Semester V

		L	T	P	C
17PAU502A	**DSE: 2 – FINANCIAL MANAGEMENT**	**6**	**2**	**-**	**6**

SCOPE

Financial Management represents how the funds are managed and their reflections on the fundamental decisions to be taken by the corporate sector. This paper presents the basics of Finance functions, Capital Structure, Cost of Capital, Capital Budgeting and Working Capital Management.

OBJECTIVES

- To enable the students to acquire knowledge of Finance Function
- To enlighten the students knowledge in cost of capital, Capital Structure, Capital Budgeting, and Working Capital Management.

UNIT I

Introduction - Nature - Scope and Objective of Financial Management - Time Value of Money - Risk and Return (including Capital Asset Pricing Model) - Valuation of Securities - Bonds and Equities

UNIT II

Investment Decisions - The Capital Budgeting Process - Cash Flow Estimation - Payback Period Method, Accounting Rate of Return - Net Present Value (NPV) - Net Terminal Value - Internal Rate of Return (IRR) - Profitability Index, Capital Budgeting under Risk - Certainty Equivalent Approach and Risk- Adjusted Discount Rate.

UNIT III

Financing Decisions - Cost of Capital and Financing Decision - Sources of Long Term Financing - Estimation of Components of Cost of Capital - Methods for Calculating Cost of Equity Capital - Cost of Retained Earnings - Cost of Debt and Cost of Preference Capital - Weighted Average Cost of Capital (WACC) and Marginal Cost of Capital - Capital Structure - Theories of Capital Structure (Net Income, Net Operating Income, MM Hypothesis, Traditional Approach) - Operating and Financial Leverage - Determinants of Capital Structure

UNIT IV

Dividend Decisions - Theories for Relevance and Irrelevance of Dividend Decision for Corporate Valuation - Cash and Stock Dividends - Dividend Policies in Practice.

UNIT V

Working Capital Decisions - Concepts of Working Capital - The risk-return trade off - Sources of Short-Term Finance - Working Capital Estimation - Cash Management - Receivables Management - Inventory Management and Payables Management.

SUGGESTED READINGS:

TEXT BOOKS

1. Maheswari, S.N. (2014). *Financial Management*. New Delhi: Sultan Chand and Sons.

REFERENCES

1. Khan, M.Y., & Jain, P.K. (2007). *Financial Management Text Problem and Cases* (5th ed.). New Delhi: Tata McGraw-Hill Publishing Co. Ltd.
2. Rustogi, R.P. (2011). *Financial Management: Theory Concepts and Practices* (5th R.ed.). New Delhi: Taxmann Publication.
3. Pandey, I.M. (2009). *Financial Management: Theory and Practices* (9th ed.). New Delhi: Vikas Publishing House Pvt Ltd.
4. Brealey, R.A., Myers, S.C., Allen, F., & Mohanty, P. (2002). *Principles of Corporate Finance* (7th ed.). New Delhi: McGraw Hill.
5. Horne, J.V., & Wachowicz, J.M. (2009). *Fundamentals of Financial Management* (13th ed.). New Delhi: Prentice Hall of India Publication.
6. Kulkarni, P.V. (2011). *Financial Management*. Mumbai: Himalaya Publishing house.

KARPAGAM ACADEMY OF HIGHER EDUCATION

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(Established Under Section 3 of UGC Act 1956)

Coimbatore – 641 021.

LECTURE PLAN
DEPARTMENT OF COMMERCE

STAFF NAME: Dr.V. KRISHNAVENI
SUBJECT NAME: FINANCIAL MANAGEMENT
SUB.CODE: 17PAU502A
SEMESTER: V
CLASS: III B.COM

Unit I

S. No	Lecture Duration Period	Topic to be covered	Support Material/Page Nos.
		UNIT I	
1.	1	Introduction to Financial Management	T :3
2.	1	Nature of Financial Management	R1:1.20
3.	1	Scope and objective of Financial Management	T-3
4.	1	Time value of money	R1:2.1-2.29
5.	1	Risk and return	RI: 3.1-3.38
6.	1	Capital Asset Pricing Model	R1: 3.18
7.	1	Capital Asset Pricing Model (T)	R1: 3.18
8.	1	Valuation of securities- Bonds	R1: 4.2
9.	1	Valuation of securities- Bonds (T)	R1: 4.2
10.	1	Valuation of securities- Equities	RI: 4.7
11.	1	Valuation of securities- Equities (T)	RI: 4.7
12.	1	Recapitulation and important question discussion	
		TOTAL NO. OF HOURS PLANNED FOR UNIT I	**12**

Unit II

S. no	Lecture Duration Period	Topic to be covered	Support Materials/page nos.
1.	1	Investment decisions	R2: 5.3-5.8
2.	1	Capital Budgeting process	R2: 5.3-5.8
3.	1	Cash Flow Estimation	R1:5.3
4.	1	Cash Flow Estimation (T)	R1:5.3
5.	1	Pay Back period method	T: 213-217
6.	1	Problems in Pay Back Period	T: 213-217
7.	1	Problems in Pay Back Period (T)	T: 213-217

8.	1	Accounting Rate of return	T: 424-436
9.	1	Problems in Accounting rate of return	R2: 5.10-5.13
10.	1	Problems in Accounting rate of return (T)	R2: 5.10-5.13
11.	1	Net Present value (NPV)	T: 218-223, 424-436
12.	1	Problems in Net Present value (NPV)	T: 424-436
13.	1	Problems in Net Present value (NPV) (T)	T: 424-436
14.	1	Net Terminal Value	W1
15.	1	Internal Rate of Return(IRR) and profitability index	T: 218-223
16.	1	Problems in IRR	R1:9.32-35
17.	1	Problems in IRR (T)	R1:9.32-35
18.	1	Capital budgeting under risk	R1: 12.1-24
19.	1	Certainty equivalent Approach	R1;12.13-15
20.	1	Risk Adjusted Discount rate	R1:12.10-22
21.	1	Risk Adjusted Discount rate (T)	R1:12.10-22
22.	1	Recapitulation and important questions discussion	
		TOTAL NO. OF HOURS PLANNED FOR UNIT II	**22**

Unit III

S. no	Lecture Duration period	Topic to be covered	Support Material/Page nos
1.	1	Financing Decisions : Cost of Capital and financing decision	T : 368-369
2.	1	Sources of Long term financing	T:82,91
3.	1	Estimation of components of cost of capital	R1:36.17-18
4.	1	Methods for calculating cost of equity capital	R1: 36.17-19
5.	1	Cost of Equity Capital – Problems	T: 380-385
6.	1	Cost of Equity Capital – Problems (T)	T: 380-385
7.	1	Cost of retained earnings	T: 385-388
8.	1	Cost of retained earnings (T)	T: 385-388
9.	1	Cost of Debt	T: .377-378
10.	1	Cost of debt- problems	R1:11.5-8,6-7,7-9
11.	1	Cost of debt- problems (T)	R1:11.5-8,6-7,7-9
12.	1	Cost of Preference Share Capital	T:. 378-380
13.	1	Cost of Preference Share Capital-problems	R1:11.9-11
14.	1	Cost of Preference Share Capital-problems (T)	R1:11.9-11
15.	1	Weighted Average cost of capital(WACC)	T: 388-396
16.	1	Weighted Average cost of capital(WACC) (T)	T: 388-396
17.	1	Marginal Cost of capital	R1:11.19-20
18.	1	Capital Structure - Theories of Capital structure-Net Income Approach	T:51-54
19.	1	Net Operating Income	T:54-63
20.	1	Net Operating Income (T)	T:54-63
21.	1	Modiglani Miller (MM)Hypothesis	T:54-63
22.	1	MM Hypothesis Problems	T: 12.5-12.7
23.	1	Traditional Approach	T: 54-63
24.	1	Operating and Financial leverage-	R1:18.7-10,18.4-7
25.	1	Determinants of capital structure	T: 70-74
26.	1	Recapitulation and important question discussion	
		TOTAL NO. OF HOURS PLANNED FOR UNIT III	**26**

Unit IV

S. no	Lecture Duration Period	Topic to be covered	Support Material/Page nos.
1.	1	Dividend decisions	R1:30.3
2.	1	Theories of relevance for corporate valuation	R1:30.12
3.	1	Theories of relevance -Walter's Model	R1:30.12-30.15
4.	1	Theories of relevance -Walter's Model (T)	R1:30.12-30.15
5.	1	Theories of relevance –Gordon's Model	R1:30.15-30.16
6	1	Theories of relevance –Gordon's Model (T)	R1:30.15-30.16
7.	1	Theories of relevance –Dividend Capitalisation model	R1: 30.16 -30.17
8.	1	Theories of relevance –Dividend Capitalisation model (T)	R1: 30.16 -30.17
9.	1	Theories of irrelevance for corporate valuation	R1:30.4
10.	1	Theories of irrelevance -Modigilani and Miller(MM)	T:54-63,R1:30.4-30.5
11.	1	Theories of irrelevance -Modigilani and Miller(MM) (T)	T:54-63,R1:30.4-30.5
12.	1	Cash and stock dividends	R1:31.11
13.	1	Dividend policies in practice	T:12.5,R1:31.10
14.	1	Recapitulation and important question discussion	
		TOTAL NO. OF HOURS PLANNED FOR UNIT IV	**14**

Unit V

S. no	Lecture Duration Period	Topic to be covered	Support Materials
1.	1	Working capital decisions	R1: 13.3
2.	1	Concepts of working capital	R1:13.3-13.4,13.9-13.10,T: 293-295
3.	1	Risk and return trade off	R1;13.7-13.8
4.	1	Sources of short term finance	R1:17.3-17.4
5.	1	Working capital estimation	R1:13.16-13.38
6.	1	Working capital estimation (T)	R1:13.16-13.38
7.	1	Cash Management, motives of holding cash, cash budget,	T: 299-309
8.	1	cash budget (T)	T: 299-309
9.	1	Receivable management, meaning and objectives	T: 331-353
10.	1	Calculation of Debtor Turnover Ratio (DTR)	T: 331-353
11.	1	Calculation of Debtor Turnover Ratio (DTR) (T)	T: 331-353
12.	1	Inventory Management and its significance	T: 311-314
13.	1	Calculation of Inventory Turnover Ratio	T: 311-314
14.	1	Calculation of Inventory Turnover Ratio (T)	T: 311-314
15.	1	Techniques of Maintaining Inventory	T: 311-314
16.	1	Payables management	R1:6.9-6.10
17.	1	Creditor Turnover ratio(CTR)	T:331-353
18.	1	Creditor Turnover ratio(CTR) (T)	T:331-353
19.	1	Recapitulation and important questions discussion	-
20.	1	Discussion of Previous year ESE question	-
21.	1	Discussion of Previous year ESE question	-
22.	1	Discussion of Previous year ESE question	-
		TOTAL NO. OF HOURS PLANNED FOR UNIT V	**22**

TEXT BOOK

T- S.N. Maheswari, S.N. (2014). *Financial Management*, New Delhi; Sultan Chand and Sons.

REFERENCE BOOK

R1: Khan, M.Y., & Jain, P.K. (2007).*Financial Management* Text Problem and cases (5 th ed.).New Delhi; Tata McGraw-Hill Publishing Co., Ltd.,

R2: Ramachandran, R., & Srinivasan, S, (2010). *Financial Management*, Sriram Publications, Trichy

WEBSITE

W1: https://investopedia.com – Net Terminal Value

(T): Tutorials

UNIT – I : Introduction - Nature - Scope and Objective of Financial Management - Time Value of Money - Risk and Return (including Capital Asset Pricing Model) - Valuation of Securities - Bonds and Equities

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.

AIMS OF FINANCE FUNCTION

1. Rice in profits:

If the firm wants to maximise its value, it should' increase its profits and revenues. For this purpose increase of sales volume or other activities can be taken up. It is the general feature of any firm to increase profits by proper utilisation of all opportunities and plans.

Theoretically, firm gets maximum profits if it is under equilibrium. At that stage the average cost is minimal and the marginal cost and the marginal revenues are equal. Here, we can't say the sales because there must be suitable market for the increased sales. Further, the above costs must also be controlled.

2. Reduction in cost:

Capital and equity funds are utilised for production. So all types of steps should be taken to reduce firm's cost of capital.

3. Sources of funds:

It should be decided by keeping in view the value of the firm to collect funds through issue of shares or debentures.

4. Reduce risks:

There won't be profits without risk. But for this reason if more risk is taken, it may become danger to the existence of the firm. Hence risk should be reduced to minimum level.

5. Long run value:

It should be the feature of financial management to increase the long-run value of the firm. To earn more profits in short time, some firms may do the activities like releasing of low quality goods, neglecting the interests of consumers and employees.

These trials may give good results in the short run. But for increasing the value of the firm in the long run, avoiding; such activities are more essential.

FINANCIAL MANAGEMENT

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

Meaning and Definition

Financial management is that managerial activity which is concerned with the planning and controlling of the firm's financial resources. In other words it is concerned with acquiring, financing and managing assets to accomplish the overall goal of a business enterprise (mainly to maximize the shareholder's wealth).

"Financial management is concerned with the efficient use of an important economic resource, namely capital funds" - **Solomon Ezra & J. John Pringle**.

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

"Financial Management is concerned with managerial decisions that result in the acquisition and financing of long-term and short-term credits of the firm. As such it deals with the situations that require selection of specific assets (or combination of assets), the selection of specific liability (or combination of liabilities) as well as the problem of size and growth of an enterprise. The analysis of these decisions is based on the expected inflows and outflows of funds and their effects upon managerial objectives"**. – Phillippatus.**.

Nature of Financial Management

- It is an indispensable organ of business management.
- Its function is different from accounting function.
- It is a centralised function.
- Helpful in decisions of top management.
- It applicable to all types of concerns.
- It needs financial planning, control and follow-up.
- It related with different disciplines like economics, accounting, law, information technology, mathematics etc.

SCOPE AND FUNCTIONS OF FINANCIAL MANAGEMENT:

Financial management is one of the important parts of overall management, which is directly related with various functional departments like personnel, marketing and production. Financial management covers wide area with multidimensional approaches. The following are the important scope of financial management.

1. Financial Management and Economics

Economic concepts like micro and macroeconomics are directly applied with the financial management approaches. Investment decisions, micro and macro environmental factors are closely associated with the functions of financial manager. Financial management also uses the economic equations like money value discount factor, economic order quantity etc. Financial economics is one of the emerging area, which provides immense opportunities to finance, and economical areas.

2. Financial Management and Accounting

Accounting records includes the financial information of the business concern. Hence, we can easily understand the relationship between the financial management and accounting. In the olden periods, both financial management and accounting are treated as a same discipline and then it has been merged as Management Accounting because this part is very much helpful to finance manager to take decisions. But nowadays financial management and accounting discipline are separate and interrelated.

3. Financial Management or Mathematics

Modern approaches of the financial management applied large number of mathematical and statistical tools and techniques. They are also called as econometrics. Economic order quantity, discount factor, time value of money, present value of money, cost of capital, capital structure theories, dividend theories, ratio analysis and working capital analysis are used as mathematical and statistical tools and techniques in the field of financial management.

4. Financial Management and Production Management

Production management is the operational part of the business concern, which helps to multiple the money into profit. Profit of the concern depends upon the production performance. Production performance needs finance, because production department requires raw material, machinery, wages, operating expenses etc. These expenditures are decided and estimated by the financial department and the finance manager allocates the appropriate finance to production department. The financial manager must be aware of the operational process and finance required for each process of production activities.

5. Financial Management and Marketing

Produced goods are sold in the market with innovative and modern approaches. For this, the marketing department needs finance to meet their requirements. The financial manager or finance department is responsible to allocate the adequate finance to the marketing department. Hence, marketing and financial management are interrelated and depends on each other.

6. Financial Management and Human Resource

Financial management is also related with human resource department, which provides manpower to all the functional areas of the management. Financial manager should carefully evaluate the requirement of manpower to each department and allocate the finance to the human resource department as wages, salary, remuneration, commission, bonus, pension and other monetary benefits to the human resource department. Hence, financial management is directly related with human resource management.

The scope of financial management has undergone changes over the years. Until the middle of this century, its scope was limited to procurement of funds. In the modern times, the financial management includes besides procurement of funds ,the three different kinds of decision as well namely investment, financing and dividend .Scope and importance of financial management includes-

- Estimating the total requirements of funds for a given period.
- Raising funds through various sources, both national and international, keeping in mind the cost effectiveness;
- Investing the funds in both long term as well as short term capital needs;
- Funding day-to-day working capital requirements of business;
- Collecting on time from debtors and paying to creditors on time;
- Managing funds and treasury operations;
- Ensuring a satisfactory return to all the stake holders;
- Paying interest on borrowings;
- Repaying lenders on due dates;
- Maximizing the wealth of the shareholders over the long term;
- Interfacing with the capital markets;
- Awareness to all the latest developments in the financial markets;
- Increasing the firm's competitive financial strength in the market; and
- Adhering to the requirements of corporate governance.

The above scope of activities can be grouped in to three functions-

FUNCTIONS OF FINANCIAL MANAGEMENT:

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

(a) Investment decisions,

(b) Financing decisions,

(c) Dividend decisions.

1. **Investment decisions**: These decisions relate to the selection of assets in which funds will be invested by a firm .Funds procured from different sources have to be invested in various kinds of assets. Long term funds are used in a project for various fixed assets and also for current assets.

The investment of funds in a project has to be made after careful assessment of the various projects through capital budgeting .A part of long term fund is also to be kept for financing the working capital requirements.

2. **Financing decision:** These decisions relate to acquiring the optimum finance to meet financial objectives and seeing that fixed and working capital are effectively managed. It includes sources of available funds and their respective cost, capital structure, i.e. a proper balance between equity and debt capital. It segregate profit and cash flow, financing decisions also call for a good knowledge of evaluation of risk.

3. **Dividend decision-** These decisions relate to the determination as to how much and how frequently cash can be paid out of the profits of an organization as income for its owners/shareholders, and the amount to be retained to support the growth of the organization. The level and regular growth of dividends represent a significant factor in determining a profit making company's market value i.e. the value placed on its shares by the stock market.

All the above three type of decisions are interrelated ,the first two pertaining to any kind of organization while the third relates only to profit making organizations, thus it can be seen that financial management is of vital importance at every level of business activity ,from a sole trader to the largest multinational corporation.

The financing decision relates to the composition of relative proportion of various sources of finance .The sources could be:

1. **Shareholders fund**: Equity share capital, Preference share capital, Accumulated profits.

2. **Borrowing from outside agencies**: Debentures, Loans from Financial Institutions. Whether the companies choose shareholders funds or borrowed funds or a combination of both, each type of fund carries a cost.

APPROACHES TO FINANCIAL MANAGEMENT

Financial management approach measures the scope of the financial management in various fields, which include the essential part of the finance. Financial management is not a revolutionary concept but an evolutionary. The definition and scope of financial management has been changed from one period to another period and applied various innovations. Theoretical points of view, financial management approach may be broadly divided into two major parts.

Traditional Approach

Traditional approach is the initial stage of financial management, which was followed, in the early part of during the year 1920 to 1950. This approach is based on the past experience and the traditionally accepted methods. Main part of the traditional approach is rising of funds for the business concern. Traditional approach consists of the following important area.

- Arrangement of funds from lending body.
- Arrangement of funds through various financial instruments.
- Finding out the various sources of funds.

