash between two balance sheet dates. 4. Cash flow statement indicates the factors contributing to the reduction of cash balance in spite of increase in profit and vice-versa. 5. In a cash flow statement only cash receipt and payments are recorded. 6. Cash flow statement starts with opening cash balance and ends with closing cash balance.

Exercise 4

From the following balance sheet of A Company Ltd. you are required to prepare a schedule of changes in working capital and statement of flow of funds.

Balance Sheet of A Company Ltd., as on 31st March

Liabilities	2004	2005	Assets	2004	2005
Share Capital	1,00,000	1,10,000	Land and Building	60,000	60,000
Profit and Loss a/c	20,000	23,000	Plant and Machinery	35,000	45,000
Loans	—	10,000	Stock	20,000	25,000
Creditors	15,000	18,000	Debtors	18,000	28,000
Bills payable	5,000	4,000	Bills receivable	2,000	1,000
			Cash	5,000	6,000
	1,40,000	1,65,000		1,40,000	1,65,000

Solution

Schedule of Changes in Working Capital

Particulars	2004 Rs.	2005 Rs.	Incharge Rs.	Decharge Rs.
Current Assets				
Stock	20,000	25,000	5,000	—
Debtors	18,000	28,000	10,000	—
Bills Receivable	2,000	1,000	—	1,000
Cash	5,000	6,000	1,000	
A	45,000	60,000		
Less Current Liabilities				
Creditors	15,000	18,000		3,000
Bills Payable	5,000	4,000	1,000	
B	20,000	22,000	17,000	4,000
A-B	25,000	38,000	—	13,000
Increase in W.C.	38,000	38,000	17,000	17,000

Fund Flow Statement

Sources	Rs.	Application	Rs.
Issued Share Capital	10,000	Purchase of Plant and Machinery	10,000
Loan	10,000	Increase in Working Capital	13,000
Funds From Operations	3,000		
	23,000		23,000

Exercise 5

From the above example 4 prepare a Cash Flow Statement.

Solution

Cash Flow Statement

Inflow	Rs.	Outflow	Rs.
Balance b/d	5,000	Purchase of plant	10,000
Issued Share Capital	10,000	Increase Current Assets	
Loan	10,000	Stock	
Cash Opening Profit	3,000	Decrease in Bills Payable	5,000
		Balance c/d	10,000
Decrease in Bills Receivable	1,000		1,000
Increase in Creditors	3,000		6,000
	32,000		32,000

RATIO ANALYSIS

Ratio analysis is a commonly used tool of financial statement analysis. Ratio is a mathematical relationship between one number to another number. Ratio is used as an index for evaluating the financial performance of the business concern. An accounting ratio shows

the mathematical relationship between two figures, which have meaningful relation with each other. Ratio can be classified into various types. Classification from the point of view of financial management is as follows:

- Liquidity Ratio
- Activity Ratio
- Solvency Ratio
- Profitability Ratio

Liquidity Ratio

It is also called as short-term ratio. This ratio helps to understand the liquidity in a business which is the potential ability to meet current obligations. This ratio expresses the relationship between current assets and current liabilities of the business concern during a particular period. The following are the major liquidity ratio:

S. No.	Ratio	Formula	Significant Ratio
1.	Current Ratio	$\frac{\text{Current Assets}}{\text{Current Liability}}$	2 : 1
2.	Quick Ratio	$\frac{\text{Quick Assets}}{\text{Quick Current Liability}}$	1 : 1

Activity Ratio

It is also called as turnover ratio. This ratio measures the efficiency of the current assets and liabilities in the business concern during a particular period. This ratio is helpful to understand the performance of the business concern. Some of the activity ratios are given below:

S. No.	Ratio	Formula
1.	Stock Turnover Ratio	$\frac{\text{Cost of Sales}}{\text{Average Inventory}}$
2.	Debtors Turnover Ratio	$\frac{\text{Credit Sales}}{\text{Average Debtors}}$
3.	Creditors Turnover Ratio	$\frac{\text{Credit Purchase}}{\text{Average Credit}}$
4.	Working Capital Turnover Ratio	$\frac{\text{Sales}}{\text{Net Working Capital}}$

Solvency Ratio

It is also called as leverage ratio, which measures the long-term obligation of the business concern. This ratio helps to understand, how the long-term funds are used in the business concern. Some of the solvency ratios are given below:

S. No	Ratio	Formula
1.	Debt-Equity Ratio	$\frac{\text{External Equity} + \text{Internal Equity}}{\text{Equity}}$
2.	Proprietary Ratio	$\frac{\text{Shareholder's Fund}}{\text{Total Assets}}$
3.	Interest Coverage Ratio	$\frac{\text{EBIT}}{\text{Fixed Interest Charges}}$

Profitability Ratio

Profitability ratio helps to measure the profitability position of the business concern. Some of the major profitability ratios are given below.

S. No	Ratio	Formula
1.	Gross Profit Ratio	$\frac{\text{Gross Profit}}{\text{Net Sales}} \times 100$
2.	Net Profit Ratio	$\frac{\text{Net Profit after tax}}{\text{Net Sales}} \times 100$
3.	Operating Profit Ratio	$\frac{\text{Operating Net Profit}}{\text{Sales}} \times 100$
4.	Return on Investment	$\frac{\text{Net Profit after tax}}{\text{Shareholder Fund}} \times 100$

Exercise 6

From the following balance sheet of Mr. Arvind Industries Ltd., as 31st March 2007.

Liabilities	Rs.	Assets	Rs.
Equity Share Capital	10,000	Fixed assets (less depreciation Rs. 10,000)	26,000
7% Preference Share Capital	2,000	Current Assets:	
Reserves and Surplus	8,000	Cash	1,000
6% Mortgage Debentures	14,000	Investments	3,000
Current Liabilities:		(10%) Sundry debtors	4,000
Creditors	1,200	Stock	6,000
Bills payable	2,000		
Outstanding expenses	200		
Tax Provision	2,600		
	40,000		40,000

Other information:

- Net sales Rs. 60,000
- Cost of goods sold Rs. 51,600
- Net income before tax Rs. 4,000
- Net income after tax Rs. 2,000

Calculate appropriate ratios.

Solution

Short-term solvency ratios

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liability}} = \frac{14,000}{6,000} = 2.33 : 1$$

$$\text{Liquid Ratio} = \frac{\text{Liquid Assets}}{\text{Current Liability}} = \frac{8,000}{6,000} = 1.33 : 1$$

Long-term solvency ratios

$$\text{Proprietary ratio} = \frac{\text{Proprietor's funds}}{\text{Total Assets}} = \frac{20,000}{40,000} = 0.5 : 1$$

$$\begin{aligned} \text{Proprietor's fund or Shareholder's fund} &= \text{Equity share capital} + \text{Preference share capital} + \text{Reserve and surplus} \\ &= 10,000 + 2,000 + 8,000 = 20,000 \end{aligned}$$

Activity Ratio

$$\text{Stock Turnover Ratio} = \frac{\text{Cost of Sales}}{\text{Average Inventory}} = \frac{51,600}{6,000} = 8.6 \text{ times}$$

As there is no opening stock, closing stock is taken as average stock.

$$\text{Debtors Turnover Ratio} = \frac{\text{Credit Sales}}{\text{Average Debtors}} = \frac{60,000}{6,000} = 10 \text{ times}$$

In the absence of credit sales and opening debtors, total sales is considered as credit sales and closing debtors as average debtors.

$$\text{Creditors turnover ratio} = \frac{\text{Credit Purchases}}{\text{Average Creditors}} = \frac{43,200}{1,200} = 36 \text{ times}$$

In absence of purchases, cost of goods sold – gross profit treated as credit purchases and in the absence of opening creditors, closing creditors are treated as average creditors.

$$\text{Working Capital Turnover Ratio} = \frac{\text{Sales}}{\text{Net Working Capital}} = \frac{60,000}{8,000} = 7.5 \text{ times}$$

Profitability Ratios

$$\text{Gross profit ratio} = \frac{\text{Gross Profit}}{\text{Sales}} * 100 = \frac{8,400}{60,000} * 100 = 14\%$$

$$\text{Net profit ratio} = \frac{\text{Net Profit}}{\text{Sales}} * 100 = \frac{2,000}{60,000} * 100 = 3.33\%$$

In the absence of non-operating income, operating profit ratio is equal to net profit ratio.

$$\text{Return of Investment} = \frac{\text{Net Profit after Tax}}{\text{Shareholder's Fund}} * 100 = \frac{2,000}{20,000} * 100 = 10\%$$

LEVERAGE

INTRODUCTION

Financial decision is one of the integral and important parts of financial management in any kind of business concern. A sound financial decision must consider the board coverage of the financial mix (Capital Structure), total amount of capital (capitalization) and cost of capital (K_O). Capital structure is one of the significant things for the management, since it influences the debt equity mix of the business concern, which affects the shareholder's return and risk. Hence, deciding the debt-equity mix plays a major role in the part of the value of the company and market value of the shares. The debt equity mix of the company can be examined with the help of leverage.

The concept of leverage is discussed in this part. Types and effects of leverage is discussed in the part of EBIT and EPS.

Meaning of Leverage

The term leverage refers to an increased means of accomplishing some purpose. Leverage is used to lifting heavy objects, which may not be otherwise possible. In the financial point of view, leverage refers to furnish the ability to use fixed cost assets or funds to increase the return to its shareholders.

Definition of Leverage

James Horne has defined leverage as, “the employment of an asset or fund for which the firm pays a fixed cost or fixed return.

Types of Leverage

Leverage can be classified into three major headings according to the nature of the finance mix of the company.

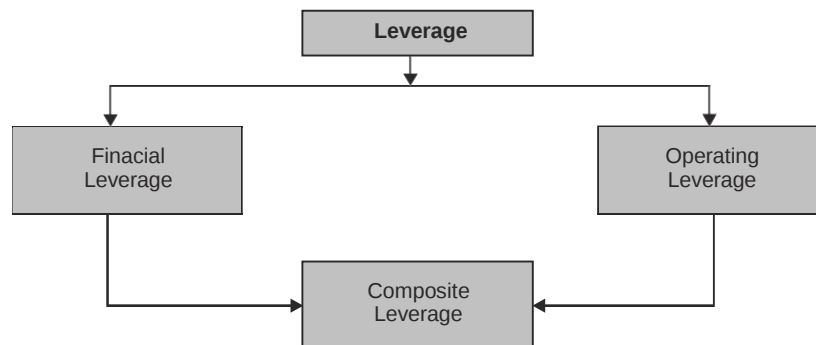


Fig. 7.1 Types of Leverage

The company may use finance or leverage or operating leverage, to increase the EBIT and EPS.

OPERATING LEVERAGE

The leverage associated with investment activities is called as operating leverage. It is caused due to fixed operating expenses in the company. Operating leverage may be defined as the company's ability to use fixed operating costs to magnify the effects of changes in sales on its earnings before interest and taxes. Operating leverage consists of two important costs viz., fixed cost and variable cost. When the company is said to have a high degree of operating leverage if it employs a great amount of fixed cost and smaller amount of variable cost. Thus, the degree of operating leverage depends upon the amount of various cost structure. Operating leverage can be determined with the help of a break even analysis.

Operating leverage can be calculated with the help of the following formula:

$$OL = \frac{C}{OP}$$

Where,

OL = Operating Leverage

C = Contribution

OP = Operating Profits

Degree of Operating Leverage

The degree of operating leverage may be defined as percentage change in the profits resulting from a percentage change in the sales. It can be calculated with the help of the following formula:

$$DOL = \frac{\text{Percentage change in profits}}{\text{Percentage change in sales}}$$

Exercise 1

From the following selected operating data, determine the degree of operating leverage. Which company has the greater amount of business risk? Why?

	Company A Rs.	Company B Rs.
Sales	25,00,000	30,00,000
Fixed costs	7,50,000	15,00,000

Variable expenses as a percentage of sales are 50% for company A and 25% for company B.

Solution**Statement of Profit**

	Company A Rs.	Company B Rs.
Sales	25,00,000	30,00,000
Variable cost	12,50,000	7,50,000
Contribution	12,50,000	22,50,000
Fixed cost	7,50,000	15,00,000
Operating Profit	<u>5,00,000</u>	<u>7,50,000</u>

$$\text{Operating Leverage} = \frac{\text{Contribution}}{\text{Operating Profit}}$$

$$\text{"A" Company Leverage} = \frac{12,50,000}{5,00,000} = 2.5$$

$$\text{"B" Company Leverage} = \frac{22,50,000}{7,50,000} = 3$$

Comments

Operating leverage for B Company is higher than that of A Company; B Company has a higher degree of operating risk. The tendency of operating profit may vary portionately with sales, is higher for B Company as compared to A Company.

Uses of Operating Leverage

Operating leverage is one of the techniques to measure the impact of changes in sales which lead for change in the profits of the company.

If any change in the sales, it will lead to corresponding changes in profit. Operating leverage helps to identify the position of fixed cost and variable cost.

Operating leverage measures the relationship between the sales and revenue of the company during a particular period.

Operating leverage helps to understand the level of fixed cost which is invested in the operating expenses of business activities.

Operating leverage describes the over all position of the fixed operating cost.

FINANCIAL LEVERAGE

Leverage activities with financing activities is called financial leverage. Financial leverage represents the relationship between the company's earnings before interest and taxes (EBIT) or operating profit and the earning available to equity shareholders.

Financial leverage is defined as "the ability of a firm to use fixed financial charges to magnify the effects of changes in EBIT on the earnings per share". It involves the use of funds obtained at a fixed cost in the hope of increasing the return to the shareholders. "The use of long-term fixed interest bearing debt and preference share capital along with share capital is called financial leverage or trading on equity".

Financial leverage may be favourable or unfavourable depends upon the use of fixed cost funds.

Favourable financial leverage occurs when the company earns more on the assets purchased with the funds, then the fixed cost of their use. Hence, it is also called as positive financial leverage.

Unfavourable financial leverage occurs when the company does not earn as much as the funds cost. Hence, it is also called as negative financial leverage.

Financial leverage can be calculated with the help of the following formula:

$$FL = \frac{OP}{PBT}$$

Where,

FL = Financial leverage

OP = Operating profit (EBIT)

PBT = Profit before tax.

Degree of Financial Leverage

Degree of financial leverage may be defined as the percentage change in taxable profit as a result of percentage change in earning before interest and tax (EBIT). This can be calculated by the following formula

$$DFL = \frac{\text{Percentage change in taxable Income}}{\text{Percentage change in EBIT}}$$

Alternative Definition of Financial Leverage

According to **Gitmar**, “financial leverage is the ability of a firm to use fixed financial changes to magnify the effects of change in EBIT and EPS”.

$$FL = \frac{EBIT}{EPS}$$

Where,

FL = Financial Leverage

EBIT = Earning Before Interest and Tax

EPS = Earning Per share.

Exercise 2

A Company has the following capital structure.

	Rs.
Equity share capital	1,00,000
10% Prof. share capital	1,00,000
8% Debentures	1,25,000

The present EBIT is Rs. 50,000. Calculate the financial leverage assuring that the company is in 50% tax bracket.

Solution

Statement of Profit	Rs.
Earning Before Interest and Tax (EBIT)	50,000
(or) Operating Profit	
Interest on Debenture	
$1,25,000 \times 8 \times 100$	
Earning before Tax (EBT)	10,000
Income Tax	20,000
Profit	20,000

$$\begin{aligned} \text{Financial leverage} &= \frac{\text{Operating Profit (OP) Profit}}{\text{Before Tax (PBT)}} \\ &= \frac{50,000}{40,000} = 1.25 \end{aligned}$$

Uses of Financial Leverage

Financial leverage helps to examine the relationship between EBIT and EPS.

Financial leverage measures the percentage of change in taxable income to the percentage change in EBIT.

Financial leverage locates the correct profitable financial decision regarding capital structure of the company.

Financial leverage is one of the important devices which is used to measure the fixed cost proportion with the total capital of the company.

If the firm acquires fixed cost funds at a higher cost, then the earnings from those assets, the earning per share and return on equity capital will decrease.

The impact of financial leverage can be understood with the help of the following exercise.

Exercise 3

XYZ Ltd. decides to use two financial plans and they need Rs. 50,000 for total investment.

Particulars	Plan A	Plan B
Debenture (interest at 10%)	40,000	10,000
Equity share (Rs. 10 each)	10,000	40,000
Total investment needed	50,000	50,000
Number of equity shares	4,000	1,000

The earnings before interest and tax are assumed at Rs. 5,000, and 12,500. The tax rate is 50%. Calculate the EPS.

Solution

When EBIT is Rs. 5,000

Particulars	Plan A	Plan B
Earnings before interest and tax (EBIT)	5,000	5,000
Less : Interest on debt (10%)	4,000	1,000
Earnings before tax (EBT)	1,000	4,000
Less : Tax at 50%	500	2,000
Earnings available to equity shareholders	Rs.500	Rs.2,000
No. of equity shares	1,000	4,000
Earnings per share (EPS)	Rs. 0.50	Rs. 0.50
Earnings/No. of equity shares		

When EBIT is Rs. 12,500

Particulars	Plan A	Plan B
Earnings before interest and tax (EBIT).	12,500	12,500
Less: Interest on debt (10%)	4,000	1,000

(Contd.)

Earning before tax (EBT)	8,500	11,500
Less : Tax at 50%	4,250	5,750
Earnings available to equity shareholders	4,250	5,750
No. of equity shares	1,000	4,000
Earning per share	4.25	1.44

DISTINGUISH BETWEEN OPERATING LEVERAGE AND FINANCIAL LEVERAGE

Operating Leverage/Financial Leverage

Operating Leverage	Financial Leverage
- Operating leverage is associated with investment activities of the company. - Operating leverage consists of fixed operating expenses of the company. - It represents the ability to use fixed operating cost. - Operating leverage can be calculated by $OL = \frac{C}{OP}$. - A percentage change in the profits resulting from a percentage change in the sales is called as degree of operating leverage. - Trading on equity is not possible while the company is operating leverage. - Operating leverage depends upon fixed cost and variable cost. - Tax rate and interest rate will not affect the operating leverage.	- Financial leverage is associated with financing activities of the company. - Financial leverage consists of operating <u>profit</u> of the company. - It represents the relationship between EBIT and EPS. - Financial leverage can be calculated by $FL = \frac{OP}{PBT}$. - A percentage change in taxable profit is the result of percentage change in EBIT. - Trading on equity is possible only when the company uses financial leverage. - Financial leverage depends upon the operating profits. - Financial leverage will change due to tax rate and interest rate.

Cost of debt (Numerical Problems), cost of equity (Numerical Problems) – dividend capitalization, CAPM, cost of preference shares (Numerical Problems), weighted average and multiple costs of capital (Numerical Problems) – valuation of bonds and shares. Capital structure planning – EBIT – EPS analysis (Numerical Problems), risks of financial leverage – margin of safety, interest and debt service. Long term sources of Finance: venture capital.

INTRODUCTION

Cost of capital is an integral part of investment decision as it is used to measure the worth of investment proposal provided by the business concern. It is used as a discount rate in determining the present value of future cash flows associated with capital projects. Cost of capital is also called as cut-off rate, target rate, hurdle rate and required rate of return. When the firms are using different sources of finance, the finance manager must take careful decision with regard to the cost of capital; because it is closely associated with the value of the firm and the earning capacity of the firm.

Meaning of Cost of Capital

Cost of capital is the rate of return that a firm must earn on its project investments to maintain its market value and attract funds.

Cost of capital is the required rate of return on its investments which belongs to equity, debt and retained earnings. If a firm fails to earn return at the expected rate, the market value of the shares will fall and it will result in the reduction of overall wealth of the shareholders.

Definitions

The following important definitions are commonly used to understand the meaning and concept of the cost of capital.

According to the definition of **John J. Hampton** “Cost of capital is the rate of return the firm required from investment in order to increase the value of the firm in the market place”.

According to the definition of **Solomon Ezra**, “Cost of capital is the minimum required rate of earnings or the cut-off rate of capital expenditure”.

According to the definition of **James C. Van Horne**, Cost of capital is “A cut-off rate for the allocation of capital to investment of projects. It is the rate of return on a project that will leave unchanged the market price of the stock”.

According to the definition of **William and Donaldson**, “Cost of capital may be defined as the rate that must be earned on the net proceeds to provide the cost elements of the burden at the time they are due”.