FUNCTIONAL AREAS OF FINANCIAL MANAGEMENT

- Capital Budgeting
- Working Capital Management
- Dividend Policies
- Acquisitions and Mergers
- Corporate Taxation
- Determining Financial Needs
- Determining Sources of Funds
- Financial Analysis
- Optimal Capital Structure
- Cost Volume Profit Analysis
- Profit Planning and Control
- Fixed Assets Management
- Project Planning and Evaluation

OBJECTIVE /GOALS OF FINANCIAL MANAGEMENT:

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

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 sake 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.

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 extract 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, 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.

Financial Management as the name suggests is management of finance. It deals with planning and mobilization of funds required by the firm. Managing of finance is nothing but managing of money. Every activity of an organization is reflected in its financial statements.

Financial Management deals with activities which have financial implications.

It includes-

- Profit maximization and wealth /value maximization
- Achieving a higher growth rate.
- Attaining a large market share.
- Promoting employee welfare
- Increasing customer satisfaction.
- Improve community life.

Among these, a conflict included in profit maximization and wealth /value maximization objective i.e. - The primary objective of a business is to earn profit, hence the objective of financial management is also **profit maximization**. If profit is given undue importance, a number of problems can arise, such as-

- It does not take into account the time pattern of returns.
- It fails to take into account the social consideration to workers, customers etc.
- The term profit is vague – it conveys a different meaning to different people .e.g. total profit, rate of profit etc.

In **wealth maximization** business firm maximize its market value ,it implies that business decision should seek to increase the net present value of the economic profit of the firm .It is the duty of the finance manager to see that the share holders get good return on the share (EPS - Earning per Share). Hence, the value of the share should increase in the stock market. The wealth

maximization objective is generally in accord with the interest of the various groups such as owners, employees etc.

Owing to limitation (timing, social consideration etc.) in profit maximization, in today's real world situations which is uncertain and multi-period in nature, wealth maximization is a better objective .Where the time period is short and degree of uncertainty is not great, wealth maximization and profit maximization amount to essentially the same.

IMPORTANCE OF FINANCIAL MANAGEMENT

Finance is the lifeblood of business organization. It needs to meet the requirement of the business concern. Each and every business concern must maintain adequate amount of finance for their smooth running of the business concern and also maintain the business carefully to achieve the goal of the business concern. The business goal can be achieved only with the help of effective management of finance. We can't neglect the importance of finance at any time at and at any situation. Some of the importance of the financial management is as follows:

Financial Planning

Financial management helps to determine the financial requirement of the business concern and leads to take financial planning of the concern. Financial planning is an important part of the business concern, which helps to promotion of an enterprise.

Acquisition of Funds

Financial management involves the acquisition of required finance to the business concern. Acquiring needed funds play a major part of the financial management, which involve possible source of finance at minimum cost.

Proper Use of Funds

Proper use and allocation of funds leads to improve the operational efficiency of the business concern. When the finance manager uses the funds properly, they can reduce the cost of capital and increase the value of the firm.

Financial Decision

Financial management helps to take sound financial decision in the business concern. Financial decision will affect the entire business operation of the concern. Because there is a direct relationship with various department functions such as marketing, production personnel, etc.

Improve Profitability

Profitability of the concern purely depends on the effectiveness and proper utilization of funds by the business concern. Financial management helps to improve the profitability position of the concern with the help of strong financial control devices such as budgetary control, ratio analysis and cost volume profit analysis.

Increase the Value of the Firm

Financial management is very important in the field of increasing the wealth of the investors and the business concern. Ultimate aim of any business concern will achieve the maximum profit and higher profitability leads to maximize the wealth of the investors as well as the nation.

Promoting Savings

Savings are possible only when the business concern earns higher profitability and maximizing wealth. Effective financial management helps to promoting and mobilizing individual and corporate savings.

Nowadays financial management is also popularly known as business finance or corporate finances. The business concern or corporate sectors cannot function without the importance of the financial management.

PROFIT MAXIMIZATION VS WEALTH MAXIMISATION

Profit maximization refers to how much dollar profit the company makes. It is a **short term** approach and a myopic person or business is mostly concerned about short term benefits.

But a short term horizon can fulfill objective of earning profit but may **not help** in creating wealth. It is because wealth creation needs a longer term; therefore financial management emphasizes on wealth maximization rather than profit maximization.

For a business, **it is not necessary that profit should be the only objective**; it may concentrate on various other aspects like increasing sales, capturing more market share, return on capital etc, which will take care of profitability. So, we can say that profit maximization is a **subset** of wealth and being a subset, it will facilitate wealth creation.

Constrains of Profit Max-

- It is a short term approach
- It ignores the timing of returns, cash flows, and risk
- Profit max method could not discuss on market share, high sales, and greater stability and so on.
- It could not consider the social responsibility that is one of the most important objectives of many firms.

Wealth maximization is **long term** process. It refers the **value of the company** generally expressed in the **value of the stock.**

- Value maximization says that managers should make all decisions so as to increase the total long run market value of the firm. Total value is the sum of the value of all financial claims on the firm- including **equity, debt, preferred stock and warrants.**
- The executives undertake investing in new projects, maximizing profits from existing products and services, controlling cost, and adding value to the company through process, which reflects in the price of the stock, but always in the increase in Net Asset Value and Equity per Share.
- The wealth of corporate owners is measured by the share price of the stock, which in turn is based on the **timing of returns (cash flows), their magnitude and their risk.** Maximizing share price will maximize owner wealth.
- Cash flow and risk are **the key decision variables** in maximizing owner wealth.
- When investors look at a company they not only look at dollar profit but also profit margins, return on capital, and other indicators of efficiency. Profit maximization does not achieve the objectives of the firm's owners; therefore wealth maximization is better option than profit maximization

Profit Max vs. Wealth Max

1. Profit maximization is short term approach and it refers to how much money the company makes. But Wealth maximization is a long term approach and it refers the value of the company.
2. Profit maximization is a subset of wealth.

3. Profit max ignores timing, cash flows, and risk, but in wealth maximizing those are the key decisions variables.

Stakeholders Wealth

"Stakeholder theory", the asserted main **contender** to value maximization for this objective function, has its root in **sociology**, **organizational behavior**, the **politics of specials interests**, and **managerial self interest.** Here "**asserted contender**" because stakeholder theory is incomplete as a specification for the corporate purpose or objective function. It is incompleteness in not accidental; it serves the **private interests** of those who promote it, including many managers and directors of corporations.

Briefly put, **value maximization** says that managers should make all decisions so as to increase the total long run market value for the firm. Total value is the sum of the value of all financial claims on the firm- **including equity**, **debt, preferred stock**, and **warrants.**

Stakeholder theory, on the other hand, says that managers should make decisions so as **to take account** of the interest **of all the stakeholders in a firm**. And stakeholders include all individuals or group who can substantially affect the welfare of the firm, including not only the financial claimants, but also employees, customers, communities, governmental officials, and under some interpretation the environment, terrorists, blackmailers, and thieves.

SOURCES OF FINANCE

Finance is the lifeblood of business concern, because it is interlinked with all activities performed by the business concern. In a human body, if blood circulation is not proper, body function will stop. Similarly, if the finance not being properly arranged, the business system will stop. Arrangement of the required finance to each department of business concern is highly a complex one and it needs careful decision. Quantum of finance may be depending upon the nature and situation of the business concern. But, the requirement of the finance may be broadly classified into two parts:

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 OF FUNDS:

Companies raise long term funds from the capital markets. Funds available for a period of less than one year are short term funds. With the increase in cross-border transactions, international sources of funds are also available. An effective trade-off between the domestic funds and international funds shall contribute towards increasing profitability and wealth maximization To enable the investments, creation of assets and infrastructure, an organisation require long term sources of funds.

Long-term sources of finance include:

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

1. Equity Share Capital

Equity share capital is a basic source of finance for any Company. It represents the ownership interest in the company. The characteristics of equity share capital are a direct consequence of its position in the company's control, income and assets. Equity share capital does not have any maturity nor there any compulsion to pay dividend on it. The equity share capital provides funds, more or less, on a permanent basis. It also works as a base for creating the debt and loan capacity of the firm.

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.

Advantages of Equity Share Financing

a. Since equity shares do not mature, it is a permanent source of fund. However, a company, if it so desires, can retire shares through buy-back as per the guidelines issued by the SEBI.

b. The new equity share capital increases the corporate flexibility from the point of view of capital structure planning. One such strategy may be to retire debt financing out of the funds received from the issue of equity capital.

c. Equity share capital does not involve any mandatory payments to shareholders.

d. It may be possible to make further issue of share capital by using a right offering. In general, selling right shares involves no change in the relationship between ownership and control. Existing shareholders can maintain their proportionate holding by exercising their pre-emptive right.

Limitations of Equity Share Financing

a. The equity share capital has the highest specific cost of capital among all the sources. This necessitates that the investment proposals should also have equally high rate of return.

b. Equity dividends are paid to the shareholders out of after-tax profits. These dividends are not tax deductible, rather imply a burden of Corporate Dividend tax on the company.

c. At times, the new issue of equity capital may reduce the EPS and thus may have an adverse effect on the market price of the equity share.

d. Excessive issue of equity share can dilute the ownership of the Company.

2. Preference Share Capital

The preference share capital is also owner's capital but has a maturity period. In India, the preference shares must be redeemed within a maximum period of 20 years from the date of issue.

The rate of dividend payable on preference shares is also fixed. As against the equity share capital, the preference shares have two references:

(i) Preference with respect to payment of dividend, and

(ii) Preference with reference to repayment of capital in case of liquidation of company.

However, the preference share capital represents an ownership interest and not a liability of the company. The preference shareholders have the right to receive dividends in priority over the equity shareholders. Indeed, it is this preference which distinguishes preference shares from equity shares. A dividend need not necessarily be paid on either type of shares. However, if the directors want to pay equity dividend, then the full dividend due on the preference shares must be paid first. Failure to meet commitment of preference dividend is not a ground for liquidation.

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 shares holders have right to participate extra profits after distributing the equity shareholders.

Non-Participating Preference Shares

Non-participating preference shares holders 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 shares holders 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

There 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 shares holders 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.

The advantages and disadvantages of the preference share capital are as follows:

Advantages of Preference Share Financing

a. The preference shares carry limited voting right though they are a part of the capital. Thus, these do not present a major control or ownership problem as long as the dividends are paid to them.

b. As an instrument of financing, the cost of capital of preference shares is less than that of equity shares.

c. The preference share financing may also provide a hedge against inflation because the fixed financial commitment which is unaffected by the inflation.

d. As there is no legal compulsion to pay preference dividend, a company does not face liquidation or other legal proceedings if it fails to pay the preference dividends.

Limitations of Preference Share Financing

a. The cost of capital of preference shares is higher than cost of debt.

b. Though there is no compulsion to pay preference dividend, yet the non-payment may adversely affect the market price of the equity shares and hence affect the value of the firm.

c. The compulsory redemption of preference shares after 20 years will entail a substantial cash outflow from the company.

d. If the company is not able to earn a return at least equal to the cost of preference share capital, then it may result in decrease in EPS for the equity shareholders.

3. Debentures

A bond or a debenture is the basic debt instrument which may be issued by a borrowing company for a price which may be less than, equal to or more than the face value. A debenture also carries a promise by the company to make interest payments to the debenture-holders of specified amount, at specified time and also to repay the principal amount at the end of a specified period. Since the debt instruments are issued keeping in view the need and cash flow profile of the company as well as the investor, there have been a variety of debt instruments being issued by companies in practice. In all these instruments, the basic features of being in the nature of a loan are not dispensed with and, therefore, these instruments have some or the other common features as follows:

(i) Credit Instrument—A debenture-holder is a creditor of the company and is entitled to receive payments of interest and the principal and enjoys some other rights.

(ii) Interest Rate— In most of the cases, the debt securities promise a rate of interest payable periodically to the debt holders. The rate of interest is also denoted as coupon rate.

(iii) Collateral— Debt issue may or may not be secured and, therefore, debentures or other such securities may be called secured debentures or unsecured debentures.

(iv) Maturity Date— All debt instruments have a fixed maturity date, when these will be repaid or redeemed in the manner specified.

(v) Voting Rights— As the debt holders are creditors of the company, they do not have any voting right in normal situations.

(vi) Face Value—every debt instrument has a face value as well as a maturity value.

(vii) Priority in Liquidation— In case of liquidation of the company, the claim of the debt holders is settled in priority over all shareholders and, generally, other unsecured creditors also.

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 traded 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 kinds 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 change on the Assets or floating change of the assets of the company. Specific change of Debenture holders are treated as secured creditors and floating change 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 of 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 SEB1 protect the interest of debenture holders.

Disadvantages of Debenture

Debenture finance consists of the following major disadvantages:

- **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.
- **No voting rights:** Debenture holders do not have any voting rights. Hence, they cannot have the control over the management of the company.
- **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.
- **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.
- **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.

4. Lease and Hire Purchase

Instead of procuring funds, and purchasing the equipment, a firm can acquire the asset itself on lease. In this case, the asset is financed by the lessor but the lessee gets the asset for use. In case of hire purchase, the assets are acquired on credit and payments are made as per terms and conditions.

5. Term Loans

This is also an important source of long-term financing. There are different financial institutions (National level as well as State level) which provide financial assistance for taking up projects. These cans be broadly divided into All India Financial Institutions and State level Financial Institutions. The All India Institutions are:-

i) Industrial Finance Corporation of India, (IFCI)

ii) Industrial Credit and Investment Corporation in India (ICICI),

iii) Industrial Development Bank of India (IDBI),

iv) Life Insurance Corporation of India,

v) Industrial Reconstruction Corporation of India,

vi) Unit Trust of India,

vii) National Small Industries Corporation Ltd.(NSIC)

The state level institutions are the State Finance Corporations and the State Industrial Development Corporations.

6. Official Foreign Source of Finance

1. Foreign Collaboration: In India joint participation of foreign and domestic capital has been quite common in recent years. Foreign collaboration could be either in the form of joint participation between private firms, or between foreign firms and Indian Government, or between foreign governments and Indian Government.

2. Bilateral Government Funding Arrangement: Generally, advanced countries provide aid in the form of loans and advances, grants, subsidies to governments of under-developed and developing countries. The aid is provided usually for financing government and public sector projects. Funds are provided at concessional terms in respect of cost (interest), maturity, and repayment schedule.

3. NRI Deposits and Investments: on-resident Indian have always been making a contribution in Indian economy. Government has been making efforts to encourage their deposits and

investments. Various schemes have been devised which ensure higher returns; procedures have been simplified to attract investments in primary and secondary market. Tax incentives are given on interest earned and dividends received by NRIs.

4. Loans from International Financial Institutions: International Bank for Reconstruction and Development (IBRD), International Monetary Fund (IMF), Asian Development Bank (ADB),and World Bank have been the major source of external finance to India.

5. External Commercial Borrowing (CEB) : Our country has also been obtaining foreign capital in the form of external commercial borrowings from agencies like US EXIM Bank, ECGC of UK, etc.

7. Non Official Foreign Source of Finance:

Foreign Direct Investment (FDI)

Foreign direct investment is one of the most important sources of foreign investment in developing countries like India. It is seen as a means to supplement domestic investment for achieving a higher level of growth and development. FDI is permitted under the forms of investments.

1. Through financial collaborations / capital / equity participation;
2. Through Joint ventures and technical collaborations;
3. Through capital markets (Euro Issues);
4. Through private placements or preferential allotment.

Capital participation / financial collaboration refers to the foreign partner's stake in the capital of the receiving country's companies while technical collaboration refers to such facilities provided by foreign partner as licensing, trademarks and patents (against which he gets lump sum fee or royalty payments for specified period); technical services etc.

From investors' point of view, the FDI inflows can be classified into the following groups.

(a) Market seeking: The investors are attracted by the size of the local market, which depends on the income of the country and its growth rate.

(b) Lower cost: Investors are more cost-conscious. They are influenced by infrastructure facilities and labour costs.

(c) Location and other factors: Technological status of a country, brand name, goodwill enjoyed by the local firms, favorable location, openness of the economy, policies of the government and

intellectual property protection granted by the government are some of the factors that attract investors to undertake investments.

SHORT TERM FUNDS:

Short term funds are usually required for working capital; to operate the project after it is completed. The working capital consists of the margin to be provided by the entrepreneur and the bulk of the balance is borrowed from a commercial bank or some other source as short term finance. The margin to be provided by the entrepreneur is included in the project cost estimates and is in financed from the various means of financing discussed earlier. The main sources of working capital are:-

1. Commercial banks,
2. The type of debentures issued for meeting working capital requirements are usually then on-convertible debentures.
3. Public Deposit
4. Commercial Paper
5. Supplier' Credit
6. Foreign currency funds etc.

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

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 secrete 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.

Functions of Finance Manager

Finance function is one of the major parts of business organization, which involves the permanent, and continuous process of the business concern. Finance is one of the interrelated functions which deal with personal function, marketing function, production function and research and development activities of the business concern. At present, every business concern concentrates more on the field of finance because, it is a very emerging part which reflects the entire operational and profit ability position of the concern. Deciding the proper financial function is the essential and ultimate goal of the business organization. Finance manager is one of the important role players in the field of finance function. He must have entire knowledge in the area of accounting, finance, economics and management. His position is highly critical and analytical to solve various problems related to finance. A person who deals finance related activities may be called finance manager.

Finance manager performs the following major functions:

1. Forecasting Financial Requirements

It is the primary function of the Finance Manager. He is responsible to estimate the financial requirement of the business concern. He should estimate, how much finances required to acquire fixed assets and forecast the amount needed to meet the working capital requirements in future.

2. Acquiring Necessary Capital

After deciding the financial requirement, the finance manager should concentrate how the finance is mobilized and where it will be available. It is also highly critical in nature.

3. Investment Decision

The finance manager must carefully select best investment alternatives and consider the reasonable and stable return from the investment. He must be well versed in the field of capital

budgeting techniques to determine the effective utilization of investment. The finance manager must concentrate to principles of safety,liquidity and profitability while investing capital.

4. Cash Management

Present days cash management plays a major role in the area of finance because proper cash management is not only essential for effective utilization of cash but it also helps to meet the short-term liquidity position of the concern.

5. Interrelation with Other Departments

Finance manager deals with various functional departments such as marketing, production, personnel, system, research, development, etc. Finance manager should have sound knowledge not only in finance related area but also well versed in other areas. He must maintain a good relationship with all the functional departments of the business organization.

Importance Of Financial Management

Finance is the lifeblood of business organization. It needs to meet the requirement of the business concern. Each and every business concern must maintain adequate amount of finance for their smooth running of the business concern and also maintain the business carefully to achieve the goal of the business concern. The business goal can be achieved only with the help of effective management of finance. We can't neglect the importance of finance at any time at and at any situation. Some of the importance of the financial management is as follows:

Financial Planning

Financial management helps to determine the financial requirement of the business concern and leads to take financial planning of the concern. Financial planning is an important part of the business concern, which helps to promotion of an enterprise.

Acquisition of Funds

Financial management involves the acquisition of required finance to the business concern. Acquiring needed funds play a major part of the financial management, which involve possible source of finance at minimum cost.

Proper Use of Funds

Proper use and allocation of funds leads to improve the operational efficiency of the business concern. When the finance manager uses the funds properly, they can reduce the cost of capital and increase the value of the firm.

Financial Decision

Financial management helps to take sound financial decision in the business concern. Financial decision will affect the entire business operation of the concern. Because there is a direct relationship with various department functions such as marketing, production personnel, etc.

Improve Profitability

Profitability of the concern purely depends on the effectiveness and proper utilization of funds by the business concern. Financial management helps to improve the profitability position of the concern with the help of strong financial control devices such as budgetary control, ratio analysis and cost volume profit analysis.

Increase the Value of the Firm

Financial management is very important in the field of increasing the wealth of the investors and the business concern. Ultimate aim of any business concern will achieve the maximum profit and higher profitability leads to maximize the wealth of the investors as well as the nation.

Promoting Savings

Savings are possible only when the business concern earns higher profitability and maximizing wealth. Effective financial management helps to promoting and mobilizing individual and corporate savings. Nowadays financial management is also popularly known as business finance or corporate finances. The business concern or corporate sectors cannot function without the importance of the financial management.

The **time value of money** (TVM) is the idea that **money** available at the present **time** is worth more than the same amount in the future due to its potential earning capacity. This core principle of finance holds that, provided **money** can earn interest, any amount of **money** is worth more the sooner it is received.

Time Value of Money

Introduction

Time Value of Money (TVM) is an important concept in financial management. It can be used to compare investment alternatives and to solve problems involving loans, mortgages, leases, savings, and annuities.

TVM is based on the concept that a dollar that you have today is worth more than the promise or expectation that you will receive a dollar in the future. Money that you hold today is worth more because you can invest it and earn interest. After all, you should receive some compensation for foregoing spending. For instance, you can invest your dollar for one year at a 6% annual interest rate and accumulate $1.06 at the end of the year. You can say that the **future value** of the dollar is $1.06 given a 6% **interest rate** and a one-year **period**. It follows that the **present value** of the $1.06 you expect to receive in one year is only $1.

A key concept of TVM is that a single sum of money or a series of equal, evenly-spaced payments or receipts promised in the future can be converted to an equivalent value today. Conversely, you can determine the value to which a single sum or a series of future payments will grow to at some future date.

You can calculate the fifth value if you are given any four of: Interest Rate, Number of Periods, Payments, Present Value, and Future Value. Each of these factors is very briefly defined in the right-hand column below. The left column has references to more detailed explanations, formulas, and examples.

Interest • **Simple** • **Compound**	Interest is a charge for borrowing money, usually stated as a percentage of the amount borrowed over a specific period of time. **Simple interest** is computed only on the original amount borrowed. It is the return on that principal for one time period. In contrast, **compound interest** is calculated each period on the original amount borrowed **plus** all unpaid interest accumulated to date. Compound interest is always assumed in TVM problems.
Number of Periods	Periods are evenly-spaced intervals of time. They are intentionally not stated in years since each interval must correspond to a compounding period for a single amount or a payment period for an annuity.

Payments	Payments are a series of equal, evenly-spaced cash flows. In TVM applications, payments must represent all outflows (negative amount) or all inflows (positive amount).
Present Value • **Single Amount** • **Annuity**	**Present Value** is an amount today that is equivalent to a future payment, or series of payments, that has been discounted by an appropriate interest rate. The future amount can be a single sum that will be received at the end of the last period, as a series of equally-spaced payments (an annuity), or both. Since money has time value, the present value of a promised future amount is worth less the longer you have to wait to receive it.
Future Value • **Single Amount** • **Annuity**	**Future Value** is the amount of money that an investment with a fixed, compounded interest rate will grow to by some future date. The investment can be a single sum deposited at the beginning of the first period, a series of equally-spaced payments (an annuity), or both. Since money has time value, we naturally expect the future value to be greater than the present value. The difference between the two depends on the number of compounding periods involved and the going interest rate.
Loan Amortization	A method for repaying a loan in equal installments. Part of each payment goes toward interest and any remainder is used to reduce the principal. As the balance of the loan is gradually reduced, a progressively larger portion of each payment goes toward reducing principal.
Cash Flow Diagram	A cash flow diagram is a picture of a financial problem that shows all cash inflows and outflows along a time line. It can help you to visualize a problem and to determine if it can be solved by TVM

	methods.

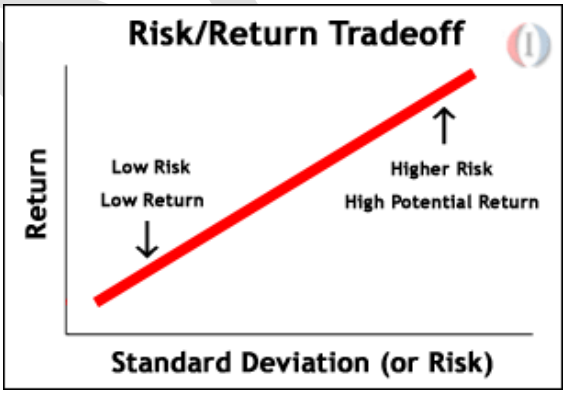
Risk and Return

High levels of uncertainty (high **risk**) are associated with high potential returns. The **risk**/**return** tradeoff is the balance between the desire for the lowest possible **risk** and the highest possible **return**. Investment **risks** can be divided into two categories: systematic and unsystematic.

The risk/return tradeoff could easily be called the "ability-to-sleep-at-night test." While some people can handle the equivalent of financial skydiving without batting an eye, others are terrified to climb the financial ladder without a secure harness. Deciding what amount of risk you can take while remaining comfortable with your investments is very important.

In the investing world, the dictionary definition of risk is the chance that an investment's actual return will be different than expected. Technically, this is measured in statistics by standard deviation. Risk means you have the possibility of losing some, or even all, of your original investment.

Low levels of uncertainty (low risk) are associated with low potential returns. High levels of uncertainty (high risk) are associated with high potential returns. The risk/return tradeoff is the balance between the desire for the lowest possible risk and the highest possible return. This is demonstrated graphically in the chart below. A higher standard deviation means a higher risk and higher possible return.



A common misconception is that higher risk equals greater return. The risk/return tradeoff tells us that the higher risk gives us the *possibility* of higher returns. There are no guarantees. Just as risk means higher potential returns, it also means higher potential losses.

On the lower end of the scale, the risk-free rate of return is represented by the return on U.S. Government Securities because their chance of default is next to nothing. If the risk-free rate is currently 6%, this means, with virtually no risk, we can earn 6% per year on our money.

The common question arises: who wants to earn 6% when index funds average 12% per year over the long run? The answer to this is that even the entire market (represented by the index fund) carries risk. The return on index funds is not 12% every year, but rather -5% one year, 25% the next year, and so on. An investor still faces substantially greater risk and volatility to get an overall return that is higher than a predictable government security. We call this additional return the risk premium, which in this case is 6% (12% - 6%).

Determining what risk level is most appropriate for you isn't an easy question to answer. Risk tolerance differs from person to person. Your decision will depend on your goals, income and personal situation, among other factors.

POSSIBLE QUESTIONS

PART – B

1. Define Finance
2. What is meant by time value of money?
3. What is meant by Financial Management?
4. List out the objectives of Financial Management?
5. List out the aims of finance function.

PART – C

1. Discuss various kinds of risk and return with suitable examples
2. Determine the various Techniques of Time Value of Money?
3. Define the term Finance and explain its classification?
4. " Maximisation of profits is regarded as the proper objective of investment decision. But it is not as exclusive as maximizing shareholders wealth" – Comment.
5. " Finance function is concerned with allocating funds to specific assets and obtaining the best mix of financing in relation to the overall valuation of the firm" - Discuss.
6. Explain the mechanics of calculating present value of cash flows giving suitable examples?
7. Discuss various kinds of risk and return with suitable examples?
8. Define Finance and explain the approaches to the study of finance?
9. " The finance manager should take into consideration the time value of money in order to take correct financial decisions" – Elucidate.
10. Draft a specimen of Organization of finance function and explain the functions of financial controller and Treasurer?

S.No	Question	Option A	Option B	Option C	Option D	Answer
1	financial management is part of	business management	management accounting	cost accounting	structural management	business management
2	Financial management also referred to as	corporate finance	Sole trader finance	co-operative finance	all of the above	corporate finance
3	The appropriate objective of an enterprise is :	Maximization of sales	Maximization of owners wealth	Maximization of profit	Maximization of production	Maximization of owners wealth
4	Which of the following is NEVER consistent with the objective of maximising shareholder wealth?	Increase sales	Corporate social responsibility	Paying dividend	Satisfying	Increase sales
5	---------- is the life blood of an enterprises	finance	production	sales	purchases	finance
6	Management of all matters related to an organisations finance is called	cash inflow and cash outflow	allocation of resources	financial management	paying dividend	financial management
7	The process of raising, providing and administering the funds used in a corporate enterprise is termed as ----------	corporate finance	partnership finance	sole trader finance	co-operative finance	corporate finance
8	---------- refers to that part of the management activity which is concerned with planning and controlling of firms financial resources.	financial management	Human resource management	Management accounting	Auditing	financial management
9	---------- focus all the financial activities in an organization.	finance function	marketing function	production function	personnel function	finance function
10	Early in the history of finances an important issue was	Liquidity	Capital structure	technology	financing options	Liquidity
11	According to traditional approach of finance function deals with only ----------	procurement of funds	utilization of funds	Private deposit	public deposit	procurement of funds
12	According to modern approach, the finance function deals with ----------	Investment	utilization of funds	finance decision	capital decision	utilization of funds
13	The most important goal of financial management is	profit maximization	matching income and expenditure	wealth maximisation	using business assets effectively	wealth maximisation
14	Financial management is ---------- process	dynamic	rigid	continuous	discontinuous	continuous
15	which one is not scope of financial management	Determining Financial Needs	Determining source of funds	Cost Reduction	Capital Structure	Cost Reduction
16	which are sources of funds	issue of shares	issue of debentures	borrowing from bank	all of the above	all of the above
17	The decision function of financial management can be broken down into the ____ decisions.	financing and investment	financing and dividend	Investment, financing and	Financing decision only	Investment, financing and

				dividend		dividend
18	The focal point of financial management in a firm is:	No of products produced	earning profits	create value for shareholders	Minimise tax	create value for shareholders
19	The primary objective of financial management is ----------	profit maximization	wealth maximization	both	current assets	wealth maximization
20	financial management is least concern for	financial forecasting	allocation of resources	establishing assets management	gross profit ratio	gross profit ratio
21	what is ignored in profit maximisation	Wealth	Net value	time value of money	Historical Cost	time value of money
22	raising more capital than required denotes situation of	overdraft	excess of capital	over liquidity	tangible	excess of capital
23	The higher the stock price per share the ---------- will be the stockholders wealth.	Greater	Lower	Profit before tax	profit after depreciation and taxes	Greater
24	CVP stands for----------	Cost Volume Profit	Cost value profit	Cost Volume Programme	Change Volume Profit	Cost Volume Profit
25	break Even Point = _____	Maximum profit	Maximum loss	At least Profit	No Profit and No loss	No Profit and No loss
26	---------- refers to decision concerning financial matters of a business firm	financial decision	investment decision	production decision	marketing decision	financial decision
27	_____ and _____ are the two versions of goals of the financial management of the firm.	Profit maximisation, Wealth maximization	Production maximisation, Sales maximisation	Sales maximisation, Profit maximization	Value maximisation, Wealth maximisation	Profit maximisation, Wealth maximization
28	The ---------- investment decision is known as capital budgeting	short term	long term	medium term	long term as well as short term profits	long term
29	The ---------- investment decision is referred to the working capital requirement	short term	long term	medium term	Quick term	short term
30	---------- is the process of making investment decisions in capital expenditure	capital budgeting	working capital management	cost of capital	leverage	capital budgeting
31	The term ---------- refers to the part of profit of a company which si distributed by it among its shareholders.	Interest	Dividend	Share	Ownership	Dividend
32	Planning refer to----------	forecasting	event	happened	activity	forecasting

33	Financial forecasting and planning are the function of ----------	production manager	financial manager	marketing manager	personnel manager.	financial manager
34	Planning is ----------	Secondary function	Primary function	Intermediary function	End function	Primary function
35	Financial Planning deals with:	Preparation of Financial Statements,	planning for capital issue	preparing budget	financial statement and capital issues	preparing budget
36	The following are examples of intangible assets except:	Machinery	Trade marks	Patents	Technical expertise	Machinery
37	Which one is not included in ideal financial plan	rigid	flexible	Foresight	simplicity	rigid
38	Principles of sound financial planning doest not include	clear cut objective	simple	More depend on outsider funds	flexible	More depend on outsider funds
39	Long term finance requires to purchase----------assets	Fixed	tangible	Intangible	variable	Fixed
40	which is not include in role of financial manager	Estimating Financial Requirements	Deciding the Capital Structure	Selecting Source of Finance	Earning profit	Earning profit
41	which one is not considered as Financial control device	Budgetary control	Return on investment	Performance appraisal	cost control	Performance appraisal
42	The appropriate objective of an enterprise is ----------	Maximization of sales.	Maximization of owners wealth	Maximization of profit	Maximization of production	Maximization of owners wealth
43	Financial forecasting and planning are ----------function financial manager	first	second	Third	end	first
44	which one least functions of financial management	forecasting	acquiring funds	earning profit	investing funds	earning profit
45	The job of a finance manager is confined to,	raising of funds	management of cash	raising of funds and their effective utilization	Raising of employees	raising of funds and their effective utilization
46	Financial decisions involve	Investment , finance and dividend decisions	Investment , finance and sales decisions	Investment , finance and cash decisions	Investment , finance and marketing decisions	Investment , finance and dividend decisions
47	Investment decisions classified into ----------	Two	Three	Four	five	Two
48	Higher is the risk higher is the ----------	return	risk	Cost	sales	return

49	The financial management is responsible for the----------function of the concern.	marketing	Accounting	Finance	managerial	finance
50	If an investor invests his money on purchase of debenture ha can get ----------	Dividend	Interest	Fee	Rent	Interest
51	---------- can be defined in terms of variability of returns	Return	Risk	Decision	Profit	Risk
52	Financial goals may be stated as maximizing_____	Long term profits	Short term profits	Minimizing risks	Long term as well as short term profits	Long term as well as short term profits
53	The primary aim of finance function is to _____for the business as are required from time to time.	Proper utilization of fund	Increasing profitability	Maximizing firms value	Acquiring sufficient fund	Acquiring sufficient fund
54	_____ relates to the determination of total amount of assets to be held in the firm.	Financing decision	Investment decision	Dividend decision	Capital decision	Investment decision
55	_____ is concerned with the quantum of profits to be distributed among share holders.	Dividend decision	Capital decision	Investment decision	Financing decision	Dividend decision
56	_____ is concerned with the best overall mix of financing for the firm.	Investment decision	Financing decision	Dividend decision	Capital decision	Financing decision
57	The first step in the financial management process_____	Financial planning and controlling	Risk and return	Financing decision	Analysis	Financial planning and controlling
58	The broad activities of financial management are ----------	financial analysis	avoidance of risk	prevention of risk	retention of risk	financial analysis
59	In finance, "short-term" means	less than three months	less than six months	less than one year	less than five years	less than one year
60	Finance is aimed at ----------	value maximization	service maximization	deflation risk	monetary value risk	value maximization

UNIT II : Investment Decisions - The Capital Budgeting Process - Cash Flow Estimation - Payback Period Method, Accounting Rate of Return - Net Present Value (NPV) - Net Terminal Value - Internal Rate of Return (IRR) - Profitability Index, Capital Budgeting under Risk - Certainty Equivalent Approach and Risk- Adjusted Discount Rate.

CAPITAL BUDGETING

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 maybe 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 of 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.

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 departments

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 payback 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.

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

Pay-back Period

The payback period (PBP) is the traditional method of capital budgeting. It is the simplest and perhaps, the most widely used quantitative method for appraising capital expenditure decision 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).

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

Meaning:

It is the number of years required to recover the original cash outlay invested in a project

Decision Rule:

The PBP can be used as a decision criterion to select investment proposal.

- If the PBP is less than the maximum acceptable payback period, accept the project.
- If the PBP is greater than the maximum acceptable payback period, reject the project.

This technique can be used to compare actual pay back with a standard pay back setup by the management in terms of the maximum period during which the initial investment must be recovered. The standard PBP is determined by management subjectively on the basis of a number of factors such as the type of project, the perceived risk of the project etc. PBP can be even used for ranking mutually exclusive projects. The projects may be ranked according to the length of PBP and the project with the shortest PBP will be selected**.**

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.

4. It is a cost effective method which does not require much of the time of finance executives as well as the use of computers.

5. It is a method for dealing with risk. It favours projects which generates substantial cash inflows in earlier years and discriminates against projects which brings substantial inflows in later years . Thus PBP method is useful in weeding out risky projects.

6. This is a method of liquidity. It emphasizes selecting a project with the early recovery of the investment.

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.

Uses:

The PBP can be gainfully employed under the following circumstances.

1. The PB method may be useful for the firms suffering from a liquidity crisis
2. It is very useful for those firms which emphasizes on short run earning performance rather than its long term growth.

3. The reciprocal of PBP is a good approximation of IRR which otherwise requires trial & error approach**.**

Payback Reciprocal and the Rate of Return:

Payback is considered a good approximation of the rate of return under following two conditions.

1. The life of the project is too large or at least twice the payback period.

2. The project generates constant annual cash inflow.

Though pay back reciprocal is a useful way to estimate the project's IRR but the major limitation of it is all investment project does not satisfy the conditions on which this method is based. When the useful life of the project is not at least twice the PBP, it will always exceed the rate of return. Similarly, if the project is not yielding constant CFAT it cannot be used as an approximation of the rate of return.

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.

Solution =Rs. 30,000

Rs. 10,000

= 3 Year

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

$$\text{Unadjusted rate of return} = \frac{\text{Annual Return}}{\text{Investment}} * 100$$

$$= \frac{\text{Rs. } 10{,}000}{\text{Rs.}30{,}000} * 100$$

= 33.33%

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
Tax 50%	1, 50,000
	1, 50,000
Add depreciation 20, 00,000 12 ½ %	2, 50,000
Cash inflow	4, 00,000

Solution

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

$$= \frac{20{,}00{,}000}{4{,}00{,}000}$$

= 5 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 6years 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	5000	5000
2	8000	13000
3	10000	23000
4	12000	35000
5	7000	42000
6	3000	45000

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

Pay-back period = 3 years+2000/12000×12 months

= 3 years 2 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 = Initial investment

_____

Annual cash inflows

= 1,00,000 /25,000 = 4 Years

(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 payback period is calculated as follows:

(i)

Year	Cash Inflows (Rs.)	Cumulative Cash Inflows (Rs.)
1	20,000	20,0000
2	20,000	40,000
3	20,000	60,000
4	20,000	80,000
5	20,000	100000
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:

- **Meaning:**

The ARR is the ratio of the average after tax profit divided by the average investment.

- **Decision Rule:**

The ARR can be used as a decision criterion to select investment proposal.

- If the ARR is higher than the minimum rate established by the management, accept the project.
- If the ARR is less than the minimum rate established by the management, reject the project.

The ranking method can also be used to select or reject the proposal using ARR. It will rank a project number one if it has highest ARR and lowest rank would be given to the project with lowest ARR.

❖ **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.

❖ **Use:**

The ARR can better be used as performance evaluation measure and control devise but it is not advisable to use as a decision making criterion for capital expenditures of the firm as it is not using cash flow information

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.