Assumption of Cost of Capital

Cost of capital is based on certain assumptions which are closely associated while calculating and measuring the cost of capital. It is to be considered that there are three basic concepts:

1. It is not a cost as such. It is merely a hurdle rate.
2. It is the minimum rate of return.
3. It consists of three important risks such as zero risk level, business risk and financial risk. Cost of capital can be measured with the help of the following equation.

$$K = r_f + b + f.$$

K = Cost of capital.

r_j = The riskless cost of the particular type of finance. b =
The business risk premium.

f = The financial risk premium.

CLASSIFICATION OF COST OF CAPITAL

Cost of capital may be classified into the following types on the basis of nature and usage:

- Explicit and Implicit Cost.
- Average and Marginal Cost.
- Historical and Future Cost.
- Specific and Combined Cost.

Explicit and Implicit Cost

The cost of capital may be explicit or implicit cost on the basis of the computation of cost of capital. Explicit cost is the rate that the firm pays to procure financing.

Implicit cost is the rate of return associated with the best investment opportunity for the firm and its shareholders that will be forgone if the projects presently under consideration by the firm were accepted.

Average and Marginal Cost

Average cost of capital is the weighted average cost of each component of capital employed by the company. It considers weighted average cost of all kinds of financing such as equity, debt, retained earnings etc.

Marginal cost is the weighted average cost of new finance raised by the company. It is the additional cost of capital when the company goes for further raising of finance.

Historical and Future Cost

Historical cost is the cost which has already been incurred for financing a particular project. It is based on the actual cost incurred in the previous project.

Future cost is the expected cost of financing in the proposed project. Expected cost is calculated on the basis of previous experience.

Specific and Combine Cost

The cost of each source of capital such as equity, debt, retained earnings and loans is called as specific cost of capital. It is very useful to determine the each and every specific source of capital.

The composite or combined cost of capital is the combination of all sources of capital. It is also called as overall cost of capital. It is used to understand the total cost associated with the total finance of the firm.

Computation of cost of capital is a very important part of the financial management to decide the capital structure of the business concern.

Importance to Capital Budgeting Decision

Capital budget decision largely depends on the cost of capital of each source. According to net present value method, present value of cash inflow must be more than the present value of cash outflow. Hence, cost of capital is used to capital budgeting decision.

Importance to Structure Decision

Capital structure is the mix or proportion of the different kinds of long term securities. A firm uses particular type of sources if the cost of capital is suitable. Hence, cost of capital helps to take decision regarding structure.

Importance to Evolution of Financial Performance

Cost of capital is one of the important determine which affects the capital budgeting, capital structure and value of the firm. Hence, it helps to evaluate the financial performance of the firm.

Importance to Other Financial Decisions

Apart from the above points, cost of capital is also used in some other areas such as, market value of share, earning capacity of securities etc. hence, it plays a major part in the financial management.

COMPUTATION OF COST OF CAPITAL

Computation of cost of capital consists of two important parts:

1. Measurement of specific costs
2. Measurement of overall cost of capital

Measurement of Cost of Capital

It refers to the cost of each specific sources of finance like:

- Cost of equity
- Cost of debt
- Cost of preference share
- Cost of retained earnings

Cost of Equity

Cost of equity capital is the rate at which investors discount the expected dividends of the firm to determine its share value.

Conceptually the cost of equity capital (K_e) defined as the “Minimum rate of return that a firm must earn on the equity financed portion of an investment project in order to leave unchanged the market price of the shares”.

Cost of equity can be calculated from the following approach:

- Dividend price (D/P) approach
- Dividend price plus growth ($D/P + g$) approach
- Earning price (E/P) approach
- Realized yield approach.

Dividend Price Approach

The cost of equity capital will be that rate of expected dividend which will maintain the present market price of equity shares.

Dividend price approach can be measured with the help of the following formula:

$$K_e = \frac{D}{N_p}$$

Where,

K_e = Cost of equity capital

D = Dividend per equity share

N_p = Net proceeds of an equity share

Exercise 1

A company issues 10,000 equity shares of Rs. 100 each at a premium of 10%. The company has been paying 25% dividend to equity shareholders for the past five years and expects to maintain the same in the future also. Compute the cost of equity capital. Will it make any difference if the market price of equity share is Rs. 175?

Solution

$$\begin{aligned} K_e &= \frac{D}{N_p} \\ &= \frac{25}{100} \times 100 \\ &= 22.72\% \end{aligned}$$

If the market price of a equity share is Rs. 175.

$$\begin{aligned} K_e &= \frac{D}{N_p} \\ &\times 100 \\ &= \frac{25}{175} \\ &= 14.28\% \end{aligned}$$

Dividend Price Plus Growth Approach

The cost of equity is calculated on the basis of the expected dividend rate per share plus growth in dividend. It can be measured with the help of the following formula:

$$K_e = \frac{D}{N_p} + g$$

Where,

K_e = Cost of equity capital

D = Dividend per equity share

g = Growth in expected dividend N_p

= Net proceeds of an equity share

Exercise 2

- (a) A company plans to issue 10000 new shares of Rs. 100 each at a par. The flotation costs are expected to be 4% of the share price. The company pays a dividend of Rs. 12 per share initially and growth in dividends is expected to be 5%. Compute the cost of new issue of equity shares.
- (b) If the current market price of an equity share is Rs. 120. Calculate the cost of existing equity share capital

Solution

$$\begin{aligned} \text{(a)} \quad K_e &= \frac{D}{N_p} + g \\ &= \frac{12}{100 - 4} + 5 = 17.5\% \end{aligned}$$

$$\begin{aligned} \text{(b)} \quad K_e &= \frac{D}{N_p} + g \\ &= \frac{12}{120} + 5\% = 15\% \end{aligned}$$

Exercise 3

The current market price of the shares of A Ltd. is Rs. 95. The flotation costs are Rs. 5 per share amounts to Rs. 4.50 and is expected to grow at a rate of 7%. You are required to calculate the cost of equity share capital.

Solution

Market price Rs. 95 Dividend

Rs. 4.50

Growth 7%.

$$K_e = \frac{D}{N_p} + g$$

$$\begin{aligned} &= \frac{4.50}{95} \times 100 + 7\% \\ &= 4.73\% + 7\% = 11.73\% \end{aligned}$$

Earning Price Approach

Cost of equity determines the market price of the shares. It is based on the future earning prospects of the equity. The formula for calculating the cost of equity according to this approach is as follows.

$$K_e = \frac{E}{N_p}$$

Where,

K_e = Cost of equity capital

E = Earning per share

N_p = Net proceeds of an equity share

Exercise 4

A firm is considering an expenditure of Rs. 75 lakhs for expanding its operations.

The relevant information is as follows :

Number of existing equity shares = 10 lakhs

Market value of existing share = Rs. 100

Net earnings = Rs. 100 lakhs

Compute the cost of existing equity share capital and of new equity capital assuming that new shares will be issued at a price of Rs. 92 per share and the costs of new issue will be Rs. 2 per share.

Solution

Cost of existing equity share capital:

$$K_e = \frac{E}{N_p}$$

$$\text{Earnings Per Share (EPS)} = \frac{100 \text{ lakhs}}{10 \text{ lakhs}} = \text{Rs. } 10$$

$$K_e = \frac{10}{100} \times 100$$

$$= 10\%$$

Cost of Equity Capital

$$K_e = \frac{E}{N_p}$$

$$= \frac{10}{92 - 2} \times 100$$

$$= 11.11\%$$

Realized Yield Approach

It is the easy method for calculating cost of equity capital. Under this method, cost of equity is calculated on the basis of return actually realized by the investor in a company on their equity capital.

$$K_e = PVf \times D$$

Where,

K_e = Cost of equity capital.

PVf = Present value of discount factor. D

= Dividend per share.

Cost of Debt

Cost of debt is the after tax cost of long-term funds through borrowing. Debt may be issued at par, at premium or at discount and also it may be perpetual or redeemable.

Debt Issued at Par

Debt issued at par means, debt is issued at the face value of the debt. It may be calculated with the help of the following formula.

$$K_d = (1 - t) R$$

Where,

K_d = Cost of debt capital t

= Tax rate

R = Debenture interest rate

Debt Issued at Premium or Discount

If the debt is issued at premium or discount, the cost of debt is calculated with the help of the following formula.

$$K_d = \frac{I}{N_p} (1 - t)$$

Where,

K_d = Cost of debt capital

I = Annual interest payable N_p

= Net proceeds of debenture

t = Tax rate

Exercise 5

- A Ltd. issues Rs. 10,00,000, 8% debentures at par. The tax rate applicable to the company is 50%. Compute the cost of debt capital.
- B Ltd. issues Rs. 1,00,000, 8% debentures at a premium of 10%. The tax rate applicable to the company is 60%. Compute the cost of debt capital.
- A Ltd. issues Rs. 1,00,000, 8% debentures at a discount of 5%. The tax rate is 60%, compute the cost of debt capital.
- B Ltd. issues Rs. 10,00,000, 9% debentures at a premium of 10%. The costs of floatation are 2%. The tax rate applicable is 50%. Compute the cost of debt-capital.

In all cases, we have computed the after-tax cost of debt as the firm saves on account of tax

by using debt as a source of finance.

Solution

$$(a) \quad K_{da} = \frac{I}{N_p} (1-t)$$

$$\begin{aligned}
 &= \frac{8,000}{1,00,000} \times (1 - 0.5) \\
 &= \frac{8,000}{1,00,000} \times 0.5 \\
 &= 4\% \\
 K_{da} &= \frac{I}{N_p (1 - t)}
 \end{aligned}$$

$$(b) N_p = \text{Face Value} + \text{Premium} = 1,00,000 + 10,000 = 1,10,000$$

$$\begin{aligned}
 &= \frac{8,000}{1,10,000} \times (1 - 0.6) \\
 &= \frac{8,000}{1,10,000} \times 0.6 \\
 &= 2.91\% \\
 K_{da} &= \frac{I}{N_p (1 - t)}
 \end{aligned}$$

(c)

$$\begin{aligned}
 &= \frac{8,000}{95,000} \times (1 - t) \\
 &= 3.37\%
 \end{aligned}$$

(d)

$$K_{da} = \frac{I}{N} (1 - t), N = \text{Rs. } (10,00,000 + 1,00,000) \times \frac{2}{p}$$

100

p

p

$$= \frac{90,000}{10,78,000} \times (1 - 0.5)$$

$$= 4.17\% = 11,00,000 - 22,000 = \text{Rs. } 10,78,000$$

Cost of Perpetual Debt and Redeemable Debt

It is the rate of return which the lenders expect. The debt carries a certain rate of interest.

$$K_{db} = \frac{I + 1 / n(P - N_p) n 1 /}{n(P + N_p) / 2}$$

Where,

I = Annual interest payable P

= Par value of debt

N_p = Net proceeds of the debenture n =

Number of years to maturity

K_{db} = Cost of debt before tax.

Cost of debt after tax can be calculated with the help of the following formula:

Where,

$$K_{da} = K_{db} \times (1 - t)$$

K_{da} = Cost of debt after tax K_{db}

= Cost of debt before tax

t = Tax rate

Exercise 6

A company issues Rs. 20,00,000, 10% redeemable debentures at a discount of 5%. The costs of floatation amount to Rs. 50,000. The debentures are redeemable after 8 years. Calculate before tax and after tax. Cost of debt assuring a tax rate of 55%.

Solution

$$K_{db} = \frac{I + \frac{1}{n} (P - N_p)}{\frac{1}{2} (P + N_p)}$$

$$= \frac{20,00,000 + \frac{1}{8} (20,00,000 - 18,50,000)}{\frac{1}{2} (20,00,000 + 18,50,000)}$$

Note $N_p = 20,00,000 - 10,00,000 - 50,000$

$$= \frac{2,00,000 + 18750}{19,25,000}$$

$$= 11.36\%$$

After Tax Cost of Debt K_{db}

$$= K_{da} (1 - t)$$

$$= 11.36 (1 - 0.55)$$

$$= 5.11\%$$

Cost of Preference Share Capital

Cost of preference share capital is the annual preference share dividend by the net proceeds from the sale of preference share.

There are two types of preference shares irredeemable and redeemable. Cost of redeemable preference share capital is calculated with the help of the following formula:

$$K_p = \frac{D_p}{N_p}$$

Where,

K_p = Cost of preference share D_p

= Fixed preference dividend

N_p = Net proceeds of an equity share

Cost of irredeemable preference share is calculated with the help of the following formula:

$$K_p = \frac{D_p + (P - N_p)/n}{(P + N_p)/2}$$

Where,

K_p = Cost of preference share

D_p = Fixed preference share P

= Par value of debt

N_p = Net proceeds of the preference share n =
Number of maturity period.

Exercise 7

XYZ Ltd. issues 20,000, 8% preference shares of Rs. 100 each. Cost of issue is Rs. 2 per share. Calculate cost of preference share capital if these shares are issued (a) at par, (b) at a premium of 10% and (c) of a debentures of 6%.

Solution

$$\text{Cost of preference share capital } K_p = \frac{D_p}{N_p}$$

$$(a) \quad K_p = \frac{D_p}{N_p} \times 100$$

$$= \frac{1,60,000}{20,00,000 + 40,000} \times 100$$

$$= 8.16\%$$

$$(b) \quad K_p = \frac{1,60,000}{20,00,000 - 2,00,000 + 40,000} \times 100$$

$$= 7.40\%$$

$$I K_p = \frac{1,60,000}{20,00,000 - 20,000 + 40,000} \times 100$$

$$= \frac{1,60,000}{18,40,000} \times 100$$

$$= 8.69\%$$

Exercise 8

ABC Ltd. issues 20,000, 8% preference shares of Rs. 100 each. Redeemable after 8 years at a premium of 10%. The cost of issue is Rs. 2 per share. Calculate the cost of preference share capital.

$$K_p = \frac{D_p + (P - N_p)/n}{(P + N_p)/2}$$

$$\begin{aligned}
&= \frac{1,60,000 + 1/8 (22,00,000 - 19,60,000)}{1/2(22,00,000 + 19,60,000)} \\
&= \frac{1,60,000 + 30,000}{20,80,000} \\
&= 9.13\%
\end{aligned}$$

where

$$\begin{aligned}
D_p &= 20,000 \times 100 \times 8\% = 1,60,000 \\
P &= 20,00,000 + 2,00,000 = 22,00,000 \\
N_p &= 20,00,000 - 40,000 = 19,60,000 \\
n &= 8 \text{ years}
\end{aligned}$$

Exercise 9

ABC Ltd. issues 20,000, 8% preference shares of Rs. 100 each at a premium of 5% redeemable after 8 years at par. The cost of issue is Rs. 2 per share. Calculate the cost of preference share capital.

Solution

$$K_p = \frac{D_p + (P - N_p)/n}{(P + N_p)/2}$$

$$\begin{aligned}
&= \frac{1,60,000 + 1/8 (20,00,000 - 20,60,000)}{1/2 (20,00,000 + 20,60,000)} \\
&= \frac{1,60,000 - 7,500}{20,30,000} \\
&= 7.51\%
\end{aligned}$$

where

$$\begin{aligned}
D_p &= 20,000 \times 100 \times 8\% = 1,60,000 \\
P &= 20,00,000 \\
n &= 8 \text{ years} \\
N_p &= 20,00,000 + 10,00,000 - 40,000 = 20,60,000
\end{aligned}$$

Cost of Retained Earnings

Retained earnings is one of the sources of finance for investment proposal; it is different from other sources like debt, equity and preference shares. Cost of retained earnings is the same as the cost of an equivalent fully subscribed issue of additional shares, which is measured by the cost of equity capital. Cost of retained earnings can be calculated with the help of the following formula:

$$K_r = K_e (1 - t) (1 - b)$$

Where,

K_r = Cost of retained earnings

K_e = Cost of equity

t = Tax rate

b = Brokerage cost

Exercise 10

A firm's K_e (return available to shareholders) is 10%, the average tax rate of shareholders is 30% and it is expected that 2% is brokerage cost that shareholders will have to pay while investing their dividends in alternative securities. What is the cost of retained earnings?

Solution

Cost of Retained Earnings, $K_r = K_e (1 - t) (1 - b)$ Where,

K_e = rate of return available to shareholders
 t = tax rate

b = brokerage cost

$$\begin{aligned}\text{So, } K_r &= 10\% (1 - 0.5) (1 - 0.02) \\ &= 10\% \times 0.5 \times 0.98 \\ &= 4.9\%\end{aligned}$$

Measurement of Overall Cost of Capital

It is also called as weighted average cost of capital and composite cost of capital. Weighted average cost of capital is the expected average future cost of funds over the long run found by weighting the cost of each specific type of capital by its proportion in the firm's capital structure.

The computation of the overall cost of capital (K_o) involves the following steps.

- Assigning weights to specific costs.
- Multiplying the cost of each of the sources by the appropriate weights.
- Dividing the total weighted cost by the total weights.

The overall cost of capital can be calculated with the help of the following formula;

$$K_o = K_d W_d + K_p W_p + K_e W_e + K_r W_r$$

Where,

K_o = Overall cost of capital

K_d = Cost of debt

K_p = Cost of preference share

K_e = Cost of equity

K_r = Cost of retained earnings

W_d = Percentage of debt of total capital

W_p = Percentage of preference share to total capital W_e =

Percentage of equity to total capital

W_r = Percentage of retained earnings

Weighted average cost of capital is calculated in the following formula also:

$$K_w = \frac{\sum XW}{\sum W}$$

Where,

K_w = Weighted average cost of capital

X = Cost of specific sources of finance

W = Weight, proportion of specific sources of finance.

Exercise 11

A firm has the following capital structure and after-tax costs for the different sources of funds used :

Source of Funds	Amount Rs.	Proportion %	After-tax cost %
Debt	12,000	20	4
Preference Shares	15,000	25	8
Equity Shares	18,000	30	12
Retained Earnings	15,000	25	11
Total	<u>60,000</u>	<u>100</u>	

You are required to compute the weighted average cost of capital.

Exercise 12

A company has on its books the following amounts and specific costs of each type of capital.

Type of Capital	Book Value Rs.	Market Value Rs.	Specific Costs (%)
Debt	4,00,000	3,80,000	5
Preference	1,00,000	1,10,000	8
Equity	6,00,000	9,00,000	15
Retained Earnings	2,00,000	3,00,000	13
	<u>13,00,000</u>	<u>16,90,000</u>	

Determine the weighted average cost of capital using:

- (a) Book value weights, and
- (b) Market value weights.

How are they different? Can you think of a situation where the weighted average cost of capital would be the same using either of the weights? (MBA – P.U. Nov. 2005)

Solution

Computation of Weighted Average Cost of Capital

A. Book Value

Source of Funds	Amount	Cost % (X)	Weighted Cost Proportion X Cost (XW)
Debt	4,00,000	5	20,000
Preference Shares	1,00,000	8	8,000
Equity Shares	6,00,000	15	90,000
Retained Earnings	2,00,000	13	26,000
	Σ W = 13,00,000		Σ XW = 1,44,000

$$K_w = \frac{\sum XW}{\sum W}$$

$$K_w = \frac{1,44,000}{13,00,000} \times 100 = 11.1\%$$

Computation Weighted Average Cost of Capital

B. MARKET VALUE

Source of Funds	Amount	Cost % (X)	Weighted Cost Proportion X Cost (XW)
Debt	3,80,000	5	19,000
Preference Shares	1,10,000	8	8,800
Equity Shares	9,00,000	15	13,500
Retained Earnings	3,00,000	13	39,000
	Σ W = 16,90,000		Σ XW = 2,01,800

$$K_w = \frac{\sum XW}{\sum W}$$

$$K_w = \frac{2,01,800}{16,90,000} \times 100 = 11.9\%$$

Exercise 13

ABC Ltd. has the following capital structure.

	Rs.
Equity (expected dividend 12%)	10,00,000
10% preference	5,00,000
8% loan	15,00,000

You are required to calculate the weighted average cost of capital, assuming 50% as the rate of income-tax, before and after tax.

Solution

Solution showing weighted average cost of capital:

Particulars	Rs.	After	Weights	Cost
Equity	10,00,000	12%	33.33%	3.99
Preference	5,00,000	10%	16.67	1.67
8% Loan	15,00,000	4%	50.00	2.00
				7.66%

Weight average cost of capital = 7.66%

SOURCES OF FINANCE

Long-term Financial Requirements or Fixed Capital Requirement

Financial requirement of the business differs from firm to firm and the nature of the requirements on the basis of terms or period of financial requirement, it may be long term and short-term financial requirements.