❖ **Meaning:**

The NPV is the difference between the present value of future cash inflows and the present value of the initial outlay, discounted at the firm's cost of capital. The procedure for determining the present values consists of two stages. The first stage involves determination of an appropriate discount rate. With the discount rate so selected, the cash flow streams are converted into present values in the second stage.

❖ **Decision Rule:**

The present value method can be used as an accept-reject criterion. The present value of the future cash streams or inflows would be compared with present value of outlays. The present value outlays are the same as the initial investment.

- If the NPV is greater than 0, accept the project.
- If the NPV is less than 0, reject the project.

❖ **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.

❖ **Use:**

NPV is very much in use capital budgeting practice being a true profitability measure

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**
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	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Factor	.909	.826	.751	.683	.621	.564

Solution

Year	**Cash inflows**		**Present Value of Rs. 1 @ 10%**	**Present Value of Net Cash inflows**	
	Project X	**Project Y**		**Project X**	**Project Y**

	Rs.	Rs.		Rs.	Rs.
1	5000	20000	.909	4,545	18,180
2	10000	10000	.826	8,260	8,260
3	10000	5000	.751	7,510	3,755
4	3000	3000	.683	2,049	2,049
5	2000	2000	.621	1,242	1,242
Scrap Value	1000	2000	.621	621	1,245
Total present value Initial				24,227	34,728
Investments				20,000	30,000
Net present value				4,227	4,728

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

Profitability Index (PI):

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

- **Meaning:**

It is a relative measure and can be defined as the ratio which is obtained by dividing the present value of future cash inflows by the present value of cash outlays.

- **Decision Rule:**

Using the PI ratio,

- Accept the project when PI>1
- Reject the project when PI<1
- May or may not accept when PI=1, the firm is indifferent to the project.

- **Merits:**

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

❖ **Demerits:**

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

- When cash outflow occurs beyond the current period, the PI is unsuitable as a selection criterion.
- It requires estimation of cash flows with accuracy which is very difficult underever changing world.
- It also requires correct estimation of cost of capital for getting correct result.

❖ **Use:**

It is useful in evaluating capital expenditures projects being a relative measure

- When the projects are mutually exclusive and it has different cash outlays, different cash flow pattern or unequal lives, it may not give unambiguous results.

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.

❖ **Meaning:**

The internal rate of return (IRR) is the discount rate that equates the NPV of an investment opportunity with Rs.0 (because the present value of cash inflows equals the initial investment). It is the compound annual rate of return that the firm will earn if it invests in the project and receives the given cash inflows

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:

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

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

- **Decision Rule:**

When IRR is used to make accept-reject decisions, the decision criteria are as follows:

- If the IRR is greater than the cost of capital, accept the project. (r >k)
- If the IRR is less than the cost of capital, reject the project. (r<k)

- **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.

❖ **Comparison of NPV and IRR:**

Both NPV and IRR will give the same results (i.e. acceptance or rejections) regarding an investment proposal in following two situations.

- When the project under consideration involve conventional cash flow. I.e. when an initial cash outlays is followed by a series of cash inflows.
- When the projects are independent of one another i.e., proposals the acceptance of which does not preclude the acceptance of others and if the firm is not facing a problem of funds constraint.

The reasons for similarity in results in the above cases are simple. In NPV method a proposal is accepted if NPV is positive. NPV will be positive only when the actual rate of return on investment is more than the cut off rate. In case of IRR method a proposal is accepted only when the IRR is higher than the cut off rate. Thus, both methods will give consistent results since the acceptance or rejection of the proposal under both of them is based on the actual return being higher than the required rate i.e.

- NPV will be positive only if $r > k$,

- NPV will be negative only if r < k,
- NPV would be zero only if r = k

RISK AND UNCERTAINLY IN CAPITAL BUDGETING

Capital budgeting requires the projection of cash inflow and outflow of the future. The future in always uncertain, estimate of demand, production, selling price, cost etc., cannot be exact.

For example: The product at any time it become obsolete therefore, the future in unexpected. The following methods for considering the accounting of risk in capital budgeting.

Various evaluation methods are used for risk and uncertainty in capital budgeting are as follows:

(i) Risk-adjusted cut off rate (or method of varying discount rate)

(ii) Certainly equivalent method.

(iii) Sensitivity technique.

(iv) Probability technique

(v) Standard deviation method.

(vi) Co-efficient of variation method.

(vii) Decision tree analysis.

(i) Risk-adjusted cut-off rate (or Method of varying)

This is one of the simplest method while calculating the risk in capital budgeting increase cut of rate or discount factor by certain percentage an account of risk.

Statistical Techniques for Risk Analysis:

(a) Probability Assignment

(b) Expected Net Present Value

(c) Standard Deviation

(d) Coefficient of Variation

(e) Probability Distribution Approach

(f) Normal Probability Distribution

(a) Probability Assignment:

The concept of probability is fundamental to the use of the risk analysis techniques. It may be defined as the likelihood of occurrence of an event. If an event is certain to occur, the probability of its occurrence is one but if an event is certain not to occur, the probability of its occurrence is zero. Thus, probability of all events to occur lies between zero and one.

The classical view of probability holds that one can talk about probability in a very large number of times under independent identical conditions. Thus, the probability estimate, which is based on a large number of observations, is known as an objective probability. But this is of little use in analyzing investment decisions because these decisions are non-repetitive in nature and hardly made under independent identical conditions over time. The another view of probability holds that it makes a great deal of sense to talk about the probability of a single event without reference to the repeatability long run frequency concept. Therefore, it is perfectly valid to talk about the probability of sales growth will reach to 4%, the probability of rain tomorrow or fifteen days hence. Such probability assignments that reflect the state of belief of a person rather than the objective evidence of a large number of trials are called personal or subjective probabilities.

(b) Expected Net Present Value:

Once the probability assignments have been made to the future cash flows, the next step is to find out the expected net present value. It can be found out by multiplying the monetary values of the possible events by their probabilities.

(c) Standard Deviation:

The assignment of probabilities and the calculation of the expected net present value include risk into the investment decision, but a better insight into the risk analysis of capital budgeting decision is possible by calculating standard deviation and coefficient of variation.

Standard deviation (σ) is an absolute measure of risk analysis and it can be used when projects under consideration are having same cash outlay. Statically, standard deviation is the

square root of variance and variance measures the deviation about expected cash flow of each of the possible cash flows.

(d) Coefficient of Variation:

If the projects to be compared involve different outlays/different expected value, the coefficient of variation is the correct choice, being a relative measure. The higher the coefficient of variation, the riskier the project. Project Y is having higher coefficient so it is riskier than the project X. It is a better measure of the uncertainty of cash flow returns than the standard deviation because it adjusts for the size of the cash flow.

(e) Probability Distribution Approach:

The researcher has discussed the concept of probability for incorporating risk in capital budgeting proposals. The concept of probability for incorporating risk in evaluating capital budgeting proposals. The probability distribution of cash flows over time provides valuable information about the expected value of return and the dispersion of the probability distribution of possible returns which helps in taking accept-reject decision of the investment decision.

The application of this theory in analyzing risk in capital budgeting depends upon the behaviour of the cash flows, being (i) independent, or (ii) dependent. The assumption that cash flows are independent over time signifies that future cash flows are not affected by the cash flows in the preceding or following years. When the cash flows in one period depend upon the cash flows in previous periods, they are referred to as dependent cash flows.

(i) **Independent Cash Flows over Time**: The mathematical formulation to determine the expected values of the probability distribution of NPV. Where 1 *CF* is the expected value of net CFAT in period t and I is the risk free rate of interest.

(ii) **Dependent Cash Flows26:** If cash flows are perfectly correlated, the behavior of cash flows in all periods is alike. This means that if the actual cash flow in one year is α standard deviations to the left of its expected value, cash flows in other years will also be α standard deviations to the left of their respective expected values.

(f) Normal Probability Distribution:

The normal probability distribution can be used to further analyze the risk in investment decision. It enable the decision maker to have an idea of the probability of different expected values of NPV, that is, the probability of NPV having the value of zero or less, greater than zero and within the range of two values for example, within the range of Rs. 2000 and Rs. 3000 etc. If the probability of having NPV zero or less is low, eg. .01, it means that the risk in the project is negligible. Thus, the normal probability distribution is an important statistical technique in the hands of decision makers for evaluating the riskiness of a project.

The area under the normal curve, representing the normal probability distribution, is equal to 1 (0.5 on either side of the mean). The curve has its maximum height at its expected value i.e. its mean. The distribution theoretically runs from minus infinity to plus infinity. The probability of occurrence beyond 3σ is very near to zero (0.26 percent).

For any normal distribution, the probability of an outcome falling within plus or minus.

1σ from the mean is 0.6826 or 68.26 per cent,

2σ from the mean is 95.46 per cent,

3σ from the mean is 99.74 per cent.

CONVENTIONAL TECHNIQUES FOR RISK ANALYSIS:

(a) Payback

(b) Risk-adjusted Discount Rate

(c) Certainty Equivalent

(a) Payback Period:

Payback as a method of risk analysis is useful in allowing for a specific types of risk only, i.e., the risk that a project will go exactly as planned for a certain period will then suddenly stop generating returns, the risk that the forecasts of cash flows will go wrong due to lower sales, higher cost etc. This method has been already discussed in detail above so it has not been repeated here.

(b) Risk Adjusted Discount Rate Method:

The economic theorists have assumed that to allow for risk, the businessmen required a premium over and above an alternative which is risk free. It is proposed that risk premium

be incorporated into the capital budgeting analysis through the discount rate. i.e. If the time preference for the money is to be recognized by discounting estimated future cash flows, at some risk free rate, to their present value, then, to allow for the riskiness of the future cash flow a risk premium rate may be added to risk free discount rate. Such a composite discount would account for both time preference and risk preference.

Decision Rule:

- The risk adjusted approach can be used for both NPV & IRR.
- If NPV method is used for evaluation, the NPV would be calculated using risk adjusted rate. If NPV is positive, the proposal would qualify for acceptance, if it is negative, the proposal would be rejected.
- In case of IRR, the IRR would be compared with the risk adjusted required rate of return. If the 'r' exceeds risk adjusted rate, the proposal would be accepted, otherwise not.

Merits:

• It is simple to calculate and easy to understand.
• It has a great deal of intuitive appeal for risk-averse businessman.
• It incorporates an attitude towards uncertainty.

Demerits:

- The determination of appropriate discount rates keeping in view the differing degrees of risk is arbitrary and does not give objective results.
- Conceptually this method is incorrect since it adjusts the required rate of return. As a matter fact it is the future cash flows which are subject to risk.
- This method results in compounding of risk over time, thus it assumes that risk necessarily increases with time which may not be correct in all cases.
- The method presumes that investors are averse to risk, which is true in most cases. However, there are risk seeker investors and are prepared to pay premium for taking risk and for them discount rate should be reduced rather than increased with increase in risk.
- Thus, this approach can be best described as a crude method of incorporating risk into capital budgeting.

(c) Certainty Equivalent Approach:

This approach to incorporate risk in evaluating investment projects, overcomes weaknesses of the RADR approach. Under this approach riskiness of project is taken into consideration by adjusting the expected cash flows and not discount rate. This method eliminates the problem arising out of the inclusion of risk premium in the discounting process.

Decision Rule:

- If NPV method is used, the proposal would be accepted if NPV of CE cash flows is positive, otherwise it is rejected.
- If IRR is used, the internal rate of return which equates the present value of CE cash inflows with the present value of the cash outflows, would be compared with risk free discount rate.
- If IRR is greater than the risk free rate, the investment project would be accepted otherwise it would be rejected.

Merits:

- It is simple to calculate.
- It is conceptually superior to time-adjusted discount rate approach because it incorporates risk by modifying the cash flows which are subject to risk.

Demerits:

- This method explicitly recognizes risk, but the procedure for reducing the forecast of cash flows is implicit and likely to be inconsistent from one investment to another.
- The forecaster expecting reduction that will be made in his forecast, may inflate them in anticipation. This will no longer give forecasts according to “best estimate”.
- If forecast have to pass through several layers of management, the effect may be to greatly exaggerate the original forecast or to make it ultra conservative.
- By focusing explicit attention only on the gloomy outcomes, chances are increased for passing by some good investments.

These techniques attempts to incorporate risk but major shortcomings are that specifying the appropriate degree of risk for an investment project is beset with serious operational problems and they cannot be applied to various projects over time.

Other Techniques:

(a) Sensitivity Analysis

(b) Scenario Analysis

(c) Break Even Analysis

(d) Simulation Analysis

(e) Decision Tree Approach

Sensitivity Analysis:

While evaluating any capital budgeting project, there is a need to forecast cash flows. The forecasting of cash flows depends on sales forecast and costs. The Sales revenue is a function of sales volume and unit selling price. Sales volume will depend on the market size and the firm's market share. The NPV and IRR of a project are determined by analysing the after-tax cash flows arrived at by combining various variables of project cash flows, project life and discount rate. The behavior of all these variables are very much uncertain. The sensitivity analysis helps in identifying how sensitive are the various estimated variables of the project. It shows how sensitive is a project's NPV or IRR for a given change in particular variables.

The more sensitive the NPV, the more critical is the variables.

Steps:

The following three steps are involved in the use of sensitivity analysis.

1. Identify the variables which can influence the project's NPV or IRR.
2. Define the underlying relationship between the variables.
3. Analyze the impact of the change in each of the variables on the projects NPV or IRR.

The Project's NPV or IRR can be computed under following three assumptions in sensitivity analysis.

1. Pessimistic (i.e. the worst),
2. Expected (i.e. the most likely)
3. Optimistic (i.e. the best)

Merits:

• The sensitivity analysis has the following advantages:

• It compels the decision maker to identify the variables affecting the cash flow forecasts which helps in understanding the investment project in totality.

• It identifies the critical variables for which special actions can be taken.

• It guides the decision maker to concentrate on relevant variables for the project.

Demerits:

The sensitivity analysis suffers from following limitations:

• The range of values suggested by the technique may not be consistent. The terms 'optimistic' and 'pessimistic' could mean different things to different people.

• It fails to focus on the interrelationship between variables. The study of variability of one factor at a time, keeping other variables constant may not much sense. For example, sales volume may be related to price and cost. One can not study the effect of change in price keeping quantity constant.

(b) Scenario Analysis:

In sensitivity analysis, typically one variable is varied at a time. If variables are interrelated, as they are most likely to be, it is helpful to look at some plausible scenarios, each scenario representing a consistent combination of variables.

Procedure:

The steps involved in scenario analysis are as follows:

1. Select the factor around which scenarios will be built. The factor chosen must be the largest source of uncertainty for the success of the project. It may be the state of the economy or interest rate or technological development or response of the market.

2. Estimate the values of each of the variables in investment analysis (investment outlay, revenues, costs, project life, and so on) for each scenario.

3. Calculate the net present value and/or internal rate of return under each scenario.

Evaluation:

- Scenario analysis may be regarded as an improvement over sensitively analysis because it considers variations in several variables together.

- It is based on the assumption that there are few well-delineated scenarios. This may not be true in many cases. For example, the economy does not necessarily lie in three discrete states, viz., recession, stability, and boom. It can in fact be anywhere on the continuum between the extremes. When a continuum is converted into three discrete states some information is lost.
- Scenario analysis expands the concept of estimating the expected values. Thus in a case where there are 10 inputs the analyst has to estimate 30 expected values (3 x 10) to do the scenario analysis.

(c) Break-even Analysis:

In sensitivity analysis one may ask what will happen to the project if sales decline or costs increase or something else happens. A financial manager will also be interested in knowing how much should be produced and sold at a minimum to ensure that the project does not 'lose money'. Such an exercise is called break even analysis and the minimum quantity at which loss is avoided is called the break-even point. The breakeven point may be defined in accounting terms or financial terms.

Accounting Break-even Analysis

Suppose a company is considering setting up a new plant near Mumbai. The capital budgeting committee has given following projections.

(d) Simulation analysis:

Sensitivity analysis and Scenario analysis are quite useful to understand the uncertainty of the investment projects. But both the methods do not consider the interactions between variables and also, they do not reflect on the probability of the change in variables. The power of the computer can help to incorporate risk into capital budgeting through a technique called Monte Carlo simulation. The term

"Monte Carlo" implies that the approach involves the use of numbers drawn randomly from probability distributions. It is statistically based approach which makes use of random numbers and pre assigned probabilities to simulate a project's outcome or return. It requires a sophisticated computing package to operate effectively. It differs from sensitivity analysis in the sense that instead of estimating a specific value for a key variable, a distribution of possible values for each variable is used.

The simulation model building process begins with the computer calculating a random value simultaneously for each variable identified for the model like market size,

market growth rate, sales price, sales volume, variable costs, residual asset values, project life etc. From this set of random values a new series of cash flows is created and a new NPV is calculated. This process is repeated numerous times, perhaps as many as 1000 times or even more for very large projects, allowing a decision-maker to develop a probability distribution of project NPVs. From the distribution model, a mean (expected) NPV will be calculated and its associated standard deviation will be used to guage the project's level of risk. The distribution of possible outcome enables the decision-maker to view a continuum of possible outcomes rather than a single estimate.

Merits:

- An increasingly popular tool of risk analysis, simulation offers certain advantages:
- It facilitates the analysis and appraisal of highly complex, multivariate investment proposals with the help of sophisticated computer packages.
- It can cope up with both independence and dependence amongst variables. It forces decision-makers to examine the relationship between variables.

Demerits:

- Simulation is not always appropriate or feasible for risk evaluation.
- The model requires accurate probability assessments of the key variables. For example, it may be known that there is a correlation between sales price and volume sold, but specifying with mathematical accuracy the nature of the relationship for model purposes may be difficult.
- Constructing simulated financial models can be time-consuming, costly and requires specialized skills, therefore. It is likely to be used to analyse very important, complex, and large-scale projects.
- It focuses on a project's standalone risk. It ignores the impact of diversification, i.e., how a project's stand-alone risk will correlate with that of other projects within the firm and affect the firm's overall corporate risk.
- Simulation is inherently imprecise. It provides a rough approximation of the probability distribution of net present value (or any other criterion of merit).
- Due to its imprecision, the simulated probability distribution may be misleading when a tail of the distribution is critical.•

- A realistic simulation model, likely to be complex, would most probably be constructed by a management scientist, not the decision maker. The decision maker, lacking understanding of the model, may not use it.
- To determine the net present value in a simulation run the risk-free discount rate is used. This is done to avoid prejudging risk which is supposed to be reflected in the dispersion of the distribution of net present value. Thus the measure of net present value takes a meaning, very different from its usual one, which is difficult to interpret.

(e) Decision-tree Approach:

Sometimes cash flow is estimated under different managerial options with the help of decision-tree approach. A decision tree is a graphic presentation of the present decision with future events and decisions. The sequence of events is shown in a format that resembles the branches of a tree.

Steps in constructing decision tree:

The first step in constructing a decision tree is to define a proposal. It may be concerning either a new product or an old product entering a new market. It may also be an abandonment option or a continuation option, expansion option or no-expansion option, etc.
Second step is identifying various alternatives. For example, if a firm is launching a new product, it must chalk out the demand possibilities and on that basis it identifies different alternatives-whether to have a large factory or a medium-size or only a small

- Plant. Each of the alternatives will have varying consequences on the cash flow.

The third step is to lay out the decision tree showing the different alternatives through different branches. And finally, the estimates of cash flow with probabilities in each branch are made.