Long-term financial requirement means the finance needed to acquire land and building for business concern, purchase of plant and machinery and other fixed expenditure. Long-term financial requirement is also called as fixed capital requirements. Fixed capital is the capital, which is used to purchase the fixed assets of the firms such as land and building, furniture and fittings, plant and machinery, etc. Hence, it is also called a capital expenditure.

Short-term Financial Requirements or Working Capital Requirement

Apart from the capital expenditure of the firms, the firms should need certain expenditure like procurement of raw materials, payment of wages, day-to-day expenditures, etc. This kind of expenditure is to meet with the help of short-term financial requirements which will meet the operational expenditure of the firms. Short-term financial requirements are popularly known as working capital.

Sources of finance mean the ways for mobilizing various terms of finance to the industrial concern. Sources of finance state that, how the companies are mobilizing finance for their requirements. The companies belong to the existing or the new which need sum amount of finance to meet the long-term and short-term requirements such as purchasing of fixed assets, construction of office building, purchase of raw materials and day-to-day expenses.

Sources of finance may be classified under various categories according to the following important heads:

1. Based on the Period

Sources of Finance may be classified under various categories based on the period. **Long-term sources:** Finance may be mobilized by long-term or short-term. When the finance mobilized with large amount and the repayable over the period will be more than five years, it may be considered as long-term sources. Share capital, issue of debenture, long-term loans from financial institutions and commercial banks come under this kind of source of finance. Long-term source of finance needs to meet the capital expenditure of the firms such as purchase of fixed assets, land and buildings, etc.

Long-term sources of finance include:

- Equity Shares
- Preference Shares
- Debenture
- Long-term Loans
- Fixed Deposits

Short-term sources: Apart from the long-term source of finance, firms can generate finance with the help of short-term sources like loans and advances from commercial banks, moneylenders, etc. Short-term source of finance needs to meet the operational expenditure of the business concern.

Short-term source of finance include:

- Bank Credit
- Customer Advances
- Trade Credit
- Factoring
- Public Deposits
- Money Market Instruments

2. Based on Ownership

Sources of Finance may be classified under various categories based on the period:

An ownership source of finance include

- Shares capital, earnings
- Retained earnings
- Surplus and Profits

Borrowed capital include

- Debenture
- Bonds
- Public deposits
- Loans from Bank and Financial Institutions.

3. Based on Sources of Generation

Sources of Finance may be classified into various categories based on the period.

Internal source of finance includes

- Retained earnings
- Depreciation funds
- Surplus

External sources of finance may be include

- Share capital
- Debenture
- Public deposits
- Loans from Banks and Financial institutions

4. Based in Mode of Finance Security**finance may be include**

- Shares capital
- Debenture

Retained earnings may include

- Retained earnings
- Depreciation funds

Loan finance may include

- Long-term loans from Financial Institutions
- Short-term loans from Commercial banks.

The above classifications are based on the nature and how the finance is mobilized from

various sources. But the above sources of finance can be divided into three major classifications:

- Security Finance
- Internal Finance
- Loans Finance

SECURITY FINANCE

If the finance is mobilized through issue of securities such as shares and debenture, it is called as security finance. It is also called as corporate securities. This type of finance plays a major role in the field of deciding the capital structure of the company.

Characters of Security Finance

Security finance consists of the following important characters:

1. Long-term sources of finance.
2. It is also called as corporate securities.
3. Security finance includes both shares and debentures.
4. It plays a major role in deciding the capital structure of the company.
5. Repayment of finance is very limited.
6. It is a major part of the company's total capitalization.

Types of Security Finance

Security finance may be divided into two major types:

1. Ownership securities or capital stock.
2. Creditorship securities or debt capital.

Ownership Securities

The ownership securities also called as capital stock, is commonly called as shares. Shares are the most Universal method of raising finance for the business concern. Ownership capital consists of the following types of securities.

- Equity Shares
- Preference Shares
- No par stock
- Deferred Shares

EQUITY SHARES

Equity Shares also known as ordinary shares, which means, other than preference shares. Equity shareholders are the real owners of the company. They have a control over the management of the company. Equity shareholders are eligible to get dividend if the company earns profit. Equity share capital cannot be redeemed during the lifetime of the company. The liability of the equity shareholders is the value of unpaid value of shares.

Features of Equity Shares

Equity shares consist of the following important features:

- 1. Maturity of the shares:** Equity shares have permanent nature of capital, which has no maturity period. It cannot be redeemed during the lifetime of the company.

- 2. Residual claim on income:** Equity shareholders have the right to get income left after paying fixed rate of dividend to preference shareholder. The earnings or the income available to the shareholders is equal to the profit after tax minus preference dividend.
- 3. Residual claims on assets:** If the company wound up, the ordinary or equity shareholders have the right to get the claims on assets. These rights are only available to the equity shareholders.
- 4. Right to control:** Equity shareholders are the real owners of the company. Hence, they have power to control the management of the company and they have power to take any decision regarding the business operation.
- 5. Voting rights:** Equity shareholders have voting rights in the meeting of the company with the help of voting right power; they can change or remove any decision of the business concern. Equity shareholders only have voting rights in the company meeting and also they can nominate proxy to participate and vote in the meeting instead of the shareholder.
- 6. Pre-emptive right:** Equity shareholder pre-emptive rights. The pre-emptive right is the legal right of the existing shareholders. It is attested by the company in the first opportunity to purchase additional equity shares in proportion to their current holding capacity.
- 7. Limited liability:** Equity shareholders are having only limited liability to the value of shares they have purchased. If the shareholders are having fully paid up shares, they have no liability. For example: If the shareholder purchased 100 shares with the face value of Rs. 10 each. He paid only Rs. 900. His liability is only Rs. 100.

Total number of shares 100 Face

value of shares Rs. 10

Total value of shares $100 \times 10 = 1,000$

Paid up value of shares 900

Unpaid value/liability $\underline{\quad 100 \quad}$

Liability of the shareholders is only unpaid value of the share (that is Rs. 100).

Advantages of Equity Shares

Equity shares are the most common and universally used shares to mobilize finance for the company. It consists of the following advantages.

- 1. Permanent sources of finance:** Equity share capital is belonging to long-term permanent nature of sources of finance, hence, it can be used for long-term or fixed capital requirement of the business concern.
- 2. Voting rights:** Equity shareholders are the real owners of the company who have voting rights. This type of advantage is available only to the equity shareholders.
- 3. No fixed dividend:** Equity shares do not create any obligation to pay a fixed rate of dividend. If the company earns profit, equity shareholders are eligible for

profit, they are eligible to get dividend otherwise, and they cannot claim any dividend from the company.

4. **Less cost of capital:** Cost of capital is the major factor, which affects the value of the company. If the company wants to increase the value of the company, they have to use more share capital because, it consists of less cost of capital (K_e) while compared to other sources of finance.
5. **Retained earnings:** When the company have more share capital, it will be suitable for retained earnings which is the less cost sources of finance while compared to other sources of finance.

Disadvantages of Equity Shares

1. **Irredeemable:** Equity shares cannot be redeemed during the lifetime of the business concern. It is the most dangerous thing of over capitalization.
2. **Obstacles in management:** Equity shareholder can put obstacles in management by manipulation and organizing themselves. Because, they have power to contrast any decision which are against the wealth of the shareholders.
3. **Leads to speculation:** Equity shares dealings in share market lead to secularism during prosperous periods.
4. **Limited income to investor:** The Investors who desire to invest in safe securities with a fixed income have no attraction for equity shares.
5. **No trading on equity:** When the company raises capital only with the help of equity, the company cannot take the advantage of trading on equity.

PREFERENCE SHARES

The parts of corporate securities are called as preference shares. It is the shares, which have preferential right to get dividend and get back the initial investment at the time of winding up of the company. Preference shareholders are eligible to get fixed rate of dividend and they do not have voting rights.

Preference shares may be classified into the following major types:

1. **Cumulative preference shares:** Cumulative preference shares have right to claim dividends for those years which have no profits. If the company is unable to earn profit in any one or more years, C.P. Shares are unable to get any dividend but they have right to get the comparative dividend for the previous years if the company earned profit.
2. **Non-cumulative preference shares:** Non-cumulative preference shares have no right to enjoy the above benefits. They are eligible to get only dividend if the company earns profit during the years. Otherwise, they cannot claim any dividend.

3. **Redeemable preference shares:** When, the preference shares have a fixed maturity period it becomes redeemable preference shares. It can be redeemable during the lifetime of the company. The Company Act has provided certain restrictions on the return of the redeemable preference shares.

Irredeemable Preference Shares

Irredeemable preference shares can be redeemed only when the company goes for liquidator. There is no fixed maturity period for such kind of preference shares.

Participating Preference Shares

Participating preference shareholders have right to participate extra profits after distributing the equity shareholders.

Non-Participating Preference Shares

Non-participating preference shareholders are not having any right to participate extra profits after distributing to the equity shareholders. Fixed rate of dividend is payable to the type of shareholders.

Convertible Preference Shares

Convertible preference shareholders have right to convert their holding into equity shares after a specific period. The articles of association must authorize the right of conversion.

Non-convertible Preference Shares

These shares, cannot be converted into equity shares from preference shares.

Features of Preference Shares

The following are the important features of the preference shares:

1. **Maturity period:** Normally preference shares have no fixed maturity period except in the case of redeemable preference shares. Preference shares can be redeemable only at the time of the company liquidation.
2. **Residual claims on income:** Preferential shareholders have a residual claim on income. Fixed rate of dividend is payable to the preference shareholders.
3. **Residual claims on assets:** The first preference is given to the preference shareholders at the time of liquidation. If any extra Assets are available that should be distributed to equity shareholder.
4. **Control of Management:** Preference shareholder does not have any voting rights. Hence, they cannot have control over the management of the company.

Advantages of Preference Shares

Preference shares have the following important advantages.

1. **Fixed dividend:** The dividend rate is fixed in the case of preference shares. It is called as fixed income security because it provides a constant rate of income to the investors.

2. **Cumulative dividends:** Preference shares have another advantage which is called cumulative dividends. If the company does not earn any profit in any previous years, it can be cumulative with future period dividend.
3. **Redemption:** Preference Shares can be redeemable after a specific period except in the case of irredeemable preference shares. There is a fixed maturity period for repayment of the initial investment.
4. **Participation:** Participative preference shareholders can participate in the surplus profit after distribution to the equity shareholders.
5. **Convertibility:** Convertibility preference shares can be converted into equity shares when the articles of association provide such conversion.

Disadvantages of Preference Shares

1. **Expensive sources of finance:** Preference shares have high expensive source of finance while compared to equity shares.
2. **No voting right:** Generally preference shareholders do not have any voting rights. Hence they cannot have the control over the management of the company.
3. **Fixed dividend only:** Preference shares can get only fixed rate of dividend. They may not enjoy more profits of the company.
4. **Permanent burden:** Cumulative preference shares become a permanent burden so far as the payment of dividend is concerned. Because the company must pay the dividend for the unprofitable periods also.
5. **Taxation:** In the taxation point of view, preference shares dividend is not a deductible expense while calculating tax. But, interest is a deductible expense. Hence, it has disadvantage on the tax deduction point of view.

DEFERRED SHARES

Deferred shares also called as founder shares because these shares were normally issued to founders. The shareholders have a preferential right to get dividend before the preference shares and equity shares. According to Companies Act 1956 no public limited company or which is a subsidiary of a public company can issue deferred shares.

These shares were issued to the founder at small denomination to control over the management by the virtue of their voting rights.

NO PAR SHARES

When the shares are having no face value, it is said to be no par shares. The company issues this kind of shares which is divided into a number of specific shares without any specific denomination. The value of shares can be measured by dividing the real net worth of the company with the total number of shares.

$$\text{Value of no. per share} = \frac{\text{The real net worth}}{\text{Total no. of shares}}$$

CREDITORSHIP SECURITIES

Creditorship Securities also known as debt finance which means the finance is mobilized from the creditors. Debenture and Bonds are the two major parts of the Creditorship Securities.

Debentures

A Debenture is a document issued by the company. It is a certificate issued by the company under its seal acknowledging a debt.

According to the Companies Act 1956, “debenture includes debenture stock, bonds and any other securities of a company whether constituting a charge of the assets of the company or not.”

Types of Debentures

Debentures may be divided into the following major types:

1. **Unsecured debentures:** Unsecured debentures are not given any security on assets of the company. It is also called simple or naked debentures. This type of debentures are treated as unsecured creditors at the time of winding up of the company.
2. **Secured debentures:** Secured debentures are given security on assets of the company. It is also called as mortgaged debentures because these debentures are given against any mortgage of the assets of the company.
3. **Redeemable debentures:** These debentures are to be redeemed on the expiry of a certain period. The interest is paid periodically and the initial investment is returned after the fixed maturity period.
4. **Irredeemable debentures:** These kind of debentures cannot be redeemable during the life time of the business concern.
5. **Convertible debentures:** Convertible debentures are the debentures whose holders have the option to get them converted wholly or partly into shares. These debentures are usually converted into equity shares. Conversion of the debentures may be:
Non-convertible debentures Fully
convertible debentures Partly
convertible debentures
6. **Other types:** Debentures can also be classified into the following types. Some of the common types of the debentures are as follows:
 1. Collateral Debenture
 2. Guaranteed Debenture
 3. First Debenture
 4. Zero Coupon Bond
 5. Zero Interest Bond/Debenture

Features of Debentures

1. **Maturity period:** Debentures consist of long-term fixed maturity period. Normally, debentures consist of 10–20 years maturity period and are repayable with the principle investment at the end of the maturity period.
2. **Residual claims in income:** Debenture holders are eligible to get fixed rate of interest at every end of the accounting period. Debenture holders have priority of claim in income of the company over equity and preference shareholders.
3. **Residual claims on asset:** Debenture holders have priority of claims on Assets of the company over equity and preference shareholders. The Debenture holders may have either specific charge on the Assets or floating charge of the assets of the company. Specific charge of Debenture holders are treated as secured creditors and floating charge of Debenture holders are treated as unsecured creditors.
4. **No voting rights:** Debenture holders are considered as creditors of the company. Hence they have no voting rights. Debenture holders cannot have the control over the performance of the business concern.
5. **Fixed rate of interest:** Debentures yield fixed rate of interest till the maturity period. Hence the business will not affect the yield of the debenture.

Advantages of Debenture

Debenture is one of the major parts of the long-term sources of finance which consists the following important advantages:

1. **Long-term sources:** Debenture is one of the long-term sources of finance to the company. Normally the maturity period is longer than the other sources of finance.
2. **Fixed rate of interest:** Fixed rate of interest is payable to debenture holders, hence it is most suitable of the companies earn higher profit. Generally, the rate of interest is lower than the other sources of long-term finance.
3. **Trade on equity:** A company can trade on equity by mixing debentures in its capital structure and thereby increase its earning per share. When the company apply the trade on equity concept, cost of capital will reduce and value of the company will increase.
4. **Income tax deduction:** Interest payable to debentures can be deducted from the total profit of the company. So it helps to reduce the tax burden of the company.
5. **Protection:** Various provisions of the debenture trust deed and the guidelines issued by the SEBI protect the interest of debenture holders.

Disadvantages of Debenture

Debenture finance consists of the following major disadvantages:

1. **Fixed rate of interest:** Debenture consists of fixed rate of interest payable to securities. Even though the company is unable to earn profit, they have to pay the fixed rate of interest to debenture holders, hence, it is not suitable to those company earnings which fluctuate considerably.

2. **No voting rights:** Debenture holders do not have any voting rights. Hence, they cannot have the control over the management of the company.
3. **Creditors of the company:** Debenture holders are merely creditors and not the owners of the company. They do not have any claim in the surplus profits of the company.
4. **High risk:** Every additional issue of debentures becomes more risky and costly on account of higher expectation of debenture holders. This enhanced financial risk increases the cost of equity capital and the cost of raising finance through debentures which is also high because of high stamp duty.
5. **Restrictions of further issues:** The company cannot raise further finance through debentures as the debentures are under the part of security of the assets already mortgaged to debenture holders.

INTERNAL FINANCE

A company can mobilize finance through external and internal sources. A new company may not raise internal sources of finance and they can raise finance only external sources such as shares, debentures and loans but an existing company can raise both internal and external sources of finance for their financial requirements. Internal finance is also one of the important sources of finance and it consists of cost of capital while compared to other sources of finance.

Internal source of finance may be broadly classified into two categories:

- A. Depreciation Funds
- B. Retained earnings

Depreciation Funds

Depreciation funds are the major part of internal sources of finance, which is used to meet the working capital requirements of the business concern. Depreciation means decrease in the value of asset due to wear and tear, lapse of time, obsolescence, exhaustion and accident. Generally depreciation is charged against fixed assets of the company at fixed rate for every year. The purpose of depreciation is replacement of the assets after the expired period. It is one kind of provision of fund, which is needed to reduce the tax burden and overall profitability of the company.

Retained Earnings

Retained earnings are another method of internal sources of finance. Actually is not a method of raising finance, but it is called as accumulation of profits by a company for its expansion and diversification activities.

Retained earnings are called under different names such as; self finance, inter finance, and plugging back of profits. According to the Companies Act 1956 certain percentage, as prescribed by the central government (not exceeding 10%) of the net profits after tax of a

financial year have to be compulsorily transferred to reserve by a company before declaring dividends for the year.

Under the retained earnings sources of finance, a part of the total profits is transferred to various reserves such as general reserve, replacement fund, reserve for repairs and renewals, reserve funds and secret reserves, etc.

Advantages of Retained Earnings

Retained earnings consist of the following important advantages:

1. **Useful for expansion and diversification:** Retained earnings are most useful to expansion and diversification of the business activities.
2. **Economical sources of finance:** Retained earnings are one of the least costly sources of finance since it does not involve any floatation cost as in the case of raising of funds by issuing different types of securities.
3. **No fixed obligation:** If the companies use equity finance they have to pay dividend and if the companies use debt finance, they have to pay interest. But if the company uses retained earnings as sources of finance, they need not pay any fixed obligation regarding the payment of dividend or interest.
4. **Flexible sources:** Retained earnings allow the financial structure to remain completely flexible. The company need not raise loans for further requirements, if it has retained earnings.
5. **Increase the share value:** When the company uses the retained earnings as the sources of finance for their financial requirements, the cost of capital is very cheaper than the other sources of finance; Hence the value of the share will increase.
6. **Avoid excessive tax:** Retained earnings provide opportunities for evasion of excessive tax in a company when it has small number of shareholders.
7. **Increase earning capacity:** Retained earnings consist of least cost of capital and also it is most suitable to those companies which go for diversification and expansion.

Disadvantages of Retained Earnings

Retained earnings also have certain disadvantages:

1. **Misuses:** The management by manipulating the value of the shares in the stock market can misuse the retained earnings.
2. **Leads to monopolies:** Excessive use of retained earnings leads to monopolistic attitude of the company.
3. **Over capitalization:** Retained earnings lead to over capitalization, because if the company uses more and more retained earnings, it leads to insufficient source of finance.
4. **Tax evasion:** Retained earnings lead to tax evasion. Since, the company reduces tax burden through the retained earnings.

- 5. Dissatisfaction:** If the company uses retained earnings as sources of finance, the shareholder can't get more dividends. So, the shareholder does not like to use the retained earnings as source of finance in all situations.

LOAN FINANCING

Loan financing is the important mode of finance raised by the company. Loan finance may be divided into two types:

- (a) Long-Term Sources
- (b) Short-Term Sources

Loan finance can be raised through the following important institutions.

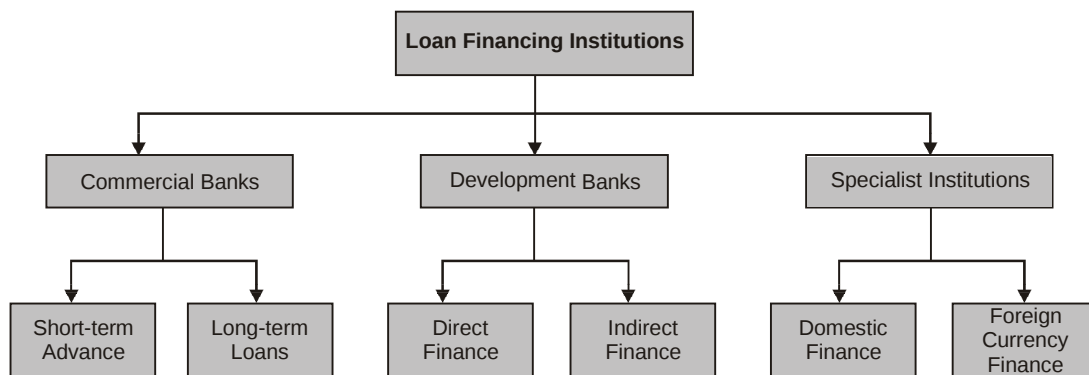


Fig. 3.1 Loan Financing

Financial Institutions

With the effect of the industrial revaluation, the government established nation wide and state wise financial industries to provide long-term financial assistance to industrial concerns in the country. Financial institutions play a key role in the field of industrial development and they are meeting the financial requirements of the business concern. IFCI, ICICI, IDBI, SFC, EXIM Bank, ECGC are the famous financial institutions in the country.

Commercial Banks

Commercial Banks normally provide short-term finance which is repayable within a year. The major finance of commercial banks is as follows:

Short-term advance: Commercial banks provide advance to their customers with or without securities. It is one of the most common and widely used short-term sources of finance, which are needed to meet the working capital requirement of the company.

It is a cheap source of finance, which is in the form of pledge, mortgage, hypothecation and bills discounted and rediscounted.

Short-term Loans

Commercial banks also provide loans to the business concern to meet the short-term financial requirements. When a bank makes an advance in lump sum against some security it is termed as loan. Loan may be in the following form:

- (a) **Cash credit:** A cash credit is an arrangement by which a bank allows his customer to borrow money up to certain limit against the security of the commodity.
- (b) **Overdraft:** Overdraft is an arrangement with a bank by which a current account holder is allowed to withdraw more than the balance to his credit up to a certain limit without any securities.

Development Banks

Development banks were established mainly for the purpose of promotion and development the industrial sector in the country. Presently, large number of development banks are functioning with multidimensional activities. Development banks are also called as financial institutions or statutory financial institutions or statutory non-banking institutions. Development banks provide two important types of finance:

- (a) Direct Finance
- (b) Indirect Finance/Refinance

Some of the important development banks are discussed in Chapter 11.

Presently the commercial banks are providing all kinds of financial services including development-banking services. And also nowadays development banks and specialised financial institutions are providing all kinds of financial services including commercial banking services. Diversified and global financial services are unavoidable to the present day economics. Hence, we can classify the financial institutions only by the structure and set up and not by the services provided by them.

UNIT –IV

Capital budgeting (Numerical Problems): Cash flows - traditional methods, discounted cash flow methods, risk analysis, real options leasing.

INTRODUCTION

The word Capital refers to be the total investment of a company of firm in money, tangible and intangible assets. Whereas budgeting defined by the “**Rowland and William**” it may be said to be the art of building budgets. Budgets are a blue print of a plan and action expressed in quantities and manners.

The examples of capital expenditure:

1. Purchase of fixed assets such as land and building, plant and machinery, good will, etc.
2. The expenditure relating to addition, expansion, improvement and alteration to the fixed assets.
3. The replacement of fixed assets.
4. Research and development project.

Definitions

According to the definition of **Charles T. Hrongreen**, “capital budgeting is a long-term planning for making and financing proposed capital out lays.

According to the definition of **G.C. Philippatos**, “capital budgeting is concerned with the allocation of the firms source financial resources among the available opportunities. The consideration of investment opportunities involves the comparison of the expected future streams of earnings from a project with the immediate and subsequent streams of earning from a project, with the immediate and subsequent streams of expenditure”.

According to the definition of **Richard and Green law**, “capital budgeting is acquiring inputs with long-term return”.

According to the definition of **Lyrich**, “capital budgeting consists in planning development of available capital for the purpose of maximizing the long-term profitability of the concern”.

It is clearly explained in the above definitions that a firm’s scarce financial resources are utilizing the available opportunities. The overall objectives of the company from is to maximize the profits and minimize the expenditure of cost.

Need and Importance of Capital Budgeting

1. **Huge investments:** Capital budgeting requires huge investments of funds, but the available funds are limited, therefore the firm before investing projects, plan are control its capital expenditure.
2. **Long-term:** Capital expenditure is long-term in nature or permanent in nature. Therefore financial risks involved in the investment decision are more. If higher risks are involved, it needs careful planning of capital budgeting.
3. **Irreversible:** The capital investment decisions are irreversible, are not changed back. Once the decision is taken for purchasing a permanent asset, it is very difficult to dispose off those assets without involving huge losses.
4. **Long-term effect:** Capital budgeting not only reduces the cost but also increases the revenue in long-term and will bring significant changes in the profit of the

company by avoiding over or more investment or under investment. Over investments leads to be unable to utilize assets or over utilization of fixed assets. Therefore before making the investment, it is required carefully planning and analysis of the project thoroughly.

CAPITAL BUDGETING PROCESS

Capital budgeting is a difficult process to the investment of available funds. The benefit will attained only in the near future but, the future is uncertain. However, the following steps followed for capital budgeting, then the process may be easier are.

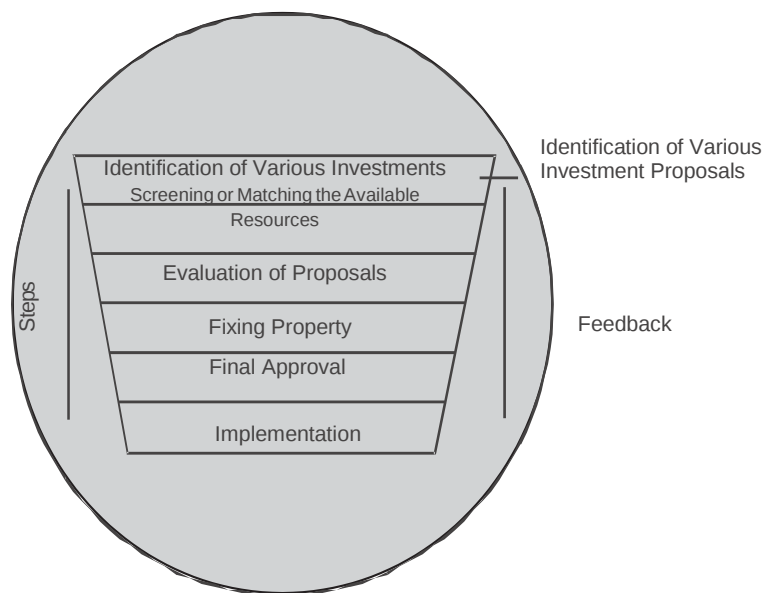


Fig. 9.1 Capital Budgeting Process

1. **Identification of various investments proposals:** The capital budgeting may have various investment proposals. The proposal for the investment opportunities may be defined from the top management or may be even from the lower rank. The heads of various department analyse the various investment decisions, and will select proposals submitted to the planning committee of competent authority.
2. **Screening or matching the proposals:** The planning committee will analyse the various proposals and screenings. The selected proposals are considered with the available resources of the concern. Here resources referred as the financial part of the proposal. This reduces the gap between the resources and the investment cost.
3. **Evaluation:** After screening, the proposals are evaluated with the help of various methods, such as pay back period proposal, net discovered present value method, accounting rate of return and risk analysis. Each method of evaluation used in detail in the later part of this chapter. The proposals are evaluated by.
 - (a) Independent proposals
 - (b) Contingent of dependent proposals
 - (c) Partially exclusive proposals.

Independent proposals are not compared with another proposals and the same may be accepted or rejected. Whereas higher proposals acceptance depends upon the other one or more proposals. For example, the expansion of plant machinery leads to constructing of new building, additional manpower etc. Mutually exclusive projects are those which competed with other proposals and to implement the proposals after considering the risk and return, market demand etc.

4. **Fixing property:** After the evolution, the planning committee will predict which proposals will give more profit or economic consideration. If the projects or proposals are not suitable for the concern's financial condition, the projects are rejected without considering other nature of the proposals.
5. **Final approval:** The planning committee approves the final proposals, with the help of the following:
 - (a) Profitability
 - (b) Economic constituents
 - (c) Financial violability
 - (d) Market conditions.

The planning committee prepares the cost estimation and submits to the management.

6. **Implementing:** The competent authority spends the money and implements the proposals. While implementing the proposals, assign responsibilities to the proposals, assign responsibilities for completing it, within the time allotted and reduce the cost for this purpose. The network techniques used such as PERT and CPM. It helps the management for monitoring and containing the implementation of the proposals.

7. **Performance review of feedback:** The final stage of capital budgeting is actual results compared with the standard results. The adverse or unfavourable results identified and removing the various difficulties of the project. This is helpful for the future of the proposals.

KINDS OF CAPITAL BUDGETING DECISIONS

The overall objective of capital budgeting is to maximize the profitability. If a firm concentrates return on investment, this objective can be achieved either by increasing the revenues or reducing the costs. The increasing revenues can be achieved by expansion or the size of operations by adding a new product line. Reducing costs mean representing obsolete return on assets.

METHODS OF CAPITAL BUDGETING OF EVALUATION

By matching the available resources and projects it can be invested. The funds available are always living funds. There are many considerations taken for investment decision process such as environment and economic conditions.

The methods of evaluations are classified as follows:

(A) Traditional methods (or Non-discount methods)

- (i) Pay-back Period Methods
- (ii) Post Pay-back Methods
- (iii) Accounts Rate of Return

(B) Modern methods (or Discount methods)

- (i) Net Present Value Method
- (ii) Internal Rate of Return Method
- (iii) Profitability Index Method

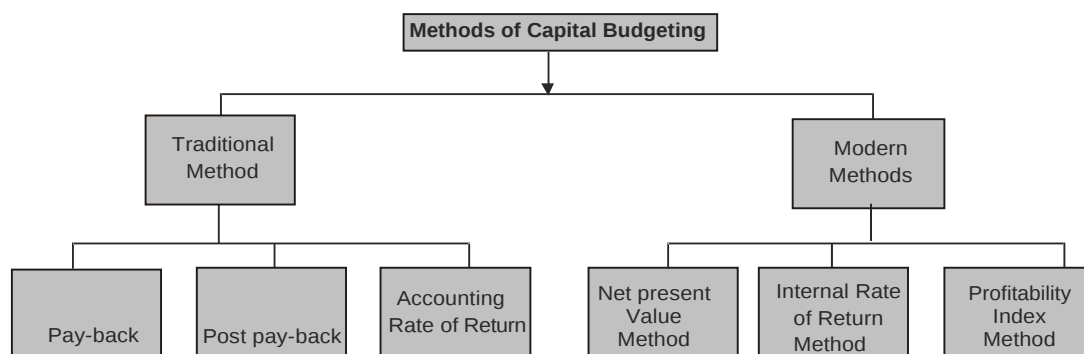


Fig. 9.2 Capital Budgeting Methods

Pay-back Period

Pay-back period is the time required to recover the initial investment in a project.

(It is one of the non-discounted cash flow methods of capital budgeting).

$$\text{Pay-back period} = \frac{\text{Initial investment}}{\text{Annual cash inflows}}$$

Merits of Pay-back method

The following are the important merits of the pay-back method:

1. It is easy to calculate and simple to understand.
2. Pay-back method provides further improvement over the accounting rate return.
3. Pay-back method reduces the possibility of loss on account of obsolescence.

Demerits

1. It ignores the time value of money.
2. It ignores all cash inflows after the pay-back period.
3. It is one of the misleading evaluations of capital budgeting.

Accept /Reject criteria

If the actual pay-back period is less than the predetermined pay-back period, the project would be accepted. If not, it would be rejected.

Exercise 1

Project cost is Rs. 30,000 and the cash inflows are Rs. 10,000, the life of the project is 5 years. Calculate the pay-back period.

$$\begin{aligned} \text{Solution} &= \frac{\text{Rs. 30,000}}{\text{Rs. 10,000}} = 3 \text{ Years} \end{aligned}$$

The annual cash inflow is calculated by considering the amount of net income on the amount of depreciation project (Asset) before taxation but after taxation. The income precision earned is expressed as a percentage of initial investment, is called unadjusted rate of return. The above problem will be calculated as below:

$$\begin{aligned} \text{Unadjusted rate of return} &= \frac{\text{Annual Return}}{\text{Investment}} \times 100 \\ &= \frac{\text{Rs. 10,000}}{\text{Rs. 30,000}} \times 100 \\ &= 33.33\% \end{aligned}$$

Exercise 2

A project costs Rs. 20,00,000 and yields annually a profit of Rs. 3,00,000 after depreciation @ 12½% but before tax at 50%. Calculate the pay-back period.

Profit after depreciation	3,00,000
	<u>1,50,000</u>
Tax 50%	1,50,000
Add depreciation	
20,00,000 $12\frac{1}{2}\%$	<u>2,50,000</u>
Cash in flow	<u>4,00,000</u>

Solution

$$\text{Pay-back period} = \frac{\text{Investment}}{\text{Cash flow}}$$

$$= \frac{20,00,000}{4,00,000} = 5 \text{ years.}$$

Uneven Cash Inflows

Normally the projects are not having uniform cash inflows. In those cases the pay-back period is calculated, cumulative cash inflows will be calculated and then interpreted.

Exercise 3

Certain projects require an initial cash outflow of Rs. 25,000. The cash inflows for 6 years are Rs. 5,000, Rs. 8,000, Rs. 10,000, Rs. 12,000, Rs. 7,000 and Rs. 3,000.

Solution

Year	Cash Inflows (Rs.)	Cumulative Cash Inflows (Rs.)
1	5,000	5,000
2	8,000	13,000
3	10,000	23,000
4	12,000	35,000
5	7,000	42,000
6	3,000	45,000

The above calculation shows that in 3 years Rs. 23,000 has been recovered Rs. 2,000, is balance out of cash outflow. In the 4th year the cash inflow is Rs. 12,000. It means the pay-back period is three to four years, calculated as follows

$$\text{Pay-back period} = 3 \text{ years} + \frac{2000}{12000} \times 12 \text{ months}$$

$$= 3 \text{ years } 2 \text{ months.}$$

Post Pay-back Profitability Method

One of the major limitations of pay-back period method is that it does not consider the cash inflows earned after pay-back period and if the real profitability of the project cannot be assessed. To improve over this method, it can be made by considering the receivable after the pay-back period. These returns are called post pay-back profits.

Exercise 4

From the following particulars, compute:

1. Payback period.
2. Post pay-back profitability and post pay-back profitability index.
 - (a) Cash outflow Rs. 1,00,000
 Annual cash inflow Rs. 25,000
 (After tax before depreciation)
 Estimate Life 6 years
 - (b) Cash outflow Rs. 1,00,000
 Annual cash inflow
 (After tax depreciation)
 First five years Rs. 20,000
 Next five years Rs. 8,000
 Estimated life 10 Years
 Salvage value Rs. 16,000

Solution

- (a) (i) Pay-back period

$$\begin{aligned}
 &= \frac{\text{Initial investment}}{\text{Annual cash inflows}} \\
 &= \frac{1,00,000}{25,000} = 4 \text{ Years}
 \end{aligned}$$

- (ii) Post pay-back profitability
 = Cash inflow (Estimated life – Pay-back period)
 = 25,000 (6 – 4)
 = Rs. 50,000

- (iii) Post pay-back profitability index

$$= \frac{50,000}{1,00,000} \times 100 = 50\%$$

- (b) Cash inflows are equal, therefore pay back period is calculated as follows: (i)

Year	Cash Inflows (Rs.)	Cumulative Cash Inflows (Rs.)
1	20,000	20,000
2	20,000	40,000
3	20,000	60,000
4	20,000	80,000

Contd....

5	20,000	1,00,000
6	8,000	1,08,000
7	8,000	1,16,000
8	8,000	1,24,000
9	8,000	1,32,000
10	8,000	1,40,000

(ii) Post pay-back profitability.

= Cash inflow (estimated life – pay-back period)

= 8,000 (10–5)

= 8000×5 = 40,000

(iii) Post pay-back profitability index

$$= \frac{40,000}{1,00,000} \times 100 = 40\%$$

Accounting Rate of Return or Average Rate of Return

Average rate of return means the average rate of return or profit taken for considering the project evaluation. This method is one of the traditional methods for evaluating the project proposals:

Merits

1. It is easy to calculate and simple to understand.
2. It is based on the accounting information rather than cash inflow.
3. It is not based on the time value of money.
4. It considers the total benefits associated with the project.

Demerits

1. It ignores the time value of money.
2. It ignores the reinvestment potential of a project.
3. Different methods are used for accounting profit. So, it leads to some difficulties in the calculation of the project.

Accept/Reject criteria

If the actual accounting rate of return is more than the predetermined required rate of return, the project would be accepted. If not it would be rejected.

Exercise 5

A company has two alternative proposals. The details are as follows:

Net Present Value

Net present value method is one of the modern methods for evaluating the project proposals. In this method cash inflows are considered with the time value of the money. Net present value describes as the summation of the present value of cash inflow and present value of cash outflow. Net present value is the difference between the total present value of future cash inflows and the total present value of future cash outflows.

Merits

1. It recognizes the time value of money.
2. It considers the total benefits arising out of the proposal.
3. It is the best method for the selection of mutually exclusive projects.
4. It helps to achieve the maximization of shareholders' wealth.

Demerits

1. It is difficult to understand and calculate.
2. It needs the discount factors for calculation of present values.
3. It is not suitable for the projects having different effective lives.

Accept/Reject criteria

If the present value of cash inflows is more than the present value of cash outflows, it would be accepted. If not, it would be rejected.

Exercise 6

From the following information, calculate the net present value of the two project and suggest which of the two projects should be accepted a discount rate of the two.

	Project X	Project Y
Initial Investment	Rs. 20,000	Rs. 30,000
Estimated Life	5 years	5 years
Scrap Value	Rs. 1,000	Rs. 2,000

The profits before depreciation and after taxation (cash flows) are as follows:

	Year 1	Year 2	Year 3	Year 4	Year 5
	Rs.	Rs.	Rs.	Rs.	Rs.
Project x	5,000	10,000	10,000	3,000	2,000
Project y	20,000	10,000	5,000	3,000	2,000

Note : The following are the present value factors @ 10% p.a.

Year	1	2	3	4	5	6
Factor	0.909	0.826	0.751	0.683	0.621	0.564

(MBA, Madurai-Kamaraj University, May 2005)

Solution

Year	Cash Inflows		Present Value of Rs. 1 @ 10%	Present Value of Net Cash Inflow	
	Project X Rs.	Project Y Rs.		Project X Rs.	Project Y Rs.
1	5,000	20,000	0.909	4,545	18,180
2	10,000	10,000	0.826	8,260	8,260
3	10,000	5,000	0.751	7,510	3,755
4	3,000	3,000	0.683	2,049	2,049
5	2,000	2,000	0.621	1,242	1,242
Scrap Value	1,000	2,000	0.621	621	1,245
Total present valueInitial investments				24,227	34,728
Net present value				20,000	30,000
				4,227	4,728

Project Y should be selected as net present value of project Y is higher.

Exercise 7

The following are the cash inflows and outflows of a certain project.

Year	Outflows	Inflows
0	1,75,000	-
1	5,50,000	35,000
2		45,000
3		65,000
4		85,000
5		50,000

The salvage value at the end of 5 years is Rs. 50,000. Taking the cutoff rate as 10%, calculate net present value.

Year	1	2	3	4	5
P.V.	0.909	0.826	0.751	0.683	0.621

Solution

Year	Cash Inflows Rs.	Present Value Factor @ 10%	Present Value of Cash Inflows
1	35,000	0.909	31,815
2	45,000	0.826	37,170

Contd....

3	65000	0.751	48815
4	85000	0.683	58055
5	50000	0.621	31050
5(Salvage)	50000	0.621	31050
		Total present value of cash inflows	237955

Less : Total present value of outflows

Cash outflow at the beginning 1,75,000

Cash outflow at the end of first

Year 50000×0.909 45,450

Total value of outflows 2,20,450

Net Present Value 17,505

If the cash inflows are not given in that cases the calculation of cash inflows are Net profit after tax+Depreciation. In this type of situation first find out the Net profit after depreciation and deducting the tax and then add the depreciation. It gives the cash inflow.