Merits:

• Decision tree analysis gives the clarity of sequential investment decisions.
• It gives a decision maker to visualize assumptions and alternatives in graphic form

which is easier to understand than the analytical form. It helps in eliminating the unprofitable branches and determines optimum decision at various decision points.

Demerits:

- The decision tree becomes more and more complicated if he includes more and more alternatives. It becomes more complicated if the analysis includes interdependent variables which are dependent on one another.
- It becomes very difficult to construct decision tree if the number of years expected life of the project and the number of possible outcomes for each year are large.

Risk

A basic assumption of traditional cost of capital analysis is that the firm's business and financial risk are unaffected by the acceptance and financing of projects.

Business risk is related to the response of the firm's earnings before interest and taxes, or operating profits, to changes in sales. When the cost of capital is used to evaluate investment alternatives, it is assumed that acceptance of the proposed projects will not affect the firm's business risk. The types of projects accepted by a firm can greatly affect its business risk.

If a firm accepts a project that is considerably more risky than average, suppliers of funds to the firm are quite likely to raise the cost of funds. This is because of the decreased probability of the fund suppliers. Receiving the expected returns on their money. A long-term lender will charge higher interest on loans if the probability of receiving periodic interest from the firm and ultimately regaining the principal is decreased. Common stockholders will require the firm to increase earnings as compensation for increases in the uncertainty of receiving dividend payments or ably appreciation in the value of their stock. In analyzing the cost of capital it is assumed that the business risk of the firm remain sun changed (i.e., that the projects accepted do not affect the variability of the firm's sales revenues). This assumption eliminates the need to consider changes in the cost of specific sources of financing resulting from changes in business risk. The definition of the cost of capital developed in this chapter is valid only for projects that do not change the firm's business risk.

Financial risk is affected by the mixture of long-term financing, or the capital structure, of the firm. Firms with high levels of long-term debt in proportion to their equity are more risky than firms maintaining lower ratios of long-term debt to equity. It is the contractual fixed-payment obligations associated with debt financing that make a firm financially risky. The greater the amount of interest and principal (or sinking fund) payments a firm must make in a given period, the higher the operating profits required to cover these charges. If a firm fails to generate sufficient revenues to cover operating charges, it may be forced into bankruptcy.

As a firm's financial structure shifts toward suppliers of funds recognize a more highly levered position the increased financial risk associated with the firm. They compensate for this increased risk by charging higher rates of interest or requiring greater returns, In short they react in much the same way as they would to increasing business risks. Frequently the funds supplied to a firm by lenders will change its financial structure, and the charge for the funds will be based on the changed financial structure. In the analysis of the cost of capital in this chapter, however, the firm's financial structure is assumed to remain fixed. This assumption is necessary in order to isolate the costs of the various forms of financing. If the firm's capital structure were not held constant, it would be quite difficult to find its cost of capital, since the selection of a given source of financing would change the costs of alternate sources of financing. The assumption of a constant capital structure implies that when a firm raises funds to finance a given project these funds are raised in the same proportions as the firm exists financing. The awkwardness of this assumption is obvious since in reality a firm raises funds in lumps, .it does not raise a mixture of small amounts of various types of funds.. For example, in order to raise Rs. l million a firm may sell bonds, preferred stock, or common stock in the amount of Rs. l million; or, it may sell Rs. 400,000 worth of bonds, Rs. 100,000 worth of preferred stock, and Rs. 500,000 worth of common stock. Most firms will use the former strategy, but our analysis of cost of capital is based on the assumption that the firm will follow the latter strategy. More sophisticated approaches for measuring the cost of capital when a firm's capital structure is changing rare available.

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If a firm accepts a project that is considerably more risky than average, suppliers of funds to the firm are quite likely to raise the cost of funds. This is because of the decreased probability of the fund suppliers. Receiving the expected returns on their money. A long-term lender will charge higher interest on loans if the probability of receiving periodic interest from the firm and ultimately regaining the principal is decreased. Common stockholders will require the firm to increase earnings as compensation for increases in the uncertainty of receiving dividend payments or ably appreciation in the value of their stock. In analyzing the cost of capital it is assumed that the business risk of the firm remain sun changed (i.e., that the projects accepted do not affect the variability of the firm. sales revenues). This assumption eliminates the need to consider changes in the cost of specific sources of financing resulting from changes in business risk. The definition of the cost of capital developed in this chapter is valid only for projects that do not change the firm's business risk.

Financial risk is affected by the mixture of long-term financing, or the capital structure, of the firm. Firms with high levels of long-term debt in proportion to their equity are more risky than firms maintaining lower ratios of long-term debt to equity. It is the contractual fixed-payment obligations associated with debt financing that make a firm financially risky. The greater the amount of interest and principal (or sinking fund) payments a firm must make in a given period, the higher the operating profits required to cover these charges. If a firm fails to generate sufficient revenues to cover operating charges, it may be forced into bankruptcy.

As a firm's financial structure shifts toward suppliers of funds recognize a more highly levered position the increased financial risk associated with the firm. They compensate for this increased risk by charging higher rates of interest or requiring greater returns, In short they react in much the same way as they would to increasing business risks. Frequently the funds supplied to a firm by lenders will change its financial structure, and the charge for the

funds will be based on the changed financial structure. In the analysis of the cost of capital in this chapter, however, the firms financial structure is assumed to remain fixed. This assumption is necessary in order to isolate the costs of the various forms of financing. If the firms capital structure were not held constant, it would be quite difficult to find its cost of capital, since the selection of a given source of financing would change the costs of alternate sources of financing. The assumption of a constant capital structure implies that when a firm raises funds to finance a given project these funds are raised in the same proportions as the firms existing financing. The awkwardness of this assumption is obvious since in reality a firm raises funds in .lumps, .it does not raise a mixture of small amounts of various types of funds. For example, in order to raise Rs. l million a firm may sell bonds, preferred stock, or common stock in the amount of Rs. l million; or, it may sell Rs. 400,000 worth of bonds, Rs. 100,000 worth of preferred stock, and Rs. 500,000 worth of common stock. Most firms will use the former strategy, but our analysis of cost of capital is based on the assumption that the firm will follow the latter strategy. More sophisticated approaches for measuring the cost of capital when a firms capital structure is changing rare available.

POSSIBLE QUESTIONS

PART – B

1. Define Capital Budgeting
2. Write any four examples for current liabilities?
3. Give the meaning of Internal rate of return?
4. What are the kinds of capital budgeting decisions?
5. Write the formula for Profitability Index?

PART – C

1. Under what circumstances may NPV and IRR give conflicting recommendations?
2. " Capital Budgeting is long – term planning for making and financing proposed capital outlays" – Explain.

3. For each of the following projects compute (i) payback period, (ii) Post-back profitability and (iii) Post – back profitability Index.

S.No	Particulars	Amount(Rs.)
1	Initial Outlay	50,000
	Annual cash inflow (After tax but before depreciation)	10,000
	Estimated Life	8 Years
2	Initial Outlay	50,000
	Annual cash inflow (After tax but before depreciation)	
	First three years	15,000
	Next five years	5,000
	Estimated Life	8 years
	Solvage	8,000

4. Determine the various classification of cost with suitable example?
5. Explain the mechanics of calculating present value of cash flows giving suitable examples?
6. Define the term Capital Budgeting and explain the various methods of capital budgeting.
7. Explain the nature and concept of capital budgeting?
8. From the following information calculate the Net Present Value of the two projects and suggest which of the two projects should be accepted assuming a discount rate of 10%.

Particulars	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 taxes (Cash flows) are as follows:

Projects	Year 1	Year 2	Year 3	Year 4	Year 5
X	5,000	10,000	10,000	3,000	2,000
Y	20,000	10,000	5,000	3,000	2,000
Present Value @ 10%	0.909	0.826	0.751	0.683	0.621

9. Under what circumstances may NPV and IRR give conflicting recommendations?

10. Calculate the pay-back periods of the following projects each requiring a cash outlay of Rs. 1,00,000. Suggest which projects are acceptable if the standard pay-back period is 5 years.

Year	Cash Inflows		
	Project A	Project B	Project C
1	30,000	30,000	10,000
2	30,000	40,000	20,000
3	30,000	20,000	30,000
4	30,000	10,000	40,000
5	30,000	5,000	-

S.No	Question	Option A	Option B	Option C	Option D	Answer
1	Capital budgeting is also known as _____.	Cost of capital	Capital structure	Investment decision making	Dividend decision	Investment decision making
2	Capital Budgeting is a part of:	Investment decision	Capital structure	Marketing management	working capital management	Investment decision
3	_____ is also known as capital expenditure decision.	Capital budgeting	Capital structure	Investment decision making	Dividend decision	Capital budgeting
4	_____ is also known as analysis of capital expenditure.	Cost of capital	Capital budgeting	Investment decision making	Dividend decision	Capital budgeting
5	_____is the process of making investment decision in capital expenditure	Working capital management	Cost of capital	Capital structure	Capital budgeting	Capital budgeting
6	Capital Budgeting Decisions are:	Recoverable	Irreversible	reversible	Unimportant	Irreversible
7	_____method is also called as pay out period method	Accounting rate of return	Net present ratio	Rate of return	Pay back period	Pay back period
8	_____ Method is also called as pay off period method.	Pay back period	Net present ratio	Accounting rate of return	Rate of return	Pay back period
9	Pay back period =	Cash inflow/cash outflow	Profit/cash outflow	EBIT/EBT	Initial Investment/annual cash inflow	Initial Investment/annual cash inflow
10	A project cost Rs 50000 and yields an annual cash inflow of Rs10000 for 7 yrs. Calculate the pay back period.	6 yrs	5 yrs	5 1/2 yrs	7 yrs	5 yrs
11	A project costs Rs100000 and yield an annual cash inflow of Rs 20000 for 8 yrs. Calculate the pay back period..	5 yrs	4 yrs	7 yrs	6 yrs	5 yrs
12	_____ is also known as accounting rate of return	Pay back period method	Average Rate of return method	NPV method	Internal rate of return method	Average Rate of return method
13	The _____ method taken into account the profitability and also the time value of money	NPV	Pay back period	Accounting rate of return	Rate of return	NPV
14	The discounted cash flow method take into account the_____	Profitability	Time value of money	Profitability and time value of money	Cash inflow	Profitability and time value of money
15	NPV =	Net present valuation	Net prescribed value	Net present value	Net profit value	Net present value
16	_____ method is also known as time adjusted rate of return.	Pay back period	Average rate of return	NPV	Internal rate of return	Internal rate of return
17	Which of the following is not incorporated in Capital Budgeting?	Time value of money	rate of Cash discount	Required rate of return	tax effect	Rate of Cash discount

18	Which of the following is not a capital budgeting decision?	Stock level	Expansion Programme	merger	Replacement of asset	Stock level
19	A sound Capital Budgeting technique is based on:	Accounting profit	cash flows	interest on Borrowings	last dividend paid	Cash flows
20	_____method is also known as trial and error yield method.	Internal rate of return	Average rate of return	NPV	Pay back period	Internal rate of return
21	IRR =	Investment realized return	Internal rate of return	Internal realized return	Investment rate of return	Internal rate of return
22	The _____ can be defined as that rate of discount at which present value of cash inflow is equal to the present value of cash outflow.	NPV	Accounting rate of return	Profitability index	Internal rate of return	Internal rate of return
23	_____ method is also called as benefit-cost ratio	Internal rate of return	NPV	Pay back period	Profitability index	Profitability index
24	_____ method reveals the relationship between present value of cash inflow and present value of cash outflow.	pay back period	average rate of return	accounting rate of return	profitability index	profitability index
25	Profitability index =	present value of cash outflow/ present value of cash inflow	cash inflow /cash outflow	cash outflow/ cash inflow	present value of cash inflow/ present value of cash outflow	present value of cash inflow/ present value of cash outflow
26	In calculating pay-back period method, earnings means	Profit before depreciation and after taxes	Profit after depreciation	Profit before tax	Profit after depreciation and taxes	Profit before depreciation and after taxes
27	The_____ is the minimum rate of return expected by an investor	Capital Structure	Cost of Capital	Capital Budgeting	Working Capital	Cost of Capital
28	_____ is the weighted average cost of various source of finance used by a firm	Capital Structure	Capital Budgeting	Cost of Capital	Working Capital	Cost of Capital
29	Higher the risk involved in a firm higher is the _____	Capital Structure	Capital Budgeting	Working Capital	Cost of Capital	Cost of Capital
30	_____ is the minimum required rate of earnings or the cut-off rate of capital expenditure	Cost of Capital	Capital Budgeting	Working Capital	Capital Structure	Cost of Capital
31	_____ for a firm may be defined as the cost of obtaining funds	Cost of Capital	Capital Budgeting	Working Capital	Capital Structure	Cost of Capital
32	Cost of Capital refers to:	Required rate of return	Floation cost	dividend	borrowing	Required rate of return
33	_____ concept an be used as a basis for evaluating the performance of the firm	Capital Structure	Cost of Capital	Capital Budgeting	Working Capital	Cost of Capital

34	_____ are book cost which are related to the past	Future Cost	Explicit Cost	Historical Cost	Implicit Cost	Historical Cost
35	_____ are estimated costs for the future	Future Cost	Explicit Cost	Historical Cost	Implicit Cost	Future Cost
36	_____ refers to the cost of specific source of capital	Explicit Cost	Specific Cost	Historical Cost	Implicit Cost	Specific Cost
37	_____ is combined cost of various source of Capital	Future Cost	Explicit Cost	Composite cost	Historical Cost	Composite cost
38	Which of the following sources of funds has an Implicit Cost of Capital?	equity capital	Preference capital	Debenture	Retained Earnings	Retained Earnings
39	_____ is the weighted average cost of Capital	Future Cost	Explicit Cost	Historical Cost	Composite cost	Composite cost
40	Which of the following has the highest cost of capital?	Equity shares	bonds	loans	Preference shares	Equity shares
41	In Capital structure decision, the _____ should be given consideration	Cost of Debt	Cost of Preference Capital	Cost of Equity Capital	Weighted average cost of Capital	Weighted average cost of Capital
42	_____ is the discount rate which equates the present value of cash inflow with the present value of cash out flow	Explicit Cost	Specific Cost	Historical Cost	Implicit Cost	Explicit Cost
43	_____ also known as the opportunity cost	Implicit Cost	Specific Cost	Historical Cost	Implicit Cost	Implicit Cost
44	_____ is the Cost of the opportunity foregone in order to take up a particular project	Implicit Cost	Specific Cost	Historical Cost	Implicit Cost	Implicit Cost
45	An _____ refers to the combined cost of Various source of Capital	Explicit Cost	Specific Cost	Average Cost	Implicit Cost	Average Cost
46	Weighted Average Cost of Capital is generally denoted by:	k_w	k_A	k_o	k_{wc}	k_w
47	_____ refers to the average cost of Capital	Marginal Cost of Capital	Specific Cost	Historical Cost	Implicit Cost	Marginal Cost of Capital
48	_____refers to the average cost of capital which has to be incurred to obtain additional funds required by a firm	Explicit Cost	Specific Cost	Marginal Cost	Implicit Cost	Marginal Cost
49	---------- is the rate of interest payable on Debt	Cost of Debt	Cost of Equity	Cost of Preference Capital	Marginal Cost	Cost of Debt
50	Cost of Debt = _____	Interest	Interest/ Net Proceeds	Investment/Interest	Earnings/ Net Interest	Interest/ Net Proceeds
51	Which of the following cost of capital require tax adjustment?	Cost of Preference Capital	Cost of Equity	Cost of debt	Cost of Retained Earnings	Cost of debt
52	Which is the most expensive source of funds?	New Preference	New Equity shares	New Debt	Retained Earnings	New Equity

		Capital				shares
53	Cost of Preference Capital = _____	Earnings	Dividend	Dividend / Net Proceeds	EBIT / Net Proceeds	Dividend / Net Proceeds
54	Cost of Capital for Bonds and Debentures is calculated on:	before tax basis	after tax basis	Risk free rate of interest	both a and b	After Tax basis
55	Firm's Cost of Capital is the average cost of:	All sources	All borrowings	Share capital	Bonds and debentures	All sources
56	Cost of capital may be defined as:	Weighted Average cost of all debts	Rate of Return expected by Equity Shareholders	Average IRR of the Projects of the firm	Minimum Rate of Return that the firm should earn.	Minimum Rate of Return that the firm should earn.
57	. Minimum Rate of Return that a firm must earn in order to satisfy its investors, is also known as	Weighted Average cost of capital	Average Return on Investment	Average cost of borrowing	Net profit ratio	Weighted Average cost of capital
58	Dividend Yield method = _____	Dividend / Net Proceeds	Interest / Net Proceeds	Dividend / Market Price	EBIT / 100	Dividend / Market Price
59	Earnings Yield method = _____	Dividend / Net Proceed	EPS / Market Price	Dividend / Mkt. Price	EBIT /100	EPS / Market Price
60	_____ is also known as trading on equity	Operating Leverage	Composite Leverage	Financial Leverage	Working Capital Leverage	Financial Leverage

UNIT III : Financing Decisions - Cost of Capital and Financing Decision - Sources of Long Term Financing - Estimation of Components of Cost of Capital - Methods for Calculating Cost of Equity Capital - Cost of Retained Earnings - Cost of Debt and Cost of Preference Capital - Weighted Average Cost of Capital (WACC) and Marginal Cost of Capital - Capital Structure - Theories of Capital Structure (Net Income, Net Operating Income, MM Hypothesis, Traditional Approach) - Operating and Financial Leverage - Determinants of Capital Structure

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.

Cost of Capital is the rate that must be earned in order to satisfy the required rate of return of the firm's investors. It can also be defined as the rate of return on investments at which the price of a firm's equity share will remain unchanged. Each type of capital used by the firm (debt, preference shares and equity) should be incorporated into the cost of capital, with the relative importance of a particular source being based on the percentage of the financing provided by each source of capital. Using of the cost a single source of capital as the hurdle rate is tempting to management, particularly when an investment is financed entirely by debt. However, doing so is a mistake in logic and can cause problems.

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 marketplace".
- 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 consist 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.

$$K = rj + b + f.$$

Where,

K = Cost of capital.

rj = 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.

❖ FUTURE COST AND HISTORICAL COST

Future cost of capital refers to the expected cost of funds to be raised to finance aproject. In contrast, historical cost represents cost incurred in the past in acquiring funds. In financial decisions future cost of capital is relatively more relevant and significant. While evaluating viability of a project, the finance manager compares expected earnings from the project with expected cost of funds to finance the project .Like wise, in taking financing decisions, attempt of the finance manager is to minimize future cost of capital and not the costs already defrayed. This does not imply that historical cost is not relevant at all. In fact, it may serve as a guideline in predicting future costs and in evaluating the past performance of the company.

❖ COMPONENT COST AND COMPOSITE COST

A company may contemplate to raise desired amount of funds by means of different sources including debentures, preferred stock, and common stocks. These sources constitute components of funds. Each of these components of funds involves cost to the company. Cost of each component of funds is designated as component or specific cost of capital. When these component costs are combined to determine the overall cost of capital, it is regarded as composite cost of capital, combined cost of capital or weighted cost of capital, the composite cost of capital, thus, represents the average of the costs of each sources of funds employed by the company. For capital budgeting decision, composite cost of capital is relatively more relevant even though the firm may finance one proposal with only one source of funds and another

proposal with another source. This is for the fact that it is the overall mix of financing over time which is materially significant in valuing firm as an ongoing overall entity.