Exercise 8 From the following information you can learn after tax and depreciation concept.

Initial Outlay	Rs. 1,00,000
Estimated life	5 Years
Scrap Value	Rs. 10,000
Profit after tax :	
End of year 1	Rs. 6,000
2	Rs. 14,000
3	Rs. 24,000
4	16,000
5	Nil

Solution Depreciation has been calculated under straight line method. The cost of capital may be taken at 10%. P.a. is given below.

Year	1	2	3	4	5
PV factor @ 10%	0.909	0.826	0.751	0.683	0.621

$$\begin{aligned}
 \text{Depreciation} &= \frac{\text{Initial cash outflow} - \text{scrap value}}{\text{Estimated Life of the project}} \\
 &= \frac{1,00,000 - 10,000}{5} \\
 &= \frac{90,000}{5} = \text{Rs. } 18,000
 \end{aligned}$$

Year	Profit after Tax	Depreciation	Cash Inflow
1	6,000	18,000	24,000
2	14,000	18,000	32,000
3	24,000	18,000	42,000
4	16,000	18,000	34,000
5	Nil	18,000	18,000

Net Present Value

Year	Cash Inflow	Discount factor @ 10%	Present value (Rs.)
1	24,000	0.909	21,816
2	32,000	0.826	26,432
3	42,000	0.751	31,542
4	34,000	0.683	23,222
5	18,000	0.621	11,178

Total present value of cash inflows	1,14,190
Less : Initial cash investment	1,00,000
Net present value	<u>1,41,90</u>

Internal Rate of Return

Internal rate of return is time adjusted technique and covers the disadvantages of the traditional techniques. In other words it is a rate at which discount cash flows to zero. It is expected by the following ratio:

$$\frac{\text{Cash inflow}}{\text{Investment initial}}$$

Steps to be followed: Step1.

find out factor

Factor is calculated as follows:

$$F = \frac{\text{Cash outlay (or) initial investment}}{\text{Cash inflow}}$$

Step 2. Find out positive net present value

Step 3. Find out negative net present value

Step 4. Find out formula net present value

Formula

$$\text{IRR} = \text{Base factor} + \frac{\text{Positive net present value}}{\text{Difference in positive and Negative net present value}} \times \text{DP}$$

Base factor = Positive discount rate

DP = Difference in percentage

Merits

1. It consider the time value of money.
2. It takes into account the total cash inflow and outflow.
3. It does not use the concept of the required rate of return.
4. It gives the approximate/nearest rate of return.

Demerits

1. It involves complicated computational method.
2. It produces multiple rates which may be confusing for taking decisions.
3. It is assume that all intermediate cash flows are reinvested at the internal rate of return.

Accept/ Reject criteria

If the present value of the sum total of the compounded reinvested cash flows is greater than the present value of the outflows, the proposed project is accepted. If not it would be rejected.

Exercise 9

A company has to select one of the following two projects:

	Project A	Project B
Cost	Rs.22,000	20,000
Cash inflows:		
Year 1	12,000	2,000
Year 2	4,000	2,000
Year 3	2,000	4,000
Year 4	10,000	20,000

Using the Internal Rate of Return method suggest which is Preferable.

Solution

$$F = \frac{\text{Cash outlay}}{\text{Cash inflow}}$$

Project A

$$\begin{aligned} \text{Cash Inflow} &= \frac{\text{Total cash inflow}}{\text{No. of years}} \\ &= \frac{28,000}{4} = 7000 \end{aligned}$$

$$= \frac{22000}{7000} = 3.14$$

The factor thus calculated will be located in table II below. This would give the estimated rate of return to be applied discounting the cash for the internal rate of returns. In this of project A the rate comes to 10% while in case of project B it comes to 15%.

Project A

Year	Cash Inflows Rs.	Discounting Factor at 10%	Present Value Rs.
1	12000	0.909	10908
2	4000	0.826	3304
3	2000	0.751	1502
4	10000	0.683	6830
			<u>22544</u>
	Less: Initial Investment.		<u>22000</u>
	Net Present Value		<u>544</u>

The present value at 10% comes to Rs. 22,544. The initial investment is Rs. 22,000. Interest rate of return may be taken approximately at 10%.

In the case more exactness is required another trial which is slightly higher than 10% (since at this rate the present value is more than initial investment) may be taken. Taking a rate of 12% the following results would emerge.

Year	Cash Inflows Rs.	Discounting Factor at 12.6%	Present Value Rs.
1	12,000	0.893	10,716
2	4,000	0.794	3,188
3	2,000	0.712	1,424
4	10,000	0.636	<u>6,380</u>
			21,688
Less:	Initial Investment Value		<u>22,000</u>
	Net Present Value		<u>(-)312</u>

$$\text{IRR} = \text{Base factor} + \frac{\text{Positive net present value}}{\text{Difference in positive and Negative net present value}} \times \text{DP}$$

$$\begin{aligned} \text{Base factor} &= 10\% \\ \text{DP} &= 2\% \end{aligned}$$

$$= 10\% + \frac{544}{544 - (-312)} \times 2\%$$

$$\begin{aligned}
 &= 10\% + \frac{544}{856} \times 2 \\
 &= 10 + 1.27 \\
 &= 11.27\%
 \end{aligned}$$

Project B

Year	Cash Inflows Rs.	Discount Factor at 15%	Present value Rs.
1	2,000	0.909#	1,818
2	2,000	0.826	1,652
3	4,000	0.751	3,004
4	20,000	0.683	13,660
		Total present value	20,134
Less:		Initial investment	20,000
		Net present value	134

$$IRR = 10\% + \frac{134}{134 - (2676)} \times 5\%$$

$$= 10\% + 0.24\% \quad IRR = 10.24\%$$

Thus, internal rate of return in project 'A' is higher as compared to project 'B'. Therefore project 'A' is preferable.

UNIT – V

Dividend decisions, influencing factors, forms and special dividends. Walter, Gordon and MM models (Numerical Problems) Linter's model dividend practices in India. Buy back of shares, taxation of dividends and capital gains. Working capital Management (Numerical Problems): Operating cycle estimation (Numerical Problems), cash, inventory and receivables management (Numerical Problems).

INTRODUCTION

The financial manager must take careful decisions on how the profit should be distributed among shareholders. It is very important and crucial part of the business concern, because these decisions are directly related with the value of the business concern and shareholder's wealth. Like financing decision and investment decision, dividend decision is also a major part of the financial manager. When the business concerns decide dividend policy, they have to consider certain factors such as retained earnings and the nature of shareholder of the business concern.

Meaning of Dividend

Dividend refers to the business concerns net profits distributed among the shareholders. It may also be termed as the part of the profit of a business concern, which is distributed among its shareholders.

According to the **Institute of Chartered Accountant of India**, dividend is defined as "a distribution to shareholders out of profits or reserves available for this purpose".

TYPES OF DIVIDEND/ FORM OF DIVIDEND

Dividend may be distributed among the shareholders in the form of cash or stock. Hence, Dividends are classified into:

- A. Cash dividend
- B. Stock dividend
- C. Bond dividend
- D. Property dividend

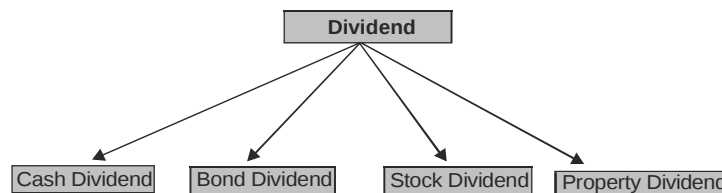


Fig. 8.1 Types of Dividend

Cash Dividend

If the dividend is paid in the form of cash to the shareholders, it is called cash dividend. It is paid periodically out the business concerns EAIT (Earnings after interest and tax). Cash dividends are common and popular types followed by majority of the business concerns.

Stock Dividend

Stock dividend is paid in the form of the company stock due to raising of more finance. Under this type, cash is retained by the business concern. Stock dividend may be bonus issue. This issue is given only to the existing shareholders of the business concern.

Bond Dividend

Bond dividend is also known as script dividend. If the company does not have sufficient funds to pay cash dividend, the company promises to pay the shareholder at a future specific date with the help of issue of bond or notes.

Property Dividend

Property dividends are paid in the form of some assets other than cash. It will distributed under the exceptional circumstance. This type of dividend is not published in India.

DIVIDEND DECISION

Dividend decision of the business concern is one of the crucial parts of the financial manager, because it determines the amount of profit to be distributed among shareholders and amount of profit to be treated as retained earnings for financing its long term growth. Hence, dividend decision plays very important part in the financial management.

Dividend decision consists of two important concepts which are based on the relationship between dividend decision and value of the firm.

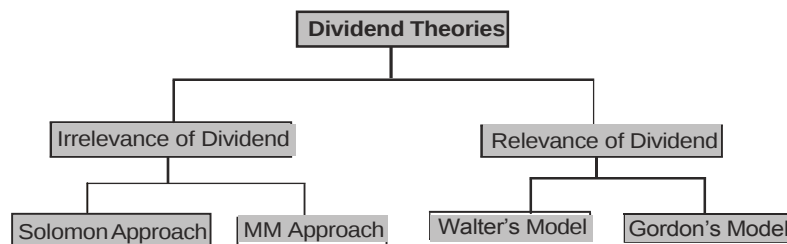


Fig. 8.2 Dividend Theories

Irrelevance of Dividend

According to professors **Soloman, Modigliani and Miller**, dividend policy has no effect on the share price of the company. There is no relation between the dividend rate and value of the firm. Dividend decision is irrelevant of the value of the firm. Modigliani and Miller contributed a major approach to prove the irrelevance dividend concept.

Modigliani and Miller's Approach

According to MM, under a perfect market condition, the dividend policy of the company is irrelevant and it does not affect the value of the firm.

“Under conditions of perfect market, rational investors, absence of tax discrimination

between dividend income and capital appreciation, given the firm's investment policy, its dividend policy may have no influence on the market price of shares".

Assumptions

MM approach is based on the following important assumptions:

1. Perfect capital market.
2. Investors are rational.
3. There are no tax.
4. The firm has fixed investment policy.
5. No risk or uncertainty.

Proof for MM approach

MM approach can be proved with the help of the following formula:

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

Where,

P_0 = Prevailing market price of a share.

K_e = Cost of equity capital.

D_1 = Dividend to be received at the end of period one.

P_1 = Market price of the share at the end of period one.

P_1 can be calculated with the help of the following formula.

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

The number of new shares to be issued can be determined by the following formula:

$$M \times P_1 = I - (X - nD_1)$$

Where,

M = Number of new share to be issued.

P_1 = Price at which new issue is to be made.

I = Amount of investment required.

X = Total net profit of the firm during the period.

nD_1 = Total dividend paid during the period.

Exercise 1

X Company Ltd., has 100000 shares outstanding the current market price of the shares Rs. 15 each. The company expects the net profit of Rs. 2,00,000 during the year and it belongs to a rich class for which the appropriate capitalisation rate has been estimated to be 20%. The company is considering dividend of Rs. 2.50 per share for the current year.

What will be the price of the share at the end of the year (i) if the dividend is paid and (ii) if the dividend is not paid.

Solution

$$P_0 = \frac{D_1 + P_1}{(1 + W_e)}$$

(i) If the dividend is paid

$$P_0 = \text{Rs. } 15$$

$$K_e = 20\%$$

$$D_1 = 2.50$$

$$P_1 = ?$$

$$15 = \frac{2.50 + P_1}{1 + 20\%}$$

$$15 = \frac{2.50 + P_1}{1.2}$$

$$2.50 + P_1 = 15 \times 1.2$$

$$P_1 = 18 - 2.50$$

$$P_1 = \text{Rs. } 15.50$$

(ii) If the dividend is not paid

$$P_0 = 15$$

$$K_e = 20\%$$

$$D_1 = 0$$

$$\begin{aligned}
 P_1 &= ? \\
 15 &= \frac{0 + P_1}{1 + 20\%} \\
 15 &= \frac{0 + P_1}{1.20} \\
 0 + P_1 &= 15 \times 1.20 \\
 P_1 &= \text{Rs. } 18.
 \end{aligned}$$

Exercise 2

Ram company belongs to a risk class for which the appropriate capitalization rate is 12%. It currently has outstanding 30000 shares selling at Rs. 100 each. The firm is contemplating the declaration of dividend of Rs. 6 per share at the end of the current financial year. The company expects to have a net income of Rs. 3,00,000 and a proposal for making new investments of Rs. 6,00,000. Show that under the MM assumptions, the payment of dividend does not affect the value of the firm. How many new shares issued and what is the market value at the end of the year?

Solution

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

$$P_0 = 100$$

$$D_1 = \text{Rs. } 6$$

$$P_1 = ?$$

$$K_e = 12\%$$

$$100 = \frac{6 + P_1}{1 + 12\%}$$

$$6 + P_1 = 112$$

$$P_1 = 112 - 6$$

$$P_1 = \text{Rs. } 106$$

Dividend is not declared

$$K_e = 12\%, P_0 = 100, D_1 = 0, P_1 = ?$$

$$100 = \frac{0 + P_1}{1 + 12\%}$$

$$100 = \frac{0 + P_1}{1.12}$$

$$P_1 = \text{Rs. } 112$$

Calculation of number of new shares to be issued

	Dividends Paid	Dividends not Paid
Net Income	300000	300000
Total Dividends	180000	–
Retained Earnings	120000	300000
Investment Budget	600000	600000
Amount to be raised as new shares (Investment – Retained Earnings)	480000	300000
Relevant – Market Price per share	Rs. 106	Rs. 112
No. of new shares to be issued	4528.3	2678.6
Total number of shares at the end of the year	30000	30000
Existing shares	4528.3	2678.6
(+) new shares issued	34528.3	32678.6
Market price per share	Rs. 106	112
Market value for shares	Rs. 3660000	3660000

There is no change in the total market value of shares whether dividends are distributed or not distributed.

Exercise 3

ABC Ltd. has a capital of Rs. 10,00,000 in equity shares of Rs. 100 each. The shares are currently quoted at par. The company proposes to declare a dividend of Rs. 10 per share at the end of the current financial year. The capitalization rate for the risk class to which the company belongs is 12%.

What will be the MP of the share at the end of the year, if

- (i) A dividend is not declared.
- (ii) A dividend is declared.
- (iii) Assuming that the company pays the dividend and has net profits of Rs. 5,00,000 and makes new investments of Rs. 10,00,000 during the period, how many new shares must be issued? Use the MM Model. **(C.A Final Nov. 1990)**

Solution

As per MM Model, the current MP of the share is

$$P_o = \frac{D_1 + P_1}{1 + W_e}$$

- (i) If the dividend is not declared

$$100 = \frac{0 + P_1}{(1 + .12)}$$

$$100 = \frac{P_1}{1.12}$$

$$P_1 = \text{Rs. } 112$$

(ii) If the dividend is declared

$$100 = \frac{10 + P_1}{1 + 0.12}$$

$$100 = \frac{10 + P_1}{1.12}$$

$$112 = 10 + P_1$$

$$P_1 = 112 - 10$$

$$P_1 = \text{Rs. } 102$$

(iii) In case the firm which pays dividend of Rs. 10 per share, then the number of new shares to be issued is M.

$$M \times P_1 = I - (X - nD_1)$$

$$M \times 102 = 10,00,000 - (5,00,000 - 10,000 \times 10)$$

$$102m = 10,00,000 - 4,00,000$$

$$M = \frac{6,00,000}{102}$$

$$= 5882.35 \text{ (or) } 5883$$

The firm should issue 5883 new shares @ Rs. 102 per share to finance its investment proposals.

Exercise 4

Z Ltd., has risk allying firm for which capitalization rate is 12%. It currently has outstanding 8,000 shares selling at Rs. 100 each. The dividend for the current financial year is Rs. 7 per share. The company expects to have a net income of Rs. 69,000 and has a proposal formatting new investments of Rs. 1,60,000. Show that under the MM hypothesis the payment of dividend does not affect the value of the firm.

(a) Value of the firm when dividends are paid. Price of the shares at the end of the current financial year.

$$\begin{aligned} P_1 &= P_0 (1 + K_e) - D_1 \\ &= 100 (1 + .12) - 7 \\ &= 100 \times 1.12 - 7 \\ P_1 &= \text{Rs. } 105 \end{aligned}$$

(b) Number of shares to be issued.

$$\begin{aligned}
 S &= \frac{I - (TE - nD)}{P_1} \\
 &= \frac{1,60,000 - (66,000 - (8,000 \times f))}{105} \\
 &= \frac{1,60,000 - (13,000)}{105} \\
 \frac{1,47,000}{105} &= 1400 \text{ shares}
 \end{aligned}$$

The MM hypothesis explained in another firm also assumes that investment required by the firm on account of payment of dividends is finance out of the new issue of equity shares.

$$S = \frac{I - (TE - nD)}{W_1}$$

S = Value of the firm can be calculated as follows.

$$nP_o = \frac{(K + S) W_1 - (1 - TE)}{1 + W_e}$$

nP_o = Value of the firm

TE = Total Earnings

M_1 = Market Price at the end of the period

K_e = Cost of capital

D = Dividend paid at the end of the year (or) period

N = Number of shares outstanding at the beginning of the period.

$$\begin{aligned}
 nP_o &= \frac{(K + S) W_1 - (1 - TE)}{1 + W_e} \\
 &= \frac{8000 + 1400 \times 105 - (1,60,000 - 66,000)}{1 + 12\%} \\
 &= \frac{6400 \times 105 - 61,000}{1.12} \\
 &= 8,00,000
 \end{aligned}$$

Criticism of MM approach

MM approach consists of certain criticisms also. The following are the major criticisms of MM approach.

MM approach assumes that tax does not exist. It is not applicable in the practical life of the firm.

MM approach assumes that, there is no risk and uncertain of the investment. It is also not applicable in present day business life.

MM approach does not consider floatation cost and transaction cost. It leads to affect the value of the firm.

MM approach considers only single decrement rate, it does not exist in real practice.

MM approach assumes that, investor behaves rationally. But we cannot give assurance that all the investors will behave rationally.

RELEVANCE OF DIVIDEND

According to this concept, dividend policy is considered to affect the value of the firm. Dividend relevance implies that shareholders prefer current dividend and there is no direct relationship between dividend policy and value of the firm. Relevance of dividend concept is supported by two eminent persons like Walter and Gordon.

Walter's Model

Prof. James E. Walter argues that the dividend policy almost always affects the value of the firm.

Walter model is based in the relationship between the following important factors:

- Rate of return I
- Cost of capital (k)

According to the Walter's model, if $r > k$, the firm is able to earn more than what the shareholders could by reinvesting, if the earnings are paid to them. The implication of $r > k$ is that the shareholders can earn a higher return by investing elsewhere.

If the firm has $r = k$, it is a matter of indifferent whether earnings are retained or distributed.

Assumptions

Walters model is based on the following important assumptions:

1. The firm uses only internal finance.
2. The firm does not use debt or equity finance.
3. The firm has constant return and cost of capital.
4. The firm has 100 percent payout.
5. The firm has constant EPS and dividend.
6. The firm has a very long life.

Walter has evolved a mathematical formula for determining the value of market share.

$$P = \frac{D + \frac{r}{W_e}(E - D)}{W_e}$$

Where,

P = Market price of an equity share

D = Dividend per share

r = Internal rate of return

E = Earning per share

K_e = Cost of equity capital

Exercise 5

From the following information supplied to you, ascertain whether the firm is following an optional dividend policy as per Walter's Model?

Total Earnings	Rs. 2,00,000
No. of equity shares (of Rs. 100 each 20,000)	
Dividend paid	Rs. 1,00,000
P/E Ratio	10
Return Investment	15%

The firm is expected to maintain its rate on return on fresh investments. Also find out what should be the E/P ratio at which the dividend policy will have no effect on the value of the share? Will your decision change if the P/E ratio is 7.25 and interest of 10 %?