❖ AVERAGE COST AND MARGINAL COST

Average cast represents the weighted average of the costs of each source of funds employed by the enterprise, the weights being the relative share of each source of funds in the capita! structure. Marginal cost of capital, by contrast refers to incremental cost associated with new funds raised by the firm. Average cost is the average of the component marginal costs, while the marginal cost is the specific concept used to comprise additional cost of raising new funds. In financial decisions the marginal cost concept is most significant.

❖ EXPLICIT COST AND IMPLICIT COST

Cost of capital can be either explicit cost or implicit. The explicit cost of any source of capital is the discount rate that equates the present value of the cash inflows that are incremental to the taking of the financing opportunity with the present value of its incremental cash outlay. Thus, the explicit cost of capital is the internal rate of return of the cash flows of financing opportunity. A series of each flows are associated with a method of financing. At the time of acquisition of capital, cash inflow occurs followed by the subsequent cash outflows in the form, of interest payment, repayment of principal money or payment of dividends. Thus, if a company issues 10 per cent perpetual debentures worth Rs. 10,00,000, there will be cash inflow to the firm of the order of 10,00,00. This will be followed by the annual cash outflow of Rs. 1,00,000. The rate of discount, that equates the present value of cash inflows with the present value of cash outflows, would be the explicit cost of capital.

The technique of determination of the explicit cost of capital is similar to the one used to ascertain IRR, with one difference, in the case of computation of the IRR, the cash outflows occur at the beginning followed by subsequent cash inflows while in the computation of the IRR, the cash outflows occur at the beginning followed by subsequent cash inflows, while in the computation of explicit cost of capital, cash inflow takes place at the beginning followed by a series of cash inflow subsequently.

The explicit cost of an interest bearing debt will be the discount rate that equates the present value of the contractual future payments of interest and principal with the net amount of cash received today. The explicit cost of capital of a gift is minus 100 percent, since no cash outflow will occur in future. Similarly, explicit cost of retained earnings which involve no future flows to or from the firm is minus 100 per cent. This should not tempt one to infer that the retained earnings is cost free. As we shall discuss in the subsequent paragraphs, retained earnings do cost the firm. The cost of retained earnings is the opportunity cost of earning on investment elsewhere or in the company itself. Opportunity cost is technically termed as implicit cost of capital. It is the rate of return on other investments available to the firm or the shareholders in addition to that currently being considered. Thus, the implicit cost of capital may be defined as the rate of return associated with the best investment opportunity for the firm and its Shareholders that will be foregone if the project presently under consideration by the firm were accepted. In this connection it may be mentioned that explicit costs arise when the firm raises funds for financing the project. It is in this sense that retained earnings have implicit cost. Other forms of capital also have implicit costs once they are invested, Thus in a sense, explicit costs may also be viewed as opportunity costs. This implies that a project should be rejected if it has a negative present value when its cash flows are discounted by the explicit cost of capital.

It is clear thus that the cost of capital is the rate of return a firm must earn on its investments for the market value of the firm to remain unchanged. Acceptance of projects with a rate of return below the cost of capital will decrease the value of the firm; acceptance of projects with a rate of return above the cost of capital will increase the value of the firm. The objective of the financial manager is to maximize the wealth of the firm's owners. Using the cost of capital as a basis for accepting or rejecting investments is consistent with this goal.

IMPORTANCE OF COST OF CAPITAL

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 (Ke) 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

$$\mathbf{Ke = D/NP \ \ or \ \ D/MP}$$

Where,

Ke = Cost of equity capital

D = Expected Dividend per share

Np = Net proceeds of an equity share.

MP= Market price per share

Exercise 1

A company issues 10,000 equity shares of Rs. 100 each at a premium of 10%. The company has been paying 20% 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. 160?

Solution

Ke = D/NP

= 20/110*100

= 18.18%

If the market price of equity share is Rs.160

Ke = D/MP

= 20/160*100

= 12.5%

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:

$$\mathbf{Ke = \frac{D}{NP} + G}$$

Where,

Ke = Cost of equity capital

D = Dividend per equity share

g = Growth in expected dividend

Np = 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 floatation 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. 150. Calculate the cost of existing equity share capital

Solution

a) **Ke = D/NP+G**
=10/100-5+5%
=15.53%
b) **Ke = D/MP+G**
=10/150+5%
=11.67%

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.

Ke = EPS/NP

Where,

Ke = Cost of equity capital

EPS = Earnings per share

Np = Net proceeds of an equity share

Exercise 4

A firm is considering an expenditure of Rs. 60 lakhs for expanding its operations.

The relevant information is as follows:

Number of existing equity shares =10 lakhs

Market value of existing share =Rs.60

Net earnings =Rs.90 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. 52 per share and the costs of new issue will be Rs. 2 per share.

Solution

Cost of existing equity share capital:

Ke = EPS/MP

Earnings Per Share (EPS)

= RS.90/10

=RS.9

Ke = 9/60*100

= 15%

Cost of New equity capital:

Ke = EPS/NP

= 9/52-2*100

= 9/50*100

= 18%

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.

This method of computing cost of equity share capital is based upon the following assumptions:

1. The firm will remain in the same risk class over the period
2. The shareholders expectation are based upon the past realised yield
3. The market price of shares does not change significantly

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.

$$\mathbf{K_{db} = I/P}$$

Where,

$\mathbf{K_{db}}$ = Cost of debt capital

P = Principal

I = 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.

$$K_{db} = I/NP$$

Where,

K_{db} = Cost of debt capital

I = Annual interest payable

Np = Net proceeds of debenture

The after tax cost of debt may be calculated as

$$K_{db} = I/NP (1-t)$$

Exercise 5

(a) 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) 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.

(c) 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.

(d) B Ltd. issues Rs. 1,00,000, 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.

(a) $\mathbf{K_{db}}$ **= I/NP (1-t)**

= 8000/100000(1-.5)

=0.08 (0.5)

=0.04

= 4%

(b) $\mathbf{K_{db}}$ **= I/NP (1-t)**

= 8000/110000(1-.6)

= 0.029

= 2.9%

(c) $\mathbf{K_{db}}$ **= I/NP (1-t)**

= 8000/95000(1-.6)

=0.084 (.4)

= 0.033

=3.36%

(d) $\mathbf{K_{db}}$ **= I/NP (1-t)**

= 9000/108000(1-.5)

=0.833 (.5)

=0.416

=4.16%

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.

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

Where,

I = Annual interest payable P = Par value of debt

Np = Net proceeds of the debenture n = Number of years to maturity

Kdb = Cost of debt before tax.

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

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

Where,

Kda = Cost of debt after tax

Kdb = 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 8years. Calculate before tax and after tax. Cost of debt assuring a tax rate of 50%.

Solution

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

$$= \frac{2,00,000+1/8(20,\,00,000-18,70,000)}{\frac{1}{2}(20,\,00,000+18,70,000)}$$

(NP=Rs.20,00,000 -100,000 (discount)-50,000 cost of Floatation)

$$= \frac{2,00,000+16250}{1935000}$$

$$= \frac{216250}{1935000}$$

= 0.1117

=11.17%

After –Tax cost of debt, $K_{da}=K_{db}(1-t)$

= 11.17 (1-.5)

= 11.17*.5

=5.585

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:

$$K_p=D/NP$$

Where,

K_p = Cost of preference share

Dp = Fixed preference dividend

Np = Net proceeds of an equity share

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

$$K_{pr} = \frac{D+MP-NP/n}{½ (MV+NP)}$$

Where,

Kp = Cost of preference share

Dp= Fixed preference share

P = Par value of debt

Np = Net proceeds of the preference share

n = Number of maturity period.

Exercise 7

XYZ Ltd. issues 10,000, 10% preference shares of Rs. 100 each. Cost of issue is Rs. 2 per share. Calculate cost of preference capital if these shares are issued (a) at par, (b) at a premium of 10% and (c) of a debentures of 5%.

Solution

Cost of Preference capital, K_P = D/NP

(a) **Kp** = 1,00,000/10,00,000-20,000*100
=10.2%

(b) **Kp** =1,00,000/10,00,000+1,00,000-20,000*100
=9.26%

(c) **Kp** =1,00,000/10,00,000-50,000-20,000*100 = 10.75%

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 subscripted issue of additional shares, which is measured by the cost of equity capital.

$$K_r=D/Np+G$$

K_r=Cost of retained earnings

D=Expected Dividend

Np=Net Proceeds of share issue

G= Rate of growth

Cost of retained earnings can be calculated with the help of the following formula:

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

Where,

Kr=Cost of retained earnings

Ke=Cost of equity

t=Tax rate

b=Brokerage cost

Exercise 10

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

Solution

Cost of Retained Earnings, Kr = Ke (1 – t) (1 – b)

Kr = 10% (1–0.5) (1–0.02)

= 10%×0.5×0.98

= 4.9%

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 firms capital structure.

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

(a) Assigning weights to specific costs.

(b) Multiplying the cost of each of the sources by the appropriate weights.

(c) Dividing the total weighted cost by the total weights.

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

$$Ko = KdWd + KpWp + Ke\ We + Kr\ Wr$$

Where,

Ko = Overall cost of capital

Kd = Cost of debt

Kp = Cost of preference share

Ke = Cost of equity

Kr = Cost of retained earnings

Wd= Percentage of debt of total capital

Wp = Percentage of preference share to total capital

We = Percentage of equity to total capital

Wr = Percentage of retained earnings

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

$$\mathbf{Kw} = \frac{\sum \mathbf{XW}}{\sum \mathbf{W}}$$

Where,

K_w = Weighted average cost of capital

X = Cost of specific sources of finance

W = Weight, proportion of specific sources of finance

The key factor affecting financing Costs

Since the cost of capital is measured under the assumption that both the firm's asset structure and its capital (financial) structure are fixed, the only factor that affects the various specific costs of financing is the supply and demand forces operating in the market for long-term funds. In other words, as a firm raises long-term funds at different points in time, the only factor affecting their cost is the riskless cost of the particular type of financing.

Since the firm's business and financial risk are assumed to be constant, the changing cost of each type of capital, j, over time should be affected only by changes in the supply of and demand for each type of funds, j. The cost of each type of capital to a given firm compared to the cost to another firm (i.e., the inter firm comparison) can differ because of differences in the degree of business and financial risk associated with each firm, since the riskless cost of the given type of funds remains constant. Different business and financial risk premiums are associated. With different levels of business and financial risk. These premiums are a function of the business risk, b, and financial risk, f, of a firm. For intra firm (i.e., time series) comparisons, the only differentiating factor is the cost of the type of financing; since business and financial risk are assumed to be constant an example may help to clarify these points.

Factors determining the cost of capital

There are several factors that impact the cost of capital of any company. This would mean that the cost of capital of any two companies would not be equal. Rightly so as these two companies would not carry the same risk.

General economic conditions:

These include the demand for and supply of capital within the economy, and the level of expected inflation. These are reflected in the riskless rate of return and is common to most of the companies.

Market conditions:

The security may not be readily marketable when the investor wants to sell; or even if a continuous demand for the security does exist, the pricemay vary significantly. This is company specific.

A firm's operating and financing decisions: Risk also results from the decisions made within the company. This risk is generally divided into two classes:

- Business risk is the variability in returns on assets and is affected by the company's investment decisions.
- Financial risk is the increased variability in returns to the common stockholders as a result of using debt and preferred stock.

Amount of financing required:

The last factor determining the company's cost of funds is the amount of financing required, where the cost of capital increases as the financing requirements become larger. This increase may be attributable to one of the two factors:

As increasingly larger public issues are increasingly floated in the market, additional flotation costs (costs of issuing the security) and under pricing will affect the percentage cost of the funds to the firm.

As management approaches the market for large amounts of capital relative to the firm's size, the investors' required rate of return may rise. Suppliers of capital become hesitant to grant relatively large amounts of funds without evidence of management's capability to absorb this capital into the business.

Generally, as the level of risk rises, a larger risk premium must be earned to satisfy company's investors. This, when added to the risk-free rate, equals the firm's cost of capital.

LEVERAGE

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 (Ko). 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.

- Financial Leverage
- Operating Leverage
- Composite 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 = 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 = Percentage change in profits / Percentage change in sales

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 overall 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 = 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 aresult of percentage change in earnings before interest and tax (EBIT). This can be calculatedby the following formula

DFL= Percentage Change in EPS / Percentage Change in EBIT

Or

DFL = EBIT/EBT(or,EBIT-I)

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 = EBIT /EPS

Where,

FL = Financial Leverage

EBIT = Earning Before Interest and Tax

EPS = Earning Per share.

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.

DISTINGUISH BETWEEN OPERATING LEVERAGE AND 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 ➢ 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 profit of the company. ➢ It represents the relationship between EBIT. and EPS. ➢ Financial leverage can be calculated by ➢ 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

COMBINED LEVERAGE

When the company uses both financial and operating leverage to magnification of any change in sales into a larger relative changes in earning per share. Combined leverage is also called as composite leverage or total leverage. Combined leverage express the relationship between the revenue in the account of sales and the taxable income.

Combined leverage can be calculated with the help of the following formulas:

CL = OL × FL

Where,

CL = Combined Leverage

OL = Operating Leverage

FL = Financial Leverage

Degree of Combined Leverage

The percentage change in a firm's earning per share (EPS) results from one percent change in sales. This is also equal to the firm's degree of operating leverage (DOL) times its degree of financial leverage (DFL) at a particular level of sales.

Degree of contributed coverage = Percentage change in EPS/ Percentage change in sales

Exercise 4

Kumar Company has sales of Rs. 5, 00,000. Variable cost of Rs. 3,00,,000 and fixed cost of Rs. 1,00,000 and long term loans of Rs.4,00,000 at 10% rate of interest. Calculate combined leverage.

Solution

(i) Operating Leverage = Contribution / Earning before interest and tax

=Rs.2,00,000 /1,00,000

=2

(ii) Financial Leverage = Sales-Variable cost-Fixed cost

Sales-Variable cost-Fixed cost – Interest

= Rs.5,00,000-Rs.3,00,000-Rs.1,00,000

Rs.5,00,000-Rs.3,00,000-Rs.1,00,000-Rs.40,000

= Rs.1,00,000/Rs.60,000

=5/3

(iii) Combined Leverage = Operating Leverage * Financial Leverage

=2/1*5/3

=10/3

WORKING CAPITAL LEVERAGE

One of the new models of leverage is working capital leverage which is used to locate the investment in working capital or current assets in the company. Working capital leverage measures the sensitivity of return in investment of charges in the level of current assets.

WCL = Percentage Change in ROI

_____

Percentage Change is WC

If the earnings are not affected by the changes in current assets, the working capitalleverage can be calculated with the help of the following formula.

$$WCL = \frac{CA}{TA \pm DCA}$$

Where,

CA = Current Assets

TA = Total Assets

DCA = Changes in the level of Current Assets

Exercise 7

The following information is available for two companies

	A Ltd	B Ltd
Fixed Assests	Rs.2,00,000	8,00,000
Current Assets	Rs.8,00,000	Rs.2,00,000
Total Assets	Rs.10,00,000	10,00,000
Earning Before Interest and Tax	Rs.1,00,000	1,00,000

You are required to compare the sensitivity earning of the two companies for a 25% change in the level of their current assets.

Solution:

WCL (A.Ltd) = 8,00,000

———————

10,00,000-2,00,000

= 1.0

WCL (B.Ltd) = 2,00,000

———————

10,00,000-50,000

=0.21

WCL of the two companies, we can say that the sensitivity of earnings for changes in the level of current assets of A.Ltd is greater than that of B.Ltd.

POSSIBLE QUESTIONS

PART – B

1. Mr. X has to receive Rs. 2,000 per year for 5 years. Calculate the present value of the annuity assuming that he can earn interest on his investment at 10% p.a. (Annuity value for 5 years @ 10% = 3.791)
2. X Ltd issues Rs.50,000 8% debentures at a premium of 10%. The tax rate is applicable to the company is 60%. Compute the cost of debt capital.
3. Define Business Finance Differentiate the Explicit cost and Implicit cost.
4. A firm is considering an expenditure of Rs.60 Lakhs for expanding its operation.
   a. No. of existing equity shares =10 lakhs
   b. Market value of existing share =Rs.60
   c. Net Earnings =Rs.90 lakhs

   Compute the cost of existing Equity Share Capital.
5. What do you mean by Retained Earnings?

PART – C

1. State how would you determine the weighted average cost of capital of a firm?
2. Compute the Cost of Debt Capital for the following:
   (i) X Ltd. issues Rs. 60,000 8% debentures at par. The tax rate applicable to the company is 50%.
   (ii) Y Ltd. issues Rs. 60,000 8% debentures at a premium of 10%. The tax rate applicable to the company is 60%.
   (iii) A Ltd. issues Rs. 60,000 8% debentures at a discount of 5%. The tax rate applicable to the company is 50%.
   (iv) B Ltd. issues Rs. 1,00,000 9% debentures at a premium of 10%. The costs of floatation are 2%. The tax rate applicable to the company is 60%.
3. Determine the various classification of cost with suitable example?
4. A firm has the following capital structure and after-tax costs for the differenct sources of funds used :

Particulars	Amount (Rs.)	Proportion (%)	After-tax cost
Debt	15,00,000	25	5
Preference Shares	12,00,000	20	10
Equity Shares	18,00,000	30	12
Retained Earnings	15,00,000	25	11
Total	60,00,000	100	

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

5. Briefly explain the computation of cost of capital?

6. (i) A Company issues 1,000 7% Preference Shares of Rs. 100 each at a premium of 10 % redeemable after 5 years at par. Compute the Cost of preference capital?

(ii) A Company issues 5,000 8% Preference Shares of Rs. 100 each at a premium of 10 % redeemable after 5 years at par. Compute the Cost of preference capital?

7. Briefly determine the features of Preference shares and Equity shares?

8. Describe the various classification of cost with suitable example?

9. State how would you determine the weighted average cost of capital of a firm?

10. Compute the Cost of Debt Capital for the following:

(i) X Ltd. issues Rs. 1,00,000 5% debentures at par. The tax rate applicable to the company is 50%.

(ii) Y Ltd. issues Rs. 60,000 8% debentures at a premium of 10%. The tax rate applicable to the company is 50%.

(iii) A Ltd. issues Rs. 40,000 8% debentures at a discount of 5%. The tax rate applicable to the company is 50%.

(iv) B Ltd. issues Rs. 1,00,000 7% debentures at a premium of 10%. The costs of floatation are 2%. The tax rate applicable to the company is 50%.