Solution

$$\text{EPS} = \frac{\text{Earnings}}{\text{no. of Shares}} = \frac{200000}{20000} = \text{Rs. } 10$$

$$\text{P/E Ratio} = 10$$

$$K_e = \frac{1}{\text{P/E Ratio}} \times \frac{1}{10} = 0.10$$

$$\begin{aligned} \text{DPS} &= \frac{\text{Total Dividends paid}}{\text{no. of Shares}} \\ &= \frac{100000}{20000} = \text{Rs. } 5 \end{aligned}$$

The value of the share as per Walter's Model is

$$\begin{aligned} P &= \frac{D + r/k_e(E - D)}{W_e} \\ &= \frac{5 + 0.15/0.10(10 - 5)}{0.10} \end{aligned}$$

$$\begin{aligned}
 &= \frac{5 + 1.5}{0.10} \\
 &= \text{Rs. } 12.5 \\
 \text{Dividend Payout} &= \frac{\text{DPS}}{\text{EPS}} \times 100 \\
 &= \frac{5}{10} \times 100 = 60\%
 \end{aligned}$$

$r > K_e$ therefore by distributing 60% of earnings, the firm is not following an optional dividend policy. In this case, the optional dividend policy for the firm would be to pay zero dividend and the Market Price would be:

$$\begin{aligned}
 P &= \frac{5 + .15 / .10 (10 - 0)}{.10} \\
 &= \frac{5 + 15}{.10} \\
 &= \frac{20}{.10} \\
 P &= \text{Rs. } 200
 \end{aligned}$$

So, the MP of the share can be increased by following a zero payout, of the P/E is 7.25 instead of 10 then the $K_e = 10\% = 0.10$ and in this case $K_e > r$ and the MP of the share is 7.25.

$$\begin{aligned}
 P &= \frac{5 + \frac{.15}{.138} (10 - 5)}{.138} \cdot .138 \\
 &= 5 + 5.435 \\
 \boxed{P = \text{Rs. } 10.435}
 \end{aligned}$$

Exercise 6

The earnings per share of a company are Rs. 80 and the rate of capitalization applicable to the company is 12%. The company has before it an option of adopting a payment ratio of 25% (or) 50% (or) 75%. Using Walter's formula of dividend payout, compute the market value of the company's share of the productivity of retained earnings (i) 12% (ii) 8% (iii) 5%.

Solution

$$E = 10 \text{ and } K_e = 12\% = 0.12$$

As per Walter's Model, the market price of a share is

$$P = \frac{D + \frac{r}{W_e} (E - D)}{W_e}$$

(A) If payout ratio is 25%

(i) $r = 12\% = 0.12$, $D = 25\% \text{ of } 10 = \text{Rs. } 2.50$

$$P = \frac{2.50 + \frac{.12}{.12} (10 - 2.50)}{.12}$$

$$= \frac{2.50 + 7.50}{0.12}$$

$$= \frac{10}{0.12}$$

$$= \text{Rs. } 83.33$$

$$R = 8\% = 0.08$$

$R = 8\% = 0.08$, $D = 25\% \text{ of } 10 = \text{Rs. } 2.50$

$$2.50 + \frac{0.08}{0.12} (10 - 2.50)$$

$$= \frac{2.50 + 5}{0.12}$$

$$= \frac{7.50}{0.12} = \text{Rs. } 62.5$$

Exercise 7

From the following data, calculate the MP of a share of ABC Ltd., under (i) Walter's formula; and (ii) Dividend growth model.

EPS = Rs. 10

DPS = Rs. 6

$K_e = 18\%$

$r = 25\%$

retention ratio (b) = 45%

Solution:

(i) Walter's Model

$$P = \frac{D + r (EPS - DPS)}{W_e}$$

$$= \frac{6 + .25 (10 - 6)}{.18}$$

$$\begin{aligned}
 &= \frac{6 + 5.56}{.18} \\
 &= \frac{11.56}{.18} \\
 &= \text{Rs. } 64.22
 \end{aligned}$$

(ii) Dividend Growth Model

$$\begin{aligned}
 P &= \frac{E(1-b)}{W_e - br} \\
 &= \frac{10(1-.45)}{.18 - (.45 \times .25)} \\
 &= \frac{10 \times .55}{.18 - 0.1125} \\
 &= \frac{5.5}{0.065} \\
 &= \text{Rs. } 81.48
 \end{aligned}$$

Criticism of Walter's Model

The following are some of the important criticisms against Walter model:

Walter model assumes that there is no extracted finance used by the firm. It is not practically applicable.

There is no possibility of constant return. Return may increase or decrease, depending upon the business situation. Hence, it is applicable.

According to Walter model, it is based on constant cost of capital. But it is not applicable in the real life of the business.

Gordon's Model

Myron Gordon suggest one of the popular model which assume that dividend policy of a firm affects its value, and it is based on the following important assumptions:

1. The firm is an all equity firm.
2. The firm has no external finance.
3. Cost of capital and return are constant.
4. The firm has perpetual life.
5. There are no taxes.
6. Constant relation ratio ($g=br$).
7. Cost of capital is greater than growth rate ($K_e > br$).

Gordon's model can be proved with the help of the following formula:

$$P = \frac{E(1 - b)}{W_e - br}$$

Where,

P = Price of a share

E = Earnings per share

$1 - b$ = D/p ratio (i.e., percentage of earnings distributed as dividends)

K_e = Capitalization rate

br = Growth rate = rate of return on investment of an all equity firm.

Exercise 8

Raja company earns a rate of 12% on its total investment of Rs. 6,00,000 in assets. It has 6,00,000 outstanding common shares at Rs. 10 per share. Discount rate of the firm is 10% and it has a policy of retaining 40% of the earnings. Determine the price of its share using Gordon's Model. What shall happen to the price of the share if the company has payout of 60% (or) 20%?

Solution

According to Gordon's Model, the price of a share is

$$P = \frac{E(1 - b)}{W_e - br}$$

Given: E = 12% of Rs. 10 = Rs. 1.20

$r = 12\% = 0.12$

$K = 10\% = 0.10$

$t = 10\% = 0.10$

$b = 40\% = 0.40$

Put the values in formula

$$\begin{aligned} P &= \frac{1.20(1 - .40)}{10 - (.40 \times .12)} \\ &= \frac{1.20 \times (0.60)}{.10 - 0.048} \\ &= \frac{0.72}{0.052} \\ &= \text{Rs. } 13.85 \end{aligned}$$

If the firm follows a policy of 60% payout then $b=20\% = 0.20$

The price is
$$P = \frac{1.20 (1 \times 0.20)}{.10 - (.2 \times .12)}$$

$$= 0.05$$

$r=4\% = 0.04$, $D = 25\%$ of $10 = 2.50$

$$= 2.50 + \frac{0.04 (10 - 2.50)}{0.12}$$

Z

$$= \frac{5}{0.12} = \text{Rs. } 41.67$$

If payout ratio is 50%, $D=50\%$ of $10 = \text{Rs. } 5$

$r=12\% = 0.12$, $D=50\%$ of $10 = \text{Rs. } 5$

$$= 5 + \frac{0.12 (10 - 5)}{0.12}$$

$$= \frac{5+5}{0.12}$$

$$= \frac{10}{0.12} = \text{Rs. } 83.33$$

$r = 8\% = 0.08$, $D = 50\%$ of $10 = 5$

$$= 5 + \frac{0.08 (10 - 5)}{0.12}$$

$$= \frac{5+3.33}{0.12}$$

$$= \frac{8.33}{0.12} = \text{Rs. } 69.42$$

$r = 4\% = 0.04$, $D = 50\%$ of $10 = 5$

$$= 5 + \frac{0.04 (10 - 5)}{0.12}$$

$$= \frac{5+1.6}{0.12}$$

$$= \frac{6.6}{0.12} = \text{Rs. } 55.58$$

C. If payout ratio is 75%

$$(i) \quad \begin{aligned} D &= 75\% \text{ of } 10 = 7.50 \\ r &= 12\% = 0.12, \quad D = 75\% \text{ of } 10 = 7.50 \end{aligned}$$

$$\begin{aligned} P &= \frac{\frac{7.50 + 0.08}{0.12} (10 - 0.50)}{0.12} \\ &= \frac{7.50 + 2.50}{83.33 \times 0.12} = \text{Rs.} \end{aligned}$$

$$(ii) \quad r = 8\% = 0.08, \quad D = 75\% \text{ of } 10 = 7.50$$

$$\begin{aligned} P &= \frac{\frac{7.50 + 0.08}{0.12} (10 - 0.50)}{0.12} \\ &= \frac{0.50 + 1.67}{0.12} \\ &= \frac{6.17}{0.12} = \text{Rs. } 6.42 \end{aligned}$$

$$(iii) \quad r = 4\% = 0.04, \quad D = 75\% \text{ of } 10 = 7.50$$

$$\begin{aligned} P &= \frac{\frac{0.50 + 0.04}{0.12} (10 - 0.50)}{0.12} \\ &= \frac{0.50 + 0.83}{0.12} \\ &= \frac{8.33}{0.12} = \text{Rs. } 66.42 \\ &= \frac{1.20 \times 0.80}{0.10 - 0.024} \\ &= \frac{0.66}{0.076} = \text{Rs. } 12.63 \end{aligned}$$

If the payout is 20% the value of $b=0.60$ and the price of the share is

$$\begin{aligned} &= \frac{1.20 (1 - 0.60)}{0.10 - (0.80 \times 0.12)} \\ &= \frac{0.48}{0.10 - 0.096} \\ &= \frac{0.48}{0.004} = \text{Rs. } 120 \end{aligned}$$

Criticism of Gordon's Model

Gordon's model consists of the following important criticisms:

Gordon model assumes that there is no debt and equity finance used by the firm. It is not applicable to present day business.

K_e and r cannot be constant in the real practice.

According to Gordon's model, there are no tax paid by the firm. It is not practically applicable.

FACTORS DETERMINING DIVIDEND POLICY**Profitable Position of the Firm**

Dividend decision depends on the profitable position of the business concern. When the firm earns more profit, they can distribute more dividends to the shareholders.

Uncertainty of Future Income

Future income is a very important factor, which affects the dividend policy. When the shareholder needs regular income, the firm should maintain regular dividend policy.

Legal Constrains

The Companies Act 1956 has put several restrictions regarding payments and declaration of dividends. Similarly, Income Tax Act, 1961 also lays down certain restrictions on payment of dividends.

Liquidity Position

Liquidity position of the firms leads to easy payments of dividend. If the firms have high liquidity, the firms can provide cash dividend otherwise, they have to pay stock dividend.

Sources of Finance

If the firm has finance sources, it will be easy to mobilise large finance. The firm shall not go for retained earnings.

Growth Rate of the Firm

High growth rate implies that the firm can distribute more dividend to its shareholders.

Tax Policy

Tax policy of the government also affects the dividend policy of the firm. When the government gives tax incentives, the company pays more dividend.

Capital Market Conditions

Due to the capital market conditions, dividend policy may be affected. If the capital market is perfect, it leads to improve the higher dividend.

TYPES OF DIVIDEND POLICY

Dividend policy depends upon the nature of the firm, type of shareholder and profitable position. On the basis of the dividend declaration by the firm, the dividend policy may be classified under the following types:

- Regular dividend policy
- Stable dividend policy
- Irregular dividend policy
- No dividend policy.

Regular Dividend Policy

Dividend payable at the usual rate is called as regular dividend policy. This type of policy is suitable to the small investors, retired persons and others.

Stable Dividend Policy

Stable dividend policy means payment of certain minimum amount of dividend regularly. This dividend policy consists of the following three important forms:

- Constant dividend per share
- Constant payout ratio
- Stable rupee dividend plus extra dividend.

Irregular Dividend Policy

When the companies are facing constraints of earnings and unsuccessful business operation, they may follow irregular dividend policy. It is one of the temporary arrangements to meet the financial problems. These types are having adequate profit. For others no dividend is distributed.

No Dividend Policy

Sometimes the company may follow no dividend policy because of its unfavourable working capital position of the amount required for future growth of the concerns.

MEANING OF WORKING CAPITAL

Capital of the concern may be divided into two major headings.

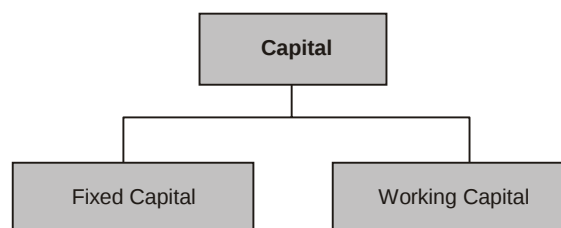


Fig. 10.1 Capital of the Business

Fixed capital means that capital, which is used for long-term investment of the business concern. For example, purchase of permanent assets. Normally it consists of non-recurring in nature.

Working Capital is another part of the capital which is needed for meeting day to day requirement of the business concern. For example, payment to creditors, salary paid to workers, purchase of raw materials etc., normally it consists of recurring in nature. It can be easily converted into cash. Hence, it is also known as short-term capital.

Definitions

According to the definition of **Mead, Baker and Malott**, “Working Capital means Current Assets”.

According to the definition of **J.S.Mill**, “The sum of the current asset is the working capital of a business”.

According to the definition of **Weston and Brigham**, “Working Capital refers to a firm’s investment in short-term assets, cash, short-term securities, accounts receivables and inventories”.

According to the definition of **Bonneville**, “Any acquisition of funds which increases the current assets, increase working capital also for they are one and the same”.

According to the definition of **Shubin**, “Working Capital is the amount of funds necessary to cover the cost of operating the enterprises”.

According to the definition of **Genestenberg**, “Circulating capital means current assets of a company that are changed in the ordinary course of business from one form to another, for example, from cash to inventories, inventories to receivables, receivables to cash”.

CONCEPT OF WORKING CAPITAL

Working capital can be classified or understood with the help of the following two important concepts.

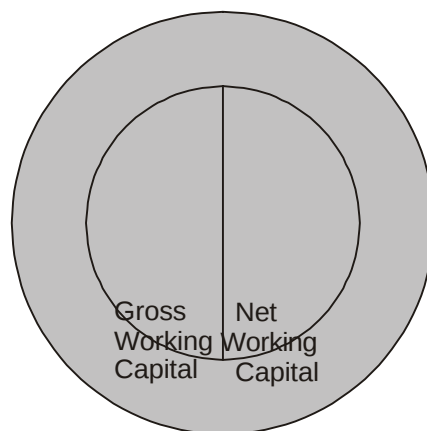


Fig. 10.2 Working Capital Concept

Gross Working Capital

Gross Working Capital is the general concept which determines the working capital concept. Thus, the gross working capital is the capital invested in total current assets of the business concern.

Gross Working Capital is simply called as the total current assets of the concern.

$$\text{GWC} = \text{CA}$$

Net Working Capital

Net Working Capital is the specific concept, which, considers both current assets and current liability of the concern.

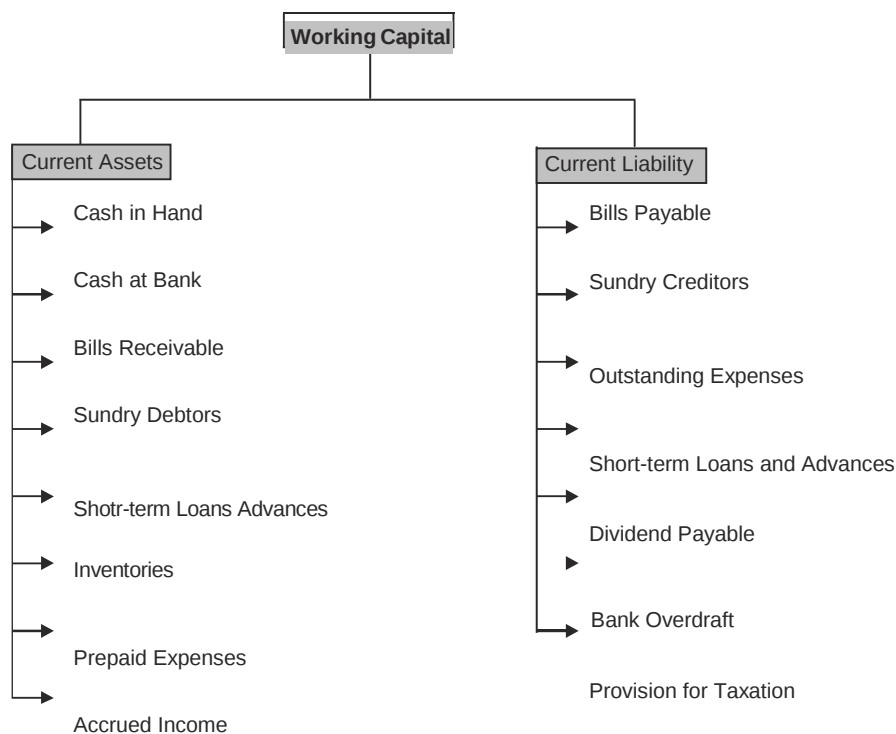
Net Working Capital is the excess of current assets over the current liability of the concern during a particular period.

If the current assets exceed the current liabilities it is said to be positive working capital; it is reverse, it is said to be Negative working capital.

$$\text{NWC} = \text{C A} - \text{CL}$$

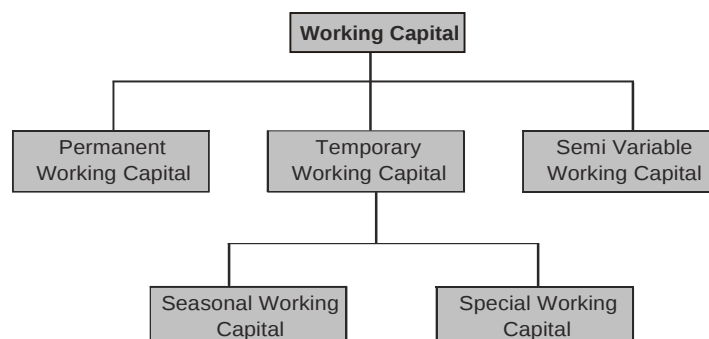
Component of Working Capital

Working capital constitutes various current assets and current liabilities. This can be illustrated by the following chart.



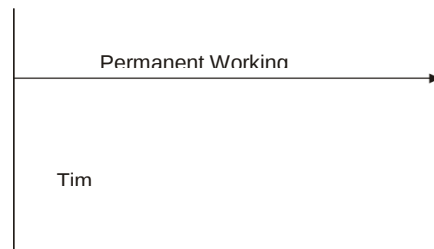
TYPES OF WORKING CAPITAL

Working Capital may be classified into three important types on the basis of time.



Permanent Working Capital

It is also known as Fixed Working Capital. It is the capital; the business concern must maintain certain amount of capital at minimum level at all times. The level of Permanent Capital depends upon the nature of the business. Permanent or Fixed Working Capital will not change irrespective of time or volume of sales.



Temporary Working Capital

It is also known as variable working capital. It is the amount of capital which is required to meet the Seasonal demands and some special purposes. It can be further classified into Seasonal Working Capital and Special Working Capital.

The capital required to meet the seasonal needs of the business concern is called as Seasonal Working Capital. The capital required to meet the special exigencies such as launching of extensive marketing campaigns for conducting research, etc.

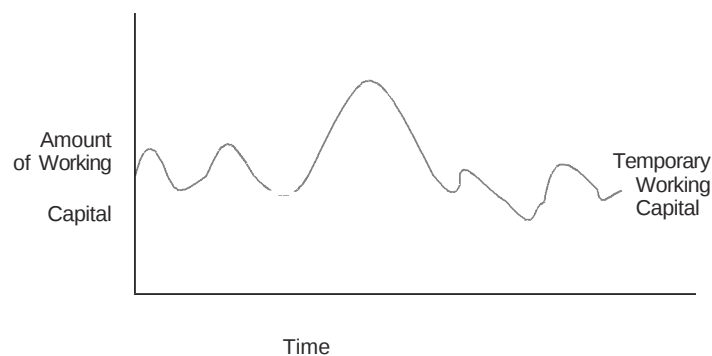


Fig. 10.5 Temporary Working Capital

Semi Variable Working Capital

Certain amount of Working Capital is in the field level up to a certain stage and after that it will increase depending upon the change of sales or time.

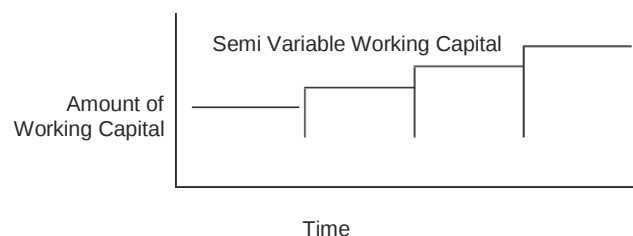


Fig. 10.6 Semi Variable Working Capital

NEEDS OF WORKING CAPITAL

Working Capital is an essential part of the business concern. Every business concern must maintain certain amount of Working Capital for their day-to-day requirements and meet the short-term obligations.