S. No	QUESTIONS	OPTION A	OPTION B	OPTION C	OPTION D	ANSWER
1.	Degree of Financial Leverage = _____	EBIT / EBT	Contribution / Profit	Contribution / Sales	EBT / EBIT	EBIT / EBT
2.	Operating Leverage = _____	EBIT / EBT	Contribution / Operating Profit	Contribution / Sales	EBT / EBIT	Contribution / Operating Profit
3.	Operating Profit = _____	Sales – Total Cost	Contribution / Profit	EBT / EBIT	Contribution / Sales	Sales – Total Cost
4.	Operating leverage helps in analysis of:	Business risk	Financial Risk	Production Risk	Credit Risk	Business risk
5.	Which of the following is studied with the help of financial leverage?	Business risk	Financial Risk	Production Risk	Credit Risk	Financial Risk
6.	Combined Leverage is obtained from OL and FL by their:	Addition	Substraction	Multiplication	Division	Multiplication
7.	Contribution = _____	Sales – Total Cost	Sales – Fixed Cost	Sales – Explicit Cost	Sales – Variable Cost	Sales – Variable Cost
8.	A Company is highly geared when	It rises finance by only equity capital	More debentures are issued than preference shares	More debentures are issued than equity capital	More preference shares are issued than equity capital	More debentures are issued than equity capital

9.	Capital gearing is the ratio between	Equity capital and debenture	Equity capital and preference capital	Equity capital and fixed interest securities	Debentures and preference capital	Equity capital and fixed interest securities
10.	Financial Leverage measures relationship between	EBIT and EBT	EBIT and EPS	Sales and EBT	Sales and EPS	EBIT and EBT
11.	Trading on equity means	Trading in equity share of small face value	A relatively smaller equity capital than borrowed capital	Transaction between the company and its minority share holders	Restricted transaction on equity shares and stock exchange	A relatively smaller equity capital than borrowed capital
12.	Leverage implies that	The return on equity share capital exceeds the interest on borrowed capital	Return on borrowed capital	Return on equity capital	The return on borrowed capital exceeds the return on equity share capital	The return on equity share capital exceeds the interest on borrowed capital
13.	High degree of financial leverage means:	High debt	Lower debt	Equal debt and equity	High debt or low debt	High debt
14.	Operating leverage arises because of:	Fixed cost of production	Fixed Interest	variable cost	Sales	Fixed cost of production
15.	Financial Leverage arises because of:	Fixed cost of production	Interest cost	variable cost	Sales	Interest cost
16.	Which combination is generally good for firms	High OL, High FL	Low OL, Low FL	High FL , Low OL	High OL and Low FL	High OL and Low FL

17.	Financial Leverage is zero if:	EBIT=Zero	EBIT= 1	EPS=1	EPS=0	EBIT=Zero
18.	Business risk can be measured by:	Openrating Leverage	financial leverage	Combined Leverage	Operating or Financial leverage	Openrating Leverage
19.	Financial risk can be measured by:	Openrating Leverage	financial leverage	Combined Leverage	Operating or Financial leverage	financial leverage
20.	which is not included under type of leverage	Administrative leverage	financial leverage	Operating leverage	Combined leverage	Administrative leverage
21.	If interest expenses for a firm rise firm has taken on more	Openrating Leverage	financial leverage	Combined Leverage	fixed assets	financial leverage
22.	Combined leverage is a percentage change in relationship between sales and----------	operating income	earning per share	Operating leverage	break even point	earning per share
23.	contribution divided by operating profit is the formula of	Financial Leverage	Operating leverage	Administrative leverage	Combined leverage	Operating leverage
24.	Which of the following is correct?	CL= OL + FL	CL= OL - FL	CL= OL * FL	CL= OL/FL	CL= OL * FL
25.	Higher FL is related the use of:	Higher Equity	Higher Debt	Lower Debt	Lower Equity	Higher Debt

26.	Higher OL is related to the use of higher:	debt capital	Equity	Fixed cost	Variable cost	Fixed cost
27.	In order to calculate EPS, Profit after Tax and Preference Dividend is divided by:	MP of Equity Shares	No. of Equity Shares	Equity share capital	Face value of Equity shares	No. of Equity Shares
28.	If a firm has no debt, which one is correct?	OL is one	FL is one	FL is zero	OL is Zero	FL is one
29.	Point of indifference relates the	EPS and net profit	EBIT and tax level	Net profit and earnings	Gross and net profit	EBIT and tax level
30.	Traditional approach of capital structure is also known as ----------	older approach	intermediate approach	modern approach	walter approach	intermediate approach
31.	Ploughing back of profit means	Earning of black money	Reinvestment of earnings	Unclaimed dividends	Transferring a part of profit to reserve	Reinvestment of earnings
32.	A Company can trade on equity when it has issued	Only equity capital	Only preference capital	Equity and preference capital	Debenture preference and equity capital	Debenture preference and equity capital
33.	Composite leverage is a combination of	Financial and operating leverage	Financial and working capital leverage	Financial and trading on equity	Operating and working capital leverage	Financial and operating leverage

34.	_____ is an arrangement that provides a firm with the use and control over assets without buying and owning the same.	Hire purchase	Pledge	lease	Bailment	lease
35.	Which is a capital expenditure?	Wages paid	Plant & machinery acquired	Salaries paid	Advertisement cost	Plant & machinery acquired
36.	Which of the following is a capital expenditure?	Wages paid	Salary	depreciation	preliminary expenses	preliminary expenses
37.	Which of the following transaction is of capital nature?	purchase of truck by a company	replacement of old tyres	yearly premium to insure the truck	cost of repairs of the truck	purchase of truck by a company
38.	Sources of finance for a business include ----------	Equity	Land	Outstanding expenses	Depreciation	Equity
39.	Equity means ----------	Paid up share capital	Reserves	Depreciation	Outstanding expenses	Paid up share capital
40.	When will the company have to plan about its capital structure?	During Incorporation	During replacement	during modernization	During diversification	During Incorporation
41.	Financial leverage means ----------	equity is the base to raise the finance	Preference is the base to raise the finance	earning is the base to raise the finance	Dividend is the base to raise the finance	equity is the base to raise the finance

42.	What are the sources of finance for a business?	Equity	creditors wealth	Debtors wealth	Stock	Equity
43.	When will the company have to plan about its capital structure?	During Incorporation	During replacement	during modernization	During promotion	During Incorporation
44.	What do you mean by financial leverage?	equity is the base to raise the finance	Preference is the base to raise the finance	earning is the base to raise the finance	Dividend is the base to raise the finance	earning is the base to raise the finance
45.	---------- comprises of fixed assets and other non-current assets	fixed capital	working capital	Share capital	Equity capital	fixed capital
46.	The ---------- refers to the kind and proportion of different securities for raising funds.	Capital structure	cost of capital	capital budgeting	auditing	Capital structure
47.	In _____ approach, the capital structure decision is relevant to the valuation of the firm.	Net income approach	Net operating income approach	MM approach	Traditional approach	Net income approach
48.	Pattern of capital structure include ----------	Equity shares	Dividend	interest	Long term loan	Equity shares
49.	Which of the following is true for Net Income Approach?	Higher Equity is better	High Debt better	Debt is irrelavant	Low Debt is better	High Debt better

50.	Which of the following is true of Net Income Approach?	$V_F = V_E+V_D$	$V_E = V_F+V_D$	$V_D = V_F+V_E$	$V_F = V_E-V_E$	$V_F = V_E+V_D$
51.	Financial leverage is intended to	Increase return on Capital Employed	Increase net equity return	decrease volatility return	Increas return on capital employed and net equity	Increase return on Capital Employed
52.	which of the following statement is incorrect	Contribution- Fixed cost= Operating cost	FL=EBIT/OP	CL= OL * FL	FL=EBT / EBIT	FL=EBIT/OP
53.	NOI Approach advocates that the degree of debt financing is:	Relevant	may be relevant	may be irrelevant	irrelevant	irrelevant
54.	The use of long term fixed interest bearing debt and preference share capital along with equity shares is called ----------	operating leverage	financial leverage	combined leverage	Capital Structure	financial leverage
55.	Which of the following assumes constant k_d and k_e?	Net income approach	Net operating income approach	MM approach	Traditional approach	Net income approach
56.	'Judicious use of leverage' is suggested by:	Net income approach	Net operating income approach	MM approach	Traditional approach	Traditional approach
57.	Traditional approach of capital structure is also known as ----------	older approach	intermediate approach	modern approach	walter approach	intermediate approach

58.	In the Traditional Approach, which one of the following remains constant?	Cost of Equity	Cost of Debt	WACC	None	None
59.	In MM-Model, irrelevance of capital structure is based on:	Cost of Debt and Equity	Arbitrage Process	Decreasing k_0	Increasing k_0	Arbitrage Process
60.	Which of the following is incorrect for NOI?	k_0 is constant	k_d is constant	ke is constant	k_d & k_0 are constant	ke is constant
61.	---------- refers to the relationship between equity capital and long term debt	capital gearing	capital structure	capital budgeting	cost of capital	capital gearing

UNIT IV : Dividend Decisions - Theories for Relevance and Irrelevance of Dividend Decision for Corporate Valuation - Cash and Stock Dividends - Dividend Policies in Practice.

Capital is the major part of all kinds of business activities, which are decided by the size, and nature of the business concern. Capital may be raised with the help of various sources. If the company maintains proper and adequate level of capital, it will earn high profit and they can provide more dividends to its shareholders.

Meaning of Capital Structure

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

Definition of Capital Structure

The following definitions clearly initiate, the meaning and objective of the capital structures.

- According to the definition of **Gerestenbeg,** "Capital Structure of a company refers to the composition or make up of its capitalization and it includes all long-term capital resources".
- According to the definition of **James C. Van Horne,** "The mix of a firm's permanent long-term financing represented by debt, preferred stock, and common stock equity".

According to the definition of **Presana Chandra,** "The composition of a firm's financing consists of equity, preference, and debt".

- According to the definition of **R.H. Wessel,** "The long term sources of fund employed in a business enterprise".

FINANCIAL STRUCTURE

The term financial structure is different from the capital structure. Financial structures hows the pattern total financing. It measures the extent to which total funds are available to finance the total assets of the business.

Financial Structure = Total liabilities

Or

Financial Structure = Capital Structure + Current liabilities.

The following points indicate the difference between the financial structure and capital structure.

FINANCIAL STRUCTURES	CAPITAL STRUCTURES
1. It includes both long-term and short-term sources of funds 2. It means the entire liabilities side of the balance sheet. 3. Financial structures consist of all sources of capital 4. It will not be more important while determining the	1. It includes only the long-term sourcesof funds. 2. It means only the long-term liabilities of the company. 3. It consists of equity, preference and retained earning capital. 4. It is one of the major determinations of value of the firm. the value of the firm

OPTIMUM CAPITAL STRUCTURE

Optimum capital structure is the capital structure at which the weighted average cost of capital is minimum and thereby the value of the firm is maximum.

Optimum capital structure may be defined as the capital structure or combination of debt and equity that leads to the maximum value of the firm.

Objectives of Capital Structure

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

1. Maximize the value of the firm.

2. Minimize the overall cost of capital.

Forms of Capital Structure

Capital structure pattern varies from company to company and the availability of finance.

Normally the following forms of capital structure are popular in practice.

• Equity shares only.

• Equity and preference shares only.

• Equity and Debentures only.

• Equity shares, preference shares and debentures.

FACTORS DETERMINING CAPITAL STRUCTURE

The following factors are considered while deciding the capital structure of the firm.

Leverage

It is the basic and important factor, which affect the capital structure. It uses the fixed cost financing such as debt, equity and preference share capital. It is closely related to the overall cost of capital.

Cost of Capital

Cost of capital constitutes the major part for deciding the capital structure of a firm. Normally long- term finance such as equity and debt consist of fixed cost while mobilization. When the cost of capital increases, value of the firm will also decrease. Hence the firm must take careful steps to reduce the cost of capital.

(a) Nature of the business: Use of fixed interest/dividend bearing finance depends upon the nature of the business. If the business consists of long period of operation, it will apply for equity than debt, and it will reduce the cost of capital.

(b) Size of the company: It also affects the capital structure of a firm. If the firm belongs to large scale, it can manage the financial requirements with the help of internal sources. But if it is small size, they will go for external finance. It consists of high cost of capital.

(c) Legal requirements: Legal requirements are also one of the considerations while dividing the capital structure of a firm. For example, banking companies are restricted to raise funds from some sources.

(d) Requirement of investors: In order to collect funds from different type of investors, it will be appropriate for the companies to issue different sources of securities.

Government policy

Promoter contribution is fixed by the company Act. It restricts to mobilize large, long term funds from external sources. Hence the company must consider government policy regarding the capital structure.

CAPITAL STRUCTURE THEORIES

Capital structure is the major part of the firm's financial decision which affects the value of the firm and it leads to change EBIT and market value of the shares. There is a relationship among the capital structure, cost of capital and value of the firm. The aim of effective capital structure is to maximize the value of the firm and to reduce the cost of capital.

There are two major theories explaining the relationship between capital structure, cost of capital and value of the firm.

1. **Tradition al Approach**
2. **Modern Approach**
   - Net Income Approach
   - Net Operating Income Approach
   - Modigliani-Miller Approach

1. Traditional Approach

It is the mix of Net Income approach and Net Operating Income approach. Hence, it is also called as intermediate approach. According to the traditional approach, mix of debt and equity capital can increase the value of the firm by reducing overall cost of capital up to certain level of debt. Traditional approach states that the Ko decreases only within the responsible limit of financial leverage and when reaching the minimum level, it starts increasing with financial leverage.

Assumptions

Capital structure theories are based on certain assumption to analysis in a single and convenient manner:

• There are only two sources of funds used by a firm; debt and shares.

• The firm pays 100% of its earning as dividend.

• The total assets are given and do not change.

• The total finance remains constant.

• The operating profits (EBIT) are not expected to grow.

• The business risk remains constant.

• The firm has a perpetual life.

• The investors behave rationally.

Net Income (NI) Approach

Net income approach suggested by the Durand. According to this approach, the capital structure decision is relevant to the valuation of the firm. In other words, a change in the capital structure leads to a corresponding change in the overall cost of capital as well as the total value of the firm.

According to this approach, use more debt finance to reduce the overall cost of capital and increase the value of firm.

Net income approach is based on the following three important assumptions:

1. There are no corporate taxes.

2. The cost debt is less than the cost of equity.

3. The use of debt does not change the risk perception of the investor.

$$V = S+B$$

Where

V = Value of firm

S = Market value of equity

B = Market value of debt

Net Operating Income (NOI) Approach

Another modern theory of capital structure, suggested by **Durand**. This is just the opposite to the Net Income approach. According to this approach, Capital Structure decision is irrelevant to the valuation of the firm. The market value of the firm is not at all affected by the capital structure changes.

According to this approach, the change in capital structure will not lead to any change in the total value of the firm and market price of shares as well as the overall cost of capital.

NI approach is based on the following important assumptions;

- The overall cost of capital remains constant;
- There are no corporate taxes;
- The market capitalizes the value of the firm as a whole;

Value of the firm (V) can be calculated with the help of the following formula

$$V = \mathbf{EBIT / K_o}$$

Where,

V = Value of the firm

EBIT = Earnings before interest and tax or Net Operating Income

Ko = Overall cost of capital

Modigliani and Miller Approach

Modigliani and Miller approach states that the financing decision of a firm does not affect the market value of a firm in a perfect capital market. In other words MM approach maintains that the average cost of capital does not change with change in the debt weighted equity minor capital structures of the firm.

Modigliani and Miller approach is based on the following important assumptions:

• There is a perfect capital market.

• There are no retained earnings.

• There are no corporate taxes.

• The investors act rationally.

• The dividend payout ratio is 100%.

• The business consists of the same level of business risk.

Value of the firm can be calculated with the help of the following formula:

$$V = EBIT / K_o * (1-t)$$

Where

EBIT = Earnings before interest and tax

Ko = Overall cost of capital

t = Tax rate

INTRODUCTION

The term dividend refers to that part of profits of a company which is distributed by the company among its shareholders. It is the reward of the shareholders for investments made by them in the shares of the company. The investors are interested in earning the maximum return on their investments and to maximize their wealth. A company, on the other hand, needs to provide funds to finance its long-term growth. If a company pays out as dividend most of what it earns, then for business requirements and further expansion it will have to depend upon outside resources such as issue of debt or new shares. Dividend policy of a firm, thus affects both the long-term financing and the wealth of shareholders. As a result, the firm's decision to pay dividends must be reached in such a manner so as to equitably apportion the distributed profits and retained earnings.

Since dividend is a right of Shareholders to participate in the profits and surplus of the company for their investment in the share capital of the company, they should receive fair amount of the profits. The company should, therefore, distribute a reasonable amount as dividends (which should include a normal rate of interest plus a return for the risks assumed) to its members and retain the rest for its growth and survival.

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

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 distribute 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.

Dividend Theories

Irrelevance of Dividend

- Solomon Approach
- MM Approach

Relevance of Dividend

- Walter's Model
- Gordon's Model

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 taxes.

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

$$P_o = \frac{D_1 + P_1}{(1+K_e)}$$

Where,

P_o = 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.

P1 can be calculated with the help of the following formula.

P1 = Po (1+Ke) – D1

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

M × P1 = I – (X – nD1)

Where,

M = Number of new share to be issued.

P1 = Price at which new issue is to be made.

I = Amount of investment required.

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

nD1= 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

$$P_o = \frac{D_1+P_1}{(1+K_e)}$$

(i) If the dividend is paid

Po = Rs.15

Ke = 20%

D1 = 2.50

P1 = ?

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

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

$2.50 + P1 = 15 \times 1.2$

$P1 = 18 – 2.50$

$P1 = Rs. 15.50$

(ii) If the dividend is not paid

$Po = 15$

$Ke = 20\%$

$D1 = 0$

$P_1 = ?$

$$15 = \frac{0 +P_1}{1+ 20\%}$$

$$15 = \frac{0 +P_1}{}$$

1.20

$0 + P_1 = 15 \times 1.20$

P_1 = Rs. 18.

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.

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

$P_1 = P_o (1+K_e) – D1$

$= 100 (1 + .12) – 7$

$= 100 \times 1.12 – 7$

P_1 = Rs. 105

(b) Number of shares to be issued.

$$S = \frac{I - (TE – nD)}{P_1}$$

$$= \frac{1,60,000 - (69000 – (8000*7)}{105}$$

$$= \frac{1,60,000 - (69000 – (8000*7)}{105}$$

$$= 1,47,000$$

105

= 1400 Shares

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.

$$S = \frac{I - (TE - nD)}{P_1}$$

S = Value of the firm can be calculated as follows

$$nP_o = \frac{(N+S)\,M_1 - (I - TE)}{1 + Ke}$$

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.

$$nP_o = \frac{(N+S)\,M_1 - (I - TE)}{1 + Ke}$$

$$= \frac{(8000+1400*105 - (160000-69000)}{1+ 12\%}$$

$$= \frac{9400*105 - 91000}{}$$

1.12

= 8,00,000

Criticism of MM approach

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

Another feature of Walter's formula is that it provides an added or reduced Weight to the retained earnings portion of the capitalization earnings formula. The factors 'r' and 'k' are placed in front of retained earnings to change its weighted value under different situations as discussed below:

1. Growth Firms

In growth firms internal rate of return is greater than the normal rate(r > k). Therefore, r/k factor will greater than 1. Such firms must reinvest retained earnings since existing alternative investments offer a lower return than the firm is able to secure. Each rupee of retained earnings will have a higher weighting in Walter's formula than a comparable rupee of dividends. Thus, large the firm retains, higher the value of the firm. Optimum dividend payout ratio for such a firm will be zero.

2. Normal Firm

Normal firms comprise those firms whose internal rate of return is equal to normal capitalization (r=k). These firms earn on their investments rate of return equal to market rate of return. For such firms dividend policy will have no effect on the market value per share in the Walter's model. Accordingly, retained earnings will have the same weighted value as dividends. In this case the market value per share is affected by the payout ratio.