Working Capital is needed for the following purposes.

1. **Purchase of raw materials and spares:** The basic part of manufacturing process is, raw materials. It should purchase frequently according to the needs of the business concern. Hence, every business concern maintains certain amount as Working Capital to purchase raw materials, components, spares, etc.
2. **Payment of wages and salary:** The next part of Working Capital is payment of wages and salaries to labour and employees. Periodical payment facilities make employees perfect in their work. So a business concern maintains adequate the amount of working capital to make the payment of wages and salaries.
3. **Day-to-day expenses:** A business concern has to meet various expenditures regarding the operations at daily basis like fuel, power, office expenses, etc.
4. **Provide credit obligations:** A business concern responsible to provide credit facilities to the customer and meet the short-term obligation. So the concern must provide adequate Working Capital.

Working Capital Position/ Balanced Working Capital Position.

A business concern must maintain a sound Working Capital position to improve the efficiency of business operation and efficient management of finance. Both excessive and inadequate Working Capital lead to some problems in the business concern.

A. Causes and effects of excessive working capital.

- (i) Excessive Working Capital leads to unnecessary accumulation of raw materials, components and spares.
- (ii) Excessive Working Capital results in locking up of excess Working Capital.
- (iii) It creates bad debts, reduces collection periods, etc.
- (iv) It leads to reduce the profits.

B. Causes and effects of inadequate working capital

- (i) Inadequate working capital cannot buy its requirements in bulk order.
- (ii) It becomes difficult to implement operating plans and activate the firm's profit target.
- (iii) It becomes impossible to utilize efficiently the fixed assets.
- (iv) The rate of return on investments also falls with the shortage of Working Capital.
- (v) It reduces the overall operation of the business.

FACTORS DETERMINING WORKING CAPITAL REQUIREMENTS

Working Capital requirements depends upon various factors. There are no set of rules or formula to determine the Working Capital needs of the business concern. The following are the major factors which are determining the Working Capital requirements.

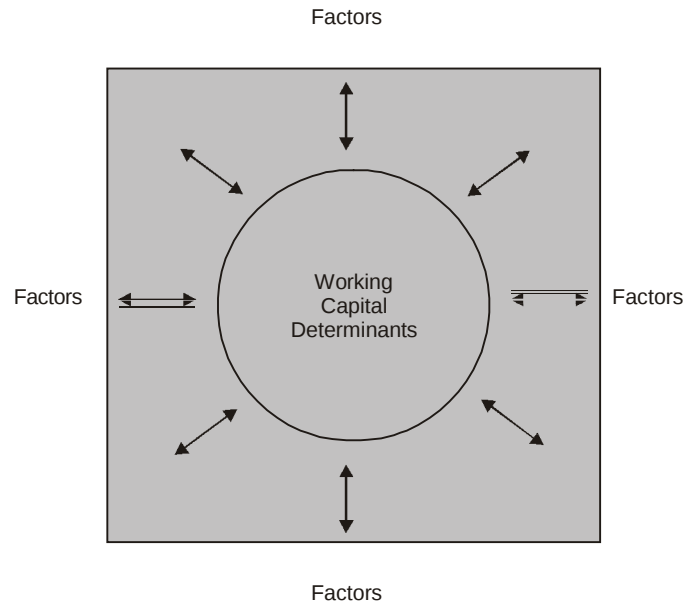


Fig. 10.7 Factors Determining Working Capital Requirements

1. **Nature of business:** Working Capital of the business concerns largely depend upon the nature of the business. If the business concerns follow rigid credit policy and sell goods only for cash, they can maintain lesser amount of Working Capital. A transport company maintains lesser amount of Working Capital while a construction company maintains larger amount of Working Capital.
2. **Production cycle:** Amount of Working Capital depends upon the length of the production cycle. If the production cycle length is small, they need to maintain lesser amount of Working Capital. If it is not, they have to maintain large amount of Working Capital.
3. **Business cycle:** Business fluctuations lead to cyclical and seasonal changes in the business condition and it will affect the requirements of the Working Capital. In the booming conditions, the Working Capital requirement is larger and in the depression condition, requirement of Working Capital will reduce. Better business results lead to increase the Working Capital requirements.
4. **Production policy:** It is also one of the factors which affects the Working Capital requirement of the business concern. If the company maintains the continues production policy, there is a need of regular Working Capital. If the production policy of the company depends upon the situation or conditions, Working Capital requirement will depend upon the conditions laid down by the company.

5. **Credit policy:** Credit policy of sales and purchase also affect the Working Capital requirements of the business concern. If the company maintains liberal credit policy to collect the payments from its customers, they have to maintain more Working Capital. If the company pays the dues on the last date it will create the cash maintenance in hand and bank.
6. **Growth and expansion:** During the growth and expansion of the business concern, Working Capital requirements are higher, because it needs some additional Working Capital and incurs some extra expenses at the initial stages.
7. **Availability of raw materials:** Major part of the Working Capital requirements are largely depend on the availability of raw materials. Raw materials are the basic components of the production process. If the raw material is not readily available, it leads to production stoppage. So, the concern must maintain adequate raw material; for that purpose, they have to spend some amount of Working Capital.

Earning capacity: If the business concern consists of high level of earning capacity, they can generate more Working Capital, with the help of cash from operation. Earning capacity is also one of the factors which determines the Working Capital requirements of the business concern

A. Operating cycle

Working Capital requirements depend upon the operating cycle of the business. The operating cycle begins with the acquisition of raw material and ends with the collection of receivables.

Operating cycle consists of the following important stages:

1. Raw Material and Storage Stage, (R)
2. Work in Process Stage, (W)
3. Finished Goods Stage, (F)
4. Debtors Collection Stage, (D)
5. Creditors Payment Period Stage. (C)

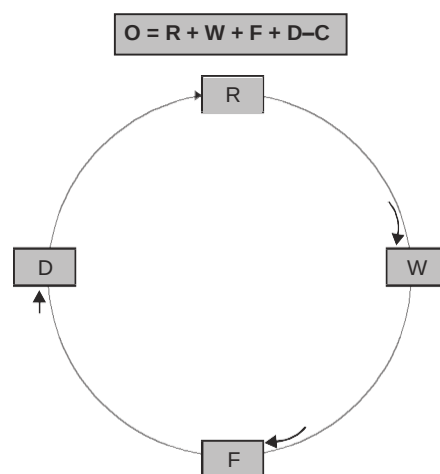


Fig. 10.8 Working Capital Cycle

Each component of the operating cycle can be calculated by the following formula:

$$R = \frac{\text{Average Stock of Raw Material}}{\text{Average Raw Material Consumption Per Day}}$$

$$W = \frac{\text{Average Work in Process Inventory}}{\text{Average Cost of Production Per Day}}$$

$$F = \frac{\text{Average Finished Stock Inventory}}{\text{Average Cost of Goods Sold Per Day}}$$

$$D = \frac{\text{Average Book Debts}}{\text{Average Credit Sales Per Day}}$$

$$C = \frac{\text{Average Trade Creditors}}{\text{Average Credit Purchase Per Day}}$$

INVENTORY MANAGEMENT

Introduction

Inventories constitute the most significant part of current assets of the business concern. It is also essential for smooth running of the business activities.

A proper planning of purchasing of raw material, handling, storing and recording is to be considered as a part of inventory management. Inventory management means, management of raw materials and related items. Inventory management considers what to purchase, how to purchase, how much to purchase, from where to purchase, where to store and when to use for production etc.

Meaning

The dictionary meaning of the inventory is stock of goods or a list of goods. In accounting language, inventory means stock of finished goods. In a manufacturing point of view, inventory includes, raw material, work in process, stores, etc.

Kinds of Inventories

Inventories can be classified into five major categories.

A. *Raw Material*

It is basic and important part of inventories. These are goods which have not yet been committed to production in a manufacturing business concern.

B. *Work in Progress*

These include those materials which have been committed to production process but have not yet been completed.

C. *Consumables*

These are the materials which are needed to smooth running of the manufacturing process.

D. *Finished Goods*

These are the final output of the production process of the business concern. It is ready for consumers.

E. *Spares*

It is also a part of inventories, which includes small spares and parts.

Objectives of Inventory Management

Inventory occupy 30–80% of the total current assets of the business concern. It is also very essential part not only in the field of Financial Management but also it is closely associated with production management. Hence, in any working capital decision regarding the inventories, it will affect both financial and production function of the concern. Hence, efficient management of inventories is an essential part of any kind of manufacturing process concern.

The major objectives of the inventory management are as follows:

- To efficient and smooth production process.
- To maintain optimum inventory to maximize the profitability.
- To meet the seasonal demand of the products.
- To avoid price increase in future.
- To ensure the level and site of inventories required.
- To plan when to purchase and where to purchase
- To avoid both over stock and under stock of inventory.

Techniques of Inventory Management

Inventory management consists of effective control and administration of inventories. Inventory control refers to a system which ensures supply of required quantity and quality of inventories at the required time and at the same time prevent unnecessary investment in inventories. It needs the following important techniques.

Inventory management techniques may be classified into various types:

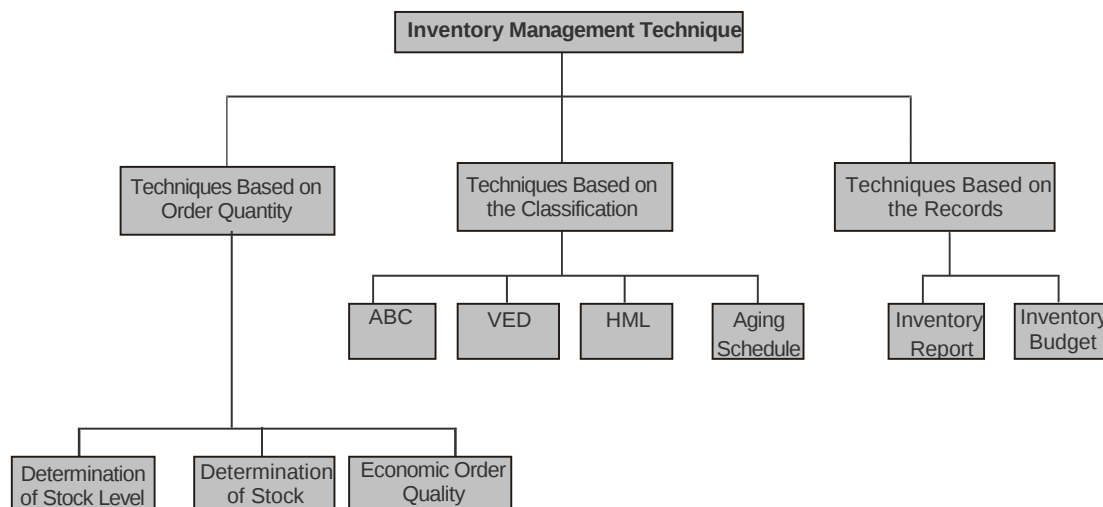


Fig. 11.1 Inventory Management Techniques

A. Techniques based on the order quantity of Inventories

Order quantity of inventories can be determined with the help of the following techniques:

Stock Level

Stock level is the level of stock which is maintained by the business concern at all times.

Therefore, the business concern must maintain optimum level of stock to smooth running of the business process. Different level of stock can be determined based on the volume of the stock.

Minimum Level

The business concern must maintain minimum level of stock at all times. If the stocks are less than the minimum level, then the work will stop due to shortage of material.

Re-order Level

Re-ordering level is fixed between minimum level and maximum level. Re-order level is the level when the business concern makes fresh order at this level.

$$\text{Re-order level} = \text{maximum consumption} \times \text{maximum Re-order period.}$$

Maximum Level

It is the maximum limit of the quantity of inventories, the business concern must maintain. If the quantity exceeds maximum level limit then it will be overstocking.

$$\begin{aligned} \text{Maximum level} &= \text{Re-order level} + \text{Re-order quantity} \\ &\quad - (\text{Minimum consumption} \times \text{Minimum delivery period}) \end{aligned}$$

Danger Level

It is the level below the minimum level. It leads to stoppage of the production process.

$$\text{Danger level} = \text{Average consumption} \times \begin{matrix} \text{Maximum re-order period for} \\ \text{emergency purchase} \end{matrix}$$

Average Stock Level

It is calculated such as,

$$\text{Average stock level} = \text{Minimum stock level} + \frac{1}{2} \text{ of re-order quantity maximum level}$$

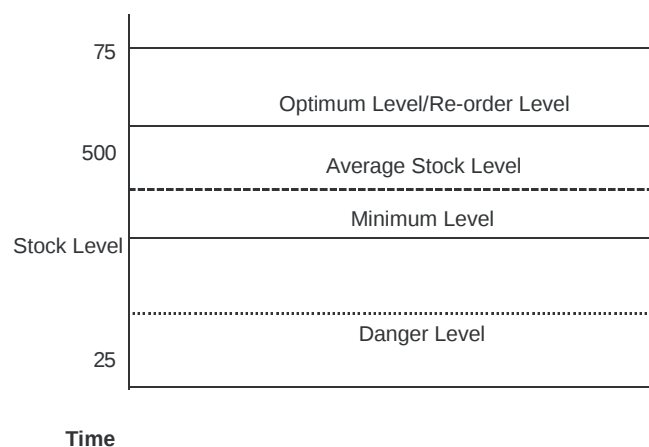


Fig. 11.2 Determining the Stock Level

Lead Time

Lead time is the time normally taken in receiving delivery after placing orders with suppliers. The time taken in processing the order and then executing it is known as lead time.

Safety Stock

Safety stock implies extra inventories that can be drawn down when actual lead time and/or usage rates are greater than expected. Safety stocks are determined by opportunity cost and carrying cost of inventories. If the business concerns maintain low level of safety stock, it will lead to larger opportunity cost and the larger quantity of safety stock involves higher carrying costs.

CASH MANAGEMENT

Business concern needs cash to make payments for acquisition of resources and services for the normal conduct of business. Cash is one of the important and key parts of the current assets.

Cash is the money which a business concern can disburse immediately without any restriction. The term cash includes coins, currency, cheques held by the business concern and balance in its bank accounts. Management of cash consists of cash inflow and outflows, cash flow within the concern and cash balance held by the concern etc.

Motives for Holding Cash**1. Transaction motive**

It is a motive for holding cash or near cash to meet routine cash requirements to finance transaction in the normal course of business. Cash is needed to make purchases of raw materials, pay expenses, taxes, dividends etc.

2. Precautionary motive

It is the motive for holding cash or near cash as a cushion to meet unexpected contingencies. Cash is needed to meet the unexpected situation like, floods strikes etc.

3. Speculative motive

It is the motive for holding cash to quickly take advantage of opportunities typically outside the normal course of business. Certain amount of cash is needed to meet an opportunity to purchase raw materials at a reduced price or make purchase at favorable prices.

4. Compensating motive

It is a motive for holding cash to compensate banks for providing certain services or loans. Banks provide variety of services to the business concern, such as clearance of cheque, transfer of funds etc.

Cash Management Techniques

Managing cash flow constitutes two important parts:

- A. Speedy Cash Collections.
- B. Slowing Disbursements.

Speedy Cash Collections

Business concern must concentrate in the field of Speedy Cash Collections from customers. For that, the concern prepares systematic plan and refined techniques. These techniques aim at, the customer who should be encouraged to pay as quickly as possible and the payment from customer without delay. Speedy Cash Collection business concern applies some of the important techniques as follows:

Prompt Payment by Customers

Business concern should encourage the customer to pay promptly with the help of offering discounts, special offer etc. It helps to reduce the delaying payment of customers and the firm can avoid delays from the customers. The firms may use some of the techniques for prompt payments like billing devices, self address cover with stamp etc.

Early Conversion of Payments into Cash

Business concern should take careful action regarding the quick conversion of the payment into cash. For this purpose, the firms may use some of the techniques like postal float, processing float, bank float and deposit float.

Concentration Banking

It is a collection procedure in which payments are made to regionally dispersed collection centers, and deposited in local banks for quick clearing. It is a system of decentralized billing and multiple collection points.

Lock Box System

It is a collection procedure in which payers send their payment or cheques to a nearby post box that is cleared by the firm's bank. Several times that the bank deposit the cheque in the firms account. Under the lock box system, business concerns hire a post office lock box at important collection centers where the customers remit payments. The local banks are authorized to open the box and pick up the remittances received from the customers. As a result, there is some extra savings in mailing time compared to concentration bank.

Slowing Disbursement

An effective cash management is not only in the part of speedy collection of its cash and receivables but also it should concentrate to slowing their disbursement of cash to the customers or suppliers. Slowing disbursement of cash is not the meaning of delaying the payment or avoiding the payment. Slowing disbursement of cash is possible with the help of the following methods:

1. Avoiding the early payment of cash

The firm should pay its payable only on the last day of the payment. If the firm avoids early payment of cash, the firm can retain the cash with it and that can be used for other purpose.

2. Centralised disbursement system

Decentralized collection system will provide the speedy cash collections. Hence centralized disbursement of cash system takes time for collection from our accounts as well as we can pay on the date.

RECEIVABLE MANAGEMENT

The term receivable is defined as debt owed to the concern by customers arising from sale of goods or services in the ordinary course of business. Receivables are also one of the major parts of the current assets of the business concerns. It arises only due to credit sales to customers, hence, it is also known as Account Receivables or Bills Receivables.

Management of account receivable is defined as the process of making decision resulting to the investment of funds in these assets which will result in maximizing the overall return on the investment of the firm.

The objective of receivable management is to promote sales and profit until that point is reached where the return on investment in further funding receivables is less than the cost of funds raised to finance that additional credit.

The costs associated with the extension of credit and accounts receivables are identified as follows:

- A. Collection Cost
- B. Capital Cost
- C. Administrative Cost
- D. Default Cost.

Collection Cost

This cost incurred in collecting the receivables from the customers to whom credit sales have been made.

Capital Cost

This is the cost on the use of additional capital to support credit sales which alternatively could have been employed elsewhere.

Administrative Cost

This is an additional administrative cost for maintaining account receivable in the form of salaries to the staff kept for maintaining accounting records relating to customers, cost of investigation etc.

Default Cost

Default costs are the over dues that cannot be recovered. Business concern may not be able to recover the over dues because of the inability of the customers.

Factors Considering the Receivable Size

Receivables size of the business concern depends upon various factors. Some of the important factors are as follows:

1. Sales Level

Sales level is one of the important factors which determines the size of receivable of the firm. If the firm wants to increase the sales level, they have to liberalise their credit policy and terms and conditions. When the firm maintains more sales, there will be a possibility of large size of receivable.

2. Credit Policy

Credit policy is the determination of credit standards and analysis. It may vary from firm to firm or even some times product to product in the same industry. Liberal credit policy leads to increase the sales volume and also increases the size of receivable. Stringent credit policy reduces the size of the receivable.

3. Credit Terms

Credit terms specify the repayment terms required of credit receivables, depend upon the credit terms, size of the receivables may increase or decrease. Hence, credit term is one of the factors which affects the size of receivable.

4. Credit Period

It is the time for which trade credit is extended to customer in the case of credit sales. Normally it is expressed in terms of 'Net days'.

5. Cash Discount

Cash discount is the incentive to the customers to make early payment of the due date. A special discount will be provided to the customer for his payment before the due date.

6. Management of Receivable

It is also one of the factors which affects the size of receivable in the firm. When the management involves systematic approaches to the receivable, the firm can reduce the size of receivable.

A pair of glasses with a thin metal frame and dark lenses is positioned on the left side of the image. A silver pen lies horizontally across the bottom left corner. The background is a solid blue color with a subtle, wavy texture. The text "FINANCIAL MARKET" is centered in the middle-right portion of the image.

FINANCIAL MARKET



Contents

1

Financial market (Introduction)

2

Relationship Between Lenders & Borrowers

3

Capital Market (Functions & Instruments)

4

Money Market (Functions & Instruments)

Financial Market

Any marketplace where buyers and sellers participate in the trade of financial securities, commodities, and other fungible items of value at low transaction costs and at prices that reflect supply and demand. Securities include stocks and bonds, and commodities include precious metals or agricultural goods.

There are both general markets (where many commodities are traded) and specialized markets (where only one commodity is traded).

In finance, financial markets facilitate:

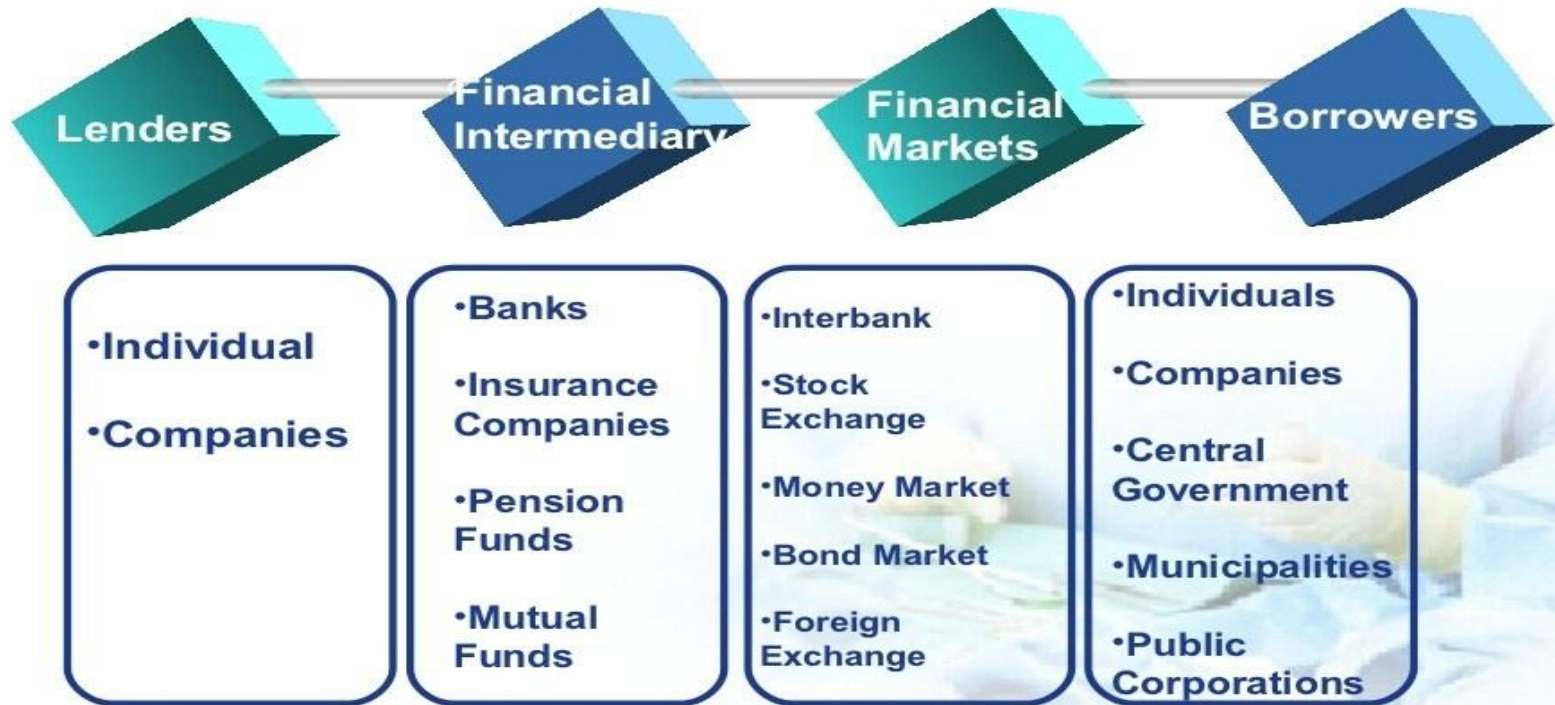
- ❖ The raising of capital (in the capital markets)
- ❖ The transfer of risk (in the derivatives markets)
- ❖ Price discovery
- ❖ Global transactions with integration of financial markets
- ❖ The transfer of liquidity (in the money markets)
- ❖ International trade (in the currency markets)

Securities

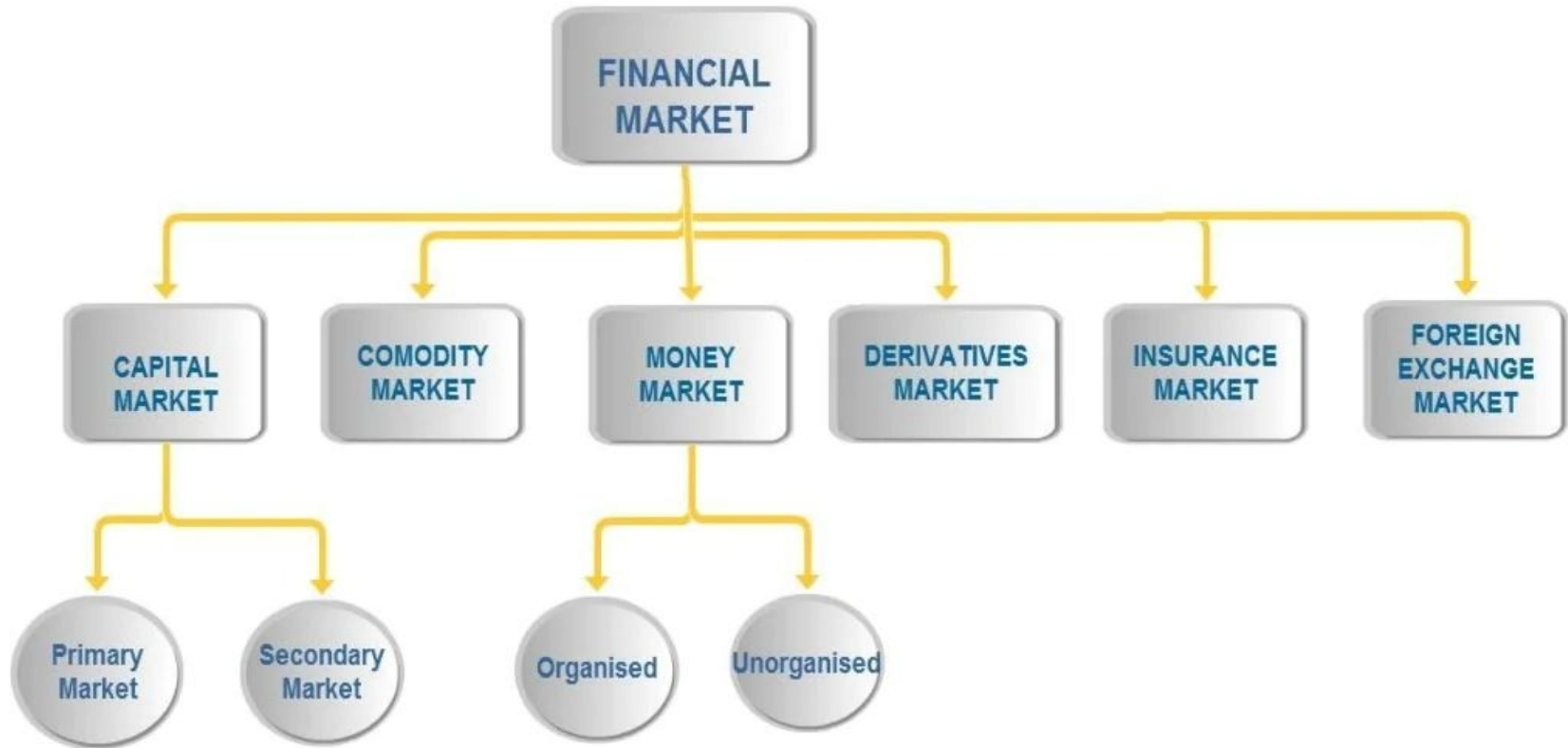


Typically a borrower issues a receipt to the lender promising to pay back the capital. These receipts are securities which may be freely bought or sold. In return for lending money to the borrower, the lender will expect some compensation in the form of interest or dividends. This return on investment is a necessary part of markets to ensure that funds are supplied to them.

Relationship Between Lenders and Borrowers



Financial Market Chart



Diagram



Capital Market

- ❖ Capital market is a market for financial assets which have a long or indefinite maturity. Unlike money market instruments the capital market instruments become mature for the period above one year.



- ❖ The capital markets may also be divided into **primary markets** and **secondary markets**. Newly formed (issued) securities are bought or sold in primary markets, such as during initial public offerings. Secondary markets allow investors to buy and sell existing securities. The transactions in primary markets exist between issuers and investors, while in secondary market transactions exist among investors
- ❖ These institutions play the role of lenders in the capital market. Business units and corporate are the borrowers in the capital market.

Instrument of Capital Market

1

STOCKS

The market in which shares are issued and traded either through exchanges or over-the-counter markets. Also known as the equity market.

2

BONDS

The environment in which the issuance and trading of debt securities occurs. The bond market primarily includes government-issued securities and corporate debt securities.

3

DEBENTURES

A certificate issued by a corporation with the purpose of creating a debt. Debentures are generally unsecured by assets and are interest bearing securities.

4

TREASURY BILLS

Short-term obligation that is not interest-bearing (it is purchased at a discount); can be sold on a discount basis for 91 days.

5

FOREIGN EXCHANGE

The market in which participants are able to buy, sell, exchange and speculate on currencies.

6

FIXED DEPOSITS

FDs are the deposits that are repayable on fixed maturity date along with the principal and agreed interest rate for the period.

Company

Role Of Capital Market

1. **Mobilization of Savings** : Capital market is an important source for mobilizing idle savings from the economy. It mobilizes funds from people for further investments in the productive channels of an economy.
2. **Capital Formation** : Capital market helps in capital formation. Capital formation is net addition to the existing stock of capital in the economy.
3. **Provision of Investment Avenue** : Capital market raises resources for longer periods of time. Thus it provides an investment avenue for people who wish to invest resources for a long period of time.
4. **Speed up Economic Growth and Development** : Capital market enhances production and productivity in the national economy by generation of employment and development of infrastructure.
5. **Service Provision** : As an important financial set up capital market provides various types of services. It includes long term and medium term loans to industry, underwriting services, consultancy services, export finance, etc. These services help the manufacturing sector in a large spectrum.

Money ₹ Market

- ❖ As money became a commodity, the money market became a component of the financial markets for assets involved in short-term borrowing, lending, buying and selling with original maturities of one year or less. Trading in the money markets is done over the counter, is wholesale.

Organised Money Market

Main components of Organised Money Market:

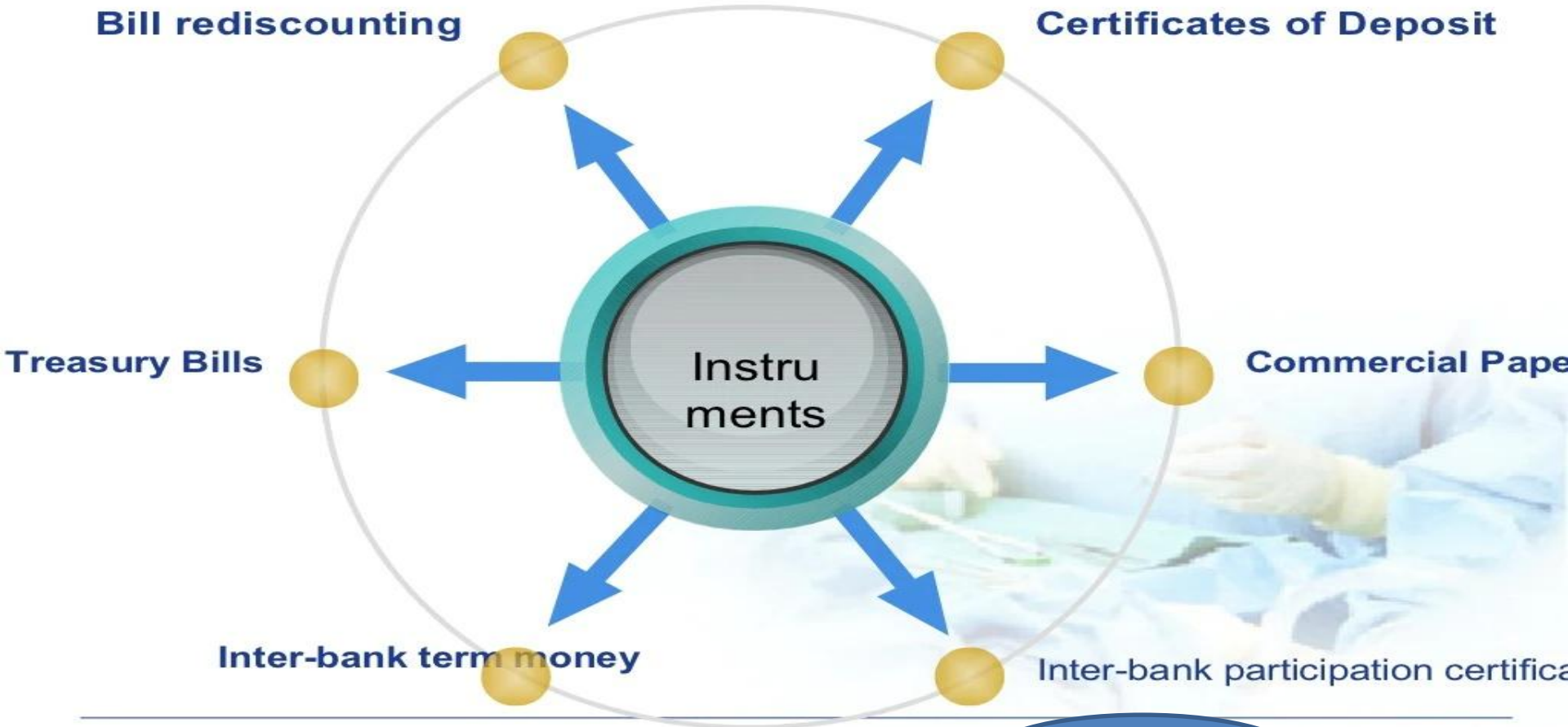
1. **The Call Money:** Here, lending and borrowing transactions are carried out for **one day**.
2. **The Treasury Bill Market:** It deals in Treasury Bills of short term duration: **14 days, 91 days, 182 days and 364 days**. They are issued by **Government** and largely held by RBI.
3. **The Commercial Bill Market:** It deals in **bills of exchange**. A seller draws a bill of exchange on the buyer to make payment within a certain period of time.
4. **The Certificate of Deposit Market:** The main purpose of CD is **to enable the commercial banks to raise funds from the market**. The CDs maturity period ranges from 7 days to 1 year (in case of FIs minimum 1 year and maximum 3 years). The CDs are issued at a discount to its face value. The CDs are issued in denomination of Rs. 1 lakh and thereafter, multiples of Rs. 1 lakh.
5. **Money Market Mutual Funds (MMMFs):** The MMMFs were introduced in 1992. The objective of MMMFs is to provide an additional short term avenue to the individual investors.

Unorganised Money Market

Main components of Unorganised Money Market:

1. **Indigenous Bankers (IBs):** The IBs are individuals or private firms who **receive deposits** and **give loans** and thereby they operate as banks. Unlike moneylenders who only lend money, IBs accept deposits as well as lend money.
2. **Money Lenders (MLs):** They lend money in rural areas as well as urban areas. They normally charge an invariably high rate of interest ranging between **15% p.a. to 50% p.a.** and even more.
3. **Chit Funds and Nidhis:** They collect funds from the members for the purpose of lending to members (who are in need of funds) for personal or other purposes.
4. **Finance Brokers:** They act as middlemen between lenders and borrowers. They charge commission for their services.
5. **Finance Companies:** They operate throughout the country. They borrow or accept deposits and lend them to others. They provide funds to small traders and others. They operate like indigenous bankers.

Money Market Instruments



FINANCIAL INTERMEDIARIES



DEFINITION

Financial intermediaries hold a very important role in the flow of money in the financial world. The assistance of a financial intermediary is needed by companies who want somebody to act as a middle man in raising money from the investors. Meeting up between these two parties are often very difficult without the help of financial intermediaries.

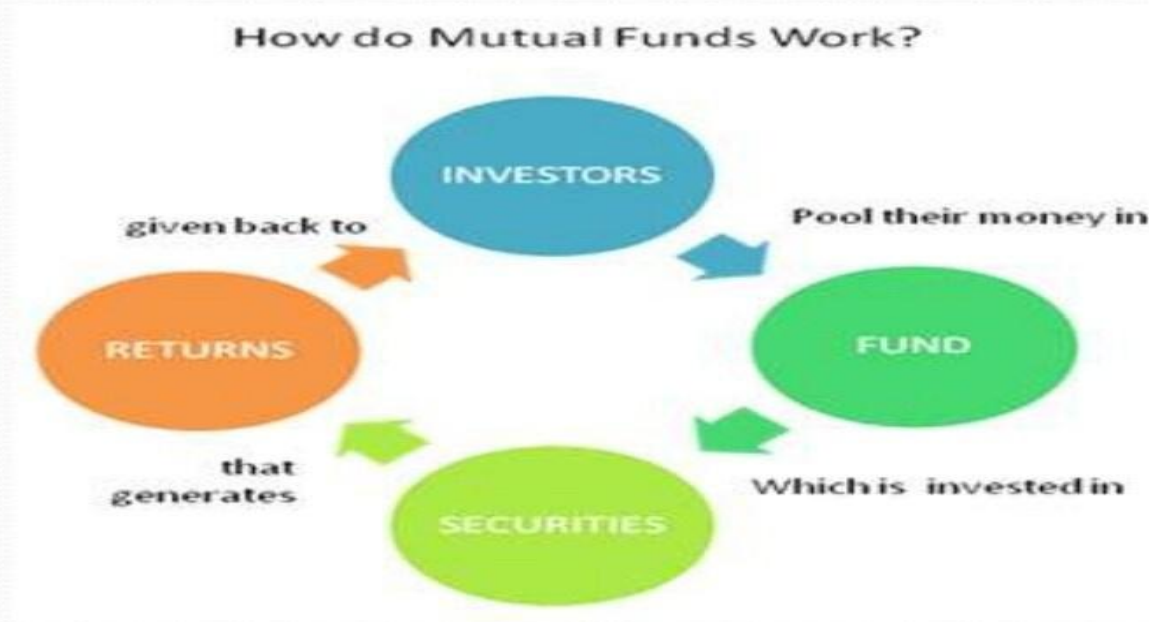
INSURANCE COMPANIES

- *Insurance companies concentrate on fulfilling the insurance needs of the community , both for life and non life insurance. These companies offer products that allow investors to select the kind of policies to suit their financial planning needs.. These companies also offer policies for funding a child's education and marriage, and providing a steady income for the aged through annuities and pensions*

MUTUAL FUNDS

- Mutual funds (MFs) organisations satisfy the needs of individuals investors through pooling resources from a large number with similar investments goals and risks appetite. The resource collected are invested in the capital and money market securities. The returns are distributed to investors optimising the return for the investors.

HOW MUTUAL FUNDS WORK





NON BANKING FINANCE COMPANIES

- *NBFCs are commonly known as finance companies and are corporate bodies, which concentrate mainly on lending activities in a well defined area.*

INVESTMENT BROKERS

- The main duty of **investment brokers** is to transact the security sales. There are discount brokers and full-service brokers. They provide an opportunity online for some individuals to promote their trades. Aside from that they can also solicit valuable investment advice to some clients who may need it that time.



INVESTMENT BANKERS

- The main duty of this financial intermediary is to increase monetary amounts of companies through stocks and bonds. Since conducting stock offerings and issuing bonds is so expensive, investment bankers focuses on how they can help the firm to earn more capital



PENSION FUND

- A **pension fund** is any plan, fund, or scheme which provides retirement income.
- Pension funds are important to shareholders of listed and private companies. They are especially important to the stock market where large institutional investors dominate.



ADVANTAGES OF FINANCIAL INTERMEDIARIES

- There are 2 essential advantages from using financial intermediaries:
- Cost advantage over direct lending/borrowing
- Market failure protection the conflicting needs of lenders and borrowers are reconciled, preventing market failure

A pair of glasses and a stethoscope are positioned on the left side of the image. The glasses have a thin, curved frame and are resting on a blue surface. A stethoscope is also visible, with its chest piece and tubing partially shown. The background is a solid blue color with a subtle gradient.

Thank You !