3. Declining Firms

Firms which earn on their investments less than the minimum rate required are designated as declining firms. The management of such firms would like to distribute its earnings to the stockholders so that they may either spend it or invest elsewhere to earn higher return than earned by the declining firms. Under such a situation each rupee of retained earnings will receive lower weight than dividends and market value of the firm will tend to be maximum when it does not retain earnings at all.

4. Evaluation of the Walter's Model

Professor Walter has endeavoured to show in an erudite manner the effects of dividend policy on value of equity shares under different situations of a firm. However, the basic premises on which edifice of the theory are laid down are unrealistic and therefore, conclusions drawn from the Walter's model are hardly true for real life situations. Thus, for instance assume that a firm finances its investment opportunities only by means of internal sources and no external financing is resorted to for this purpose. Under such a situation, either the value of the firm's investment or dividend or both will be sub-optimum. In its attempt to maximize the value of the firm, the management should go on making investments so long as return of investment is equal to the cost of capital. This is the optimum level of investment; the remaining amount should be raised from external sources. On the contrary, Walter argues that value of the firm is maximized by retaining all the profits because magnitude of investments financed by retained earnings may be less than the optimum level of investment

Assumptions

Walters's 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 recent 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

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

Where,

P = Market price of an equity share

D = Dividend per share

r = Internal rate of return

E = Earning per share

Ke = Cost of equity capital

Exercise 7

From the following data, calculate the MP of a share of ABC Ltd., under

(i) Walter'sformula; and

(ii) (ii) Dividend growth model.

EPS = Rs. 10 DPS = Rs. 6

Ke = 18% r = 25%

Retention ratio (b) = 45%

Solution:

(i) Walter's Model

EPS = Rs. 10 DPS = Rs. 6

Ke = 18% r = 25%

Retention ratio (b) = 45%

Solution:

(i) Walter's Model

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

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

$$= \frac{6 + .5.56}{.18}$$

$$= \frac{11.56}{.18}$$

$$= \frac{RS.64.22}{.18}$$

(ii) Dividend Growth Model

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

$$= \frac{10(1-.45)}{.18 * (.45*.25)}$$

$$= \frac{10 * 0.55}{0.18 * 0.1125}$$

$$= \frac{5.5}{0.0675}$$

= Rs.81.48

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 Gorden suggests 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 (Ke>br).

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

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

Where,

P = Price of a share

E = Earnings per share

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

Ke = 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 is10% 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 pay out of 60% (or) 20%?

Solution

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

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

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

$$= \frac{1.20\ (1-.40)}{10 - (.40*.12)}$$

$$= \frac{1.20\ (.60)}{.10 - 0.048}$$

$$= \frac{0.72}{}$$

0.052

= Rs.13.85

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

The price is

$$P = \frac{\textbf{1.20 (1-.20)}}{\textbf{.10 - (.2*.12)}}$$

= 0.05

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

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

If payout ratio is 50%, D=50% of 10=Rs. 5

r=12%=0.12, D=50% of 10 = Rs. 5

$$= \frac{5+5}{0.12} = \text{Rs.83.33}$$

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

$$= \frac{5+3.33}{0.12} = \text{Rs.}69.42$$

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

$$= \frac{6.67}{0.12} = \text{Rs.}55.58$$

C. If payout ratio is 75%

D = 75% of 10 = 7.50

(i) r = 12% = 0.12, D = 75% of 10 = 7.50

$$= \frac{7.50+2.50}{0.12} = \text{Rs.}83.33$$

(ii) r = 8% = 0.8, D = 75% of 10 = 7.50

$$= \frac{7.50+1.67}{0.12}$$

$$= \frac{9.17}{0.12} = \textbf{Rs.76.42}$$

(iii) r = 4% = 0.04, D = 75% of 10 = 7.50

$$= \frac{7.50+0.83}{0.12}$$

$$= \frac{8.33}{.12} = \textbf{Rs.69.42}$$

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

$$= \frac{\mathbf{1}.20\ (1-0.60)}{0.10 - (.80 * .12)}$$

$$= \frac{0.48}{0.0004} = \textbf{Rs.120}$$

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.
- Ke 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 prefect, 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.

FACTORS AFFECTING DIVIDEND POLICY:

There is a controversy amongst financial analysts regarding impact of dividends on market price of a company's shares. Some argue that dividends do not have any impact on

such price while others hold a different opinion. However, preponderance of evidence suggests that dividend policies do have a significant effect on the value of the firm's equity shares in the stock exchange. Having accepted this premise, it will now be appropriate to consider those factors which affect the dividend policy of a firm.

The factors affecting the dividend policy are both external as well as internal.

External factors

1. **General state of economy** - The general state of economy affects to a great extent the management's decision to retain or distribute earnings of the firm. In case of uncertain economic and business conditions, the management may like to retain the whole or a part of the firm's earnings to build up reserves to absorb shocks in the future. Similarly in periods of depression, the management may also withhold-dividends payment to retain a large part of its earnings to preserve the firm's liquidity position. In periods of prosperity the management may not be liberal in dividend payments though the earning power of a company warrants it because of availability of larger profitable investment opportunities similarly in periods of inflation, the management may withhold dividend payments in order to retain larger proportion of the earnings for replacement of worn-out assets.

2. **Legal restrictions** - A firm may also be legally restricted from declaring and paying dividends. For example, in India, the companies Act, 1956 has put several restrictions regarding payments and declaration of dividends. Some of these restrictions are as follows :

(i) Dividends can only be paid out of

(a) The current profits of the company,

(b) The past accumulated profits or

(c) Money provided by the Central or State Governments for the payment of dividends in pursuance of the guarantee given by the Government. Payment of dividend out of capital is illegal.

(ii) A company is not entitled to pay dividends unless (a) it has provided for present as well as all arrears of depreciation, (b) a certain percentage of net profits of that year as prescribed by the central Government not exceeding 10%, has been transferred to the reserves of the company.

(iii) Past accumulated profits can be used for declaration of dividends only as per the rules framed by the Central Government in this behalf. Similarly, the Indian Income Tax Act also lays down certain restrictions on payment of dividends. The management has to take into consideration all the legal restrictions before taking the dividend decision otherwise it may be declared as ultra vires.

Internal factors

The following are the internal factors which affect the dividend policy of a firm:

1. Desire of the shareholders - Of course, the directors have considerable liberty regarding the disposal of the firm's earnings, but the shareholders are technically the owners of the company and, therefore, their desire cannot be overlooked by the directors while deciding about the dividend policy.

Shareholders of a firm expect two forms of return from their investment in a firm:

(i) Capital gains - The shareholders expect an increase in the market value of the equity shares held by them over a period of time. Capital gain refers to the profit resulting from the sale of capital investment i.e., the equity shares in case of shareholders. For example, if a shareholder purchases a share for 40 and later on sells it for 60 the amount of capital gain is a sum of 20.

(ii) Dividends - The shareholders also expect a regular return on their investment from the firm. In most cases the shareholders' desire to get dividends takes priority over the desire to earn capital gains because of the following reasons:

(a) Reduction of uncertainty - Capital gains or a future distribution of earnings involves more uncertainty than a distribution of current earnings.

(b) Indication of strength - The declaration and payment of cash dividend carries an information content that the firm is reasonably strong and healthy.

(c) Need for current income - Many shareholders require income from the investment to pay for their current living expenses. Such shareholders are generally reluctant to sell their shares to earn capital gain.

2. Financial needs of the company - The financial needs of the company are to be considered by the management while taking the dividend decision. Of course, the financial needs of the company may be in direct conflict with the desire of the shareholders to receive

large dividends. However, a prudent management should give more weight age to the financial needs of the company rather than the desire of the shareholders. In order to maximize the shareholders' wealth, it is advisable to retain earnings in the business only when company has better profitable investment opportunities as compared to the shareholders. However, the directors must retain some earnings, whether or not profitable investment opportunity exists, to maintain the company as a sound and solvent enterprise.

3. Desire of control - Dividend policy is also influenced by the desire of shareholders or the management to retain control over the company. The issue of additional equity shares for procuring funds dilutes control to the detriment of the existing equity shareholders who have a dominating voice in the company. At the same time, recourse to long-term loans may entail financial risks and may prove disastrous to the interests of the shareholders in times of financial difficulties.

In case of a strong desire for control, the management may be reluctant to pay substantial dividends and prefer a smaller dividend pay out ratio. This is particularly true in case of companies which need funds for financing profitable investment opportunities and an outside group is seeking to gain control over the company.

However, where the management is strongly in control of the company either because of substantial shareholdings or because of the shares being widely held, the firm can afford to have a high dividend pay out ratio.

3. **Liquidity position** - The payment of dividends results in cash outflow from the firm. A firm may have adequate earnings but it may not have sufficient cash to pay dividends. It is, therefore, important for the management to take into account the cash position and the overall liquidity position of the firm before and after payment of dividends while taking the dividend decision. A firm may not, therefore, be in a position to pay dividends in cash or at a higher rate because of insufficient cash resources. Such a problem is generally faced by growing firms which need constant funds for financing their expansion activities.

POSSIBLE QUESTIONS

PART – B

1. Define Capital structure.
2. State the different forms of dividend.
3. Define Leverage analysis?
4. Write any two assumptions of Net Income Approach
5. Give a short note on Modigliani-Miller approach

PART – C

1. Define capital structure and explain the factors affecting capital structure?

2. A firm is considering two financial plans with a view to examining their impact on Earnings Per Share (EPS). The total funds required for investment in assets are Rs. 5,00,000.

Financial Plans

Particulars	Plan I	**Plan II**
Debt (Interest @ 10% p.a.)	4,00,000	1,00,000
Equity Shares (Rs. 10 each)	1,00,000	4,00,000
Total finances required	5,00,000	5,00,000
No. of equity shares	10,000	40,000

The earnings before interest and tax are assumed as Rs. 50,000, Rs. 75,000 and Rs. 1,25,000. The rate of tax be taken at 50%. Comment.

3. Distinguish between operating leverage and financial leverage?
4. Determine the factors of dividend policy of a company?
5. How is a stable dividend Policy advantageous to the investors as well as the company?
6. Enumerate the various theories of capital structure?
7. Discuss the relation between debt financing and financial leverage?
8. The following figures relate to two companies

Particulars	**P Ltd. (in Rs. Lakhs)**	**Q Ltd (in Rs. Lakhs)**
Sales	500	1,000
Variable Costs	200	300
Contribution	300	700
Fixed costs	150	400
	150	300
Interest	50	100
Profit before tax	100	200

You are required to calculate the operating, financial and combined leverages for the two companies. And Comment on the relative risk position of them

9. Determine the Gordon's Model theory of capital structure?
10. Elaborate the Net Operating Income Approach?

	UNIT IV				
S. No.	QUESTION	OPTION A	OPTION B	OPTION C	OPTION D
1	The irrelevance concept of dividend includes ----------	Short term approach	MM approach	Traditional approach	Modern approach
2	According to residual approach, ---------- has no effect on the wealth of the shareholders.	Dividend decision	Finance decision	Investment decision	Management decision
3	According to residential approach, dividend decision is merely a part of ---------	Dividend decision	Finance decision	Investment decision	Management decision
4	According to MM theory, the assumptions are ----------	no risk	high risk	low risk	medium risk
5	The relevance concept of dividend include ----------	Walter approach	Gardens approach	MM approach	Traditional approach
6	The relevance concept of dividend include ----------	MM approach	Residual approach	Gorden approach	Modern approach
7	Walter model based on the relationship between the firms ----------	Return on investment	Capital	Risk	Income
8	Walter model based on the relationship between the firms ----------	Profit	Capital	Risk	Cost of capital
9	Assumption of Walters model include ----------	r and k are constant	long life	Short life	Medium
10	Determinants of dividend policy include ----------	Legal restrictions	Nature of the industry	Age of the company	All of these
11	Legal provisions of dividend policy is laid down in ----------	Company's act	Partnership act	Societies act	Registration act
12	Desire and type of shareholder are the factors determining ---------- policy	Finance	Interest	Dividend	Profit
13	Taxation policy of govt economic policies are the factors which are influencing ----------policy.	Finance	Interest	Dividend	Profit
14	---------- policy can be maintained by companies by long standing and stable earning.	Regular dividend	Stable dividend	Irregular dividend	Unstable dividend
15	EPS Expand ----------	Earnings Per Share	Earnings per Shareholder	Expectation per share	Expectation Per security.
16	DPS = ----------'	Determinants Per Share	Dividend per share	Dividend per security	Determinants per security
17	Consistency or lack of variability in the stream of dividend payments are called --------- policy.	Regular dividend	Stable dividend	Irregular dividend	Unstable dividend
18	---------- policy is most suitable to concerns whose earnings are expected to remain stable over a number of years.	Constant dividend per share	Constant pay out ratio	profit dividend	liquidation dividend
19	---------- is the reward of the shareholders for investments made by them.	Interest	profit	dividend	income.
20	Irregular dividend policy is suitable if the company has ----------	uncertainty of earnings	unsuccessful business operations	Successful business operations	Certainty of earnings
21	Dividend paid in the ordinary course of business are known as ----------	profit dividend	liquidation dividend	Stable dividend	Irregular dividend
22	Dividends paid out of capital are known as ----------	profit dividend	liquidation dividend	Regular dividend	Unstable dividend
23	Payment of dividend in the form of cash is known as ----------	cash dividend	scrip dividend	property dividend	stock dividend
24	bond dividend is otherwise known as ----------	cash dividend	scrip dividend	property dividend	stock dividend
25	---------- dividend are paid on the form of some assets other than cash.	cash dividend	scrip dividend	property dividend	stock dividend
26	The issue of bonus shares ot the existing shareholders is known as ----------	cash dividend	scrip dividend	property dividend	stock dividend
27	A ---------- promises to pay the shareholder at a future specific date .	cash dividend	property dividend	bond dividend	stock dividend
28	---------- dividend policy is most suitable to the firm having fluctuating earnings from year to year.	Stable rupee divided plus extra dividend	constant payout ratio	constant dividend per share	all of these.
29	The forms of stable dividend policy are ----------	Constant payout ratio	constant payout ratio	constant dividend per share	all of these
30	The ----------position of the company is an important consideration in paying dividend.	Liquidity	solvency	Profitability	turnover

31	---------- refers to the payment of dividend regularly to the shareholders.	stability of dividend	no dividend	excess dividend	additional dividend other than prescribed
32	Dividend policy of a firm affers both the long term financing and _____	owners wealth	creditors wealth	shareholders wealth	Employees wealth
33	_____ dividend is a visual method of paying dividend.	payment	cash	other than cash	stock
34	Accounts to _____- model the dividend decision is relevant	traditional	net income	modern	MM
35	_____ aftects the liquidity position of the company	cash dividend	Stock dividend	interest	dividend
36	Property dividends are paid in the form of some assets other than _____	stock	shares	Cash	Bank
37	_____ means the issue of bonus shares to the existing shareholders of the company	Stock dividend	shares	debentures	none
38	_____ means reducing the par value of the shares by increasing the number of shares proportionately.	preference shares	equity shares	promoters shares	Stock spilit
39	Which of the following are the consumptions of MM approach of dividend theory.	Perfect capital market	Floation cost	Market price	Constant price
40	_____ of dividend refers to the payment of dividend regularly to shareholders	irregular	Stability	constant	Regular
41	EPS =_____	Total earnings/ no. of shares	net income / total shares	income after taxes/ no of debentures	shares / income
42	Established companies which have sufficient reserves can afford to pay _____ dividend.	stable	irregular	.Liberal	less
43	The industries with steady demand of their products can follow a _____ dividend pay out ratio.	Higher	lower	constant	no dividend
44	The industries with cyclical demand of their production can follow a _____ dividend pay out ratio.	higher	constant	Lower	no dividend
45	Companies were allowed to pay dividend upto _____ of theire profits.	33%	12%	15%	17%
46	The companies were allowed to pay dividend upto _____ on the paid up share capital.	15%	20%	25%	12%
47	Walter's Model suggests for 100% DP Ratio when	$k_e = r$	$k_e < r$	$k_e > r$	$k_e = 0$
48	If a firm has $k_e > r$ the Walter's Model suggests for	0% payout	25% payout	100% payout	50% payout
49	Which of the following is not relevant for dividend pay-ment for a year	Cash flow position	Profit Position	Retained Earnings	Paid up capital
50	Stock split is a form of	Dividend Payment	bonus issue	Financial Restructuring	Dividend in Kind
51	If the following is an element of dividend policy?	Production capacity	Change in Management	Informational Content	Debt service capacity
52	Which of the following is not a type of dividend payment?	Property	Share split	Bonus issue	cash
53	'Constant Dividend Per Share' Policy is considered as:	Increasing Dividend Policy	Decreasing Dividend policy	Increase or Decrease Dividend policy	Stable dividend policy
54	Every company should follow	High dividend payment	Low dividend payment	Fixed dividend policy	Stable dividend policy
55	Dividend is the share of profit of company divided amongst its	shareholders	brokers	debenture holders'	bond holders
56	Stock dividend---------- the number of equity shares	Increases	Decreases	Neutralise	Increase or decrease
57	The policy concerning quantum of profits to be distributed as dividend	Dividend policy	distribution policy	share policy	sale policy
58	Under rigid dividend policy, the rate of dividend is	0	1	-1	-2
59	If the earnings of company are stable then it can easily follow	Stable dividend policy	Flexible dividend policy	lower rate dividend plicy	High dividend plicy
60	Dividends are earnings for shareholders and they expect reasonable ea	profit	capital	investments	property
61	Which one is not irregular dividend policy----------	More profit	uncertainty of earnings	heavy fixed burden of interest	shortage of liquid resources
62	The ----------position of the company is an important consideration in paying dividend.	Liquidity	solvency	Profitability	turnover

ANSWER
MM approach
Dividend decision
Finance decision
no risk
MM approach
Gorden approach
Return on investment
Cost of capital
Short life
All of these
Company’s act
Dividend
Dividend
Regular dividend
Earnings Per Share
Dividend per share
Stable dividend
Constant dividend per share
dividend
unsuccessful business operations
profit dividend
liquidation dividend
cash dividend
scrip dividend
property dividend
stock dividend
bond dividend
Stable rupee divided plus extra dividend
all of these
Liquidity

stability of dividend
shareholders wealth
other than cash
MM
Stock dividend
Cash
Stock dividend
Stock spilit
Perfect capital market
Stability
Total earnings/ no. of shares
.Liberal
Higher
Lower
33%
12%
$k_{e>}$ r
0% payout
Retained Earnings
Financial Restructuring
Informational Content
Share split
Stable dividend policy
Stable dividend policy
shareholders
Increases
Dividend policy
0
Stable dividend policy
investments
More profit
Liquidity

UNIT V : Working Capital Decisions - Concepts of Working Capital - The risk-return trade off - Sources of Short-Term Finance - Working Capital Estimation - Cash Management - Receivables Management - Inventory Management and Payables Management.

WORKING CAPITAL MANAGEMENT

Working capital management is also one of the important parts of the financial management. It is concerned with short-term finance of the business concern which is a closely related trade between profitability and liquidity. Efficient working capital management leads to improve the operating performance of the business concern and it helps to meet the short term liquidity. Hence, study of working capital management is not only an important part of financial management but also are overall management of the business concern. Working capital is described as the capital which is not fixed but the more common uses of the working capital is to consider it as the difference between the book value of current assets and current liabilities.

MEANING OF WORKING CAPITAL

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

- Fixed Capital
- Working Capital

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.

- Gross Working Capital
- Net Working Capital

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.

GWC = CA

Net Working Capital

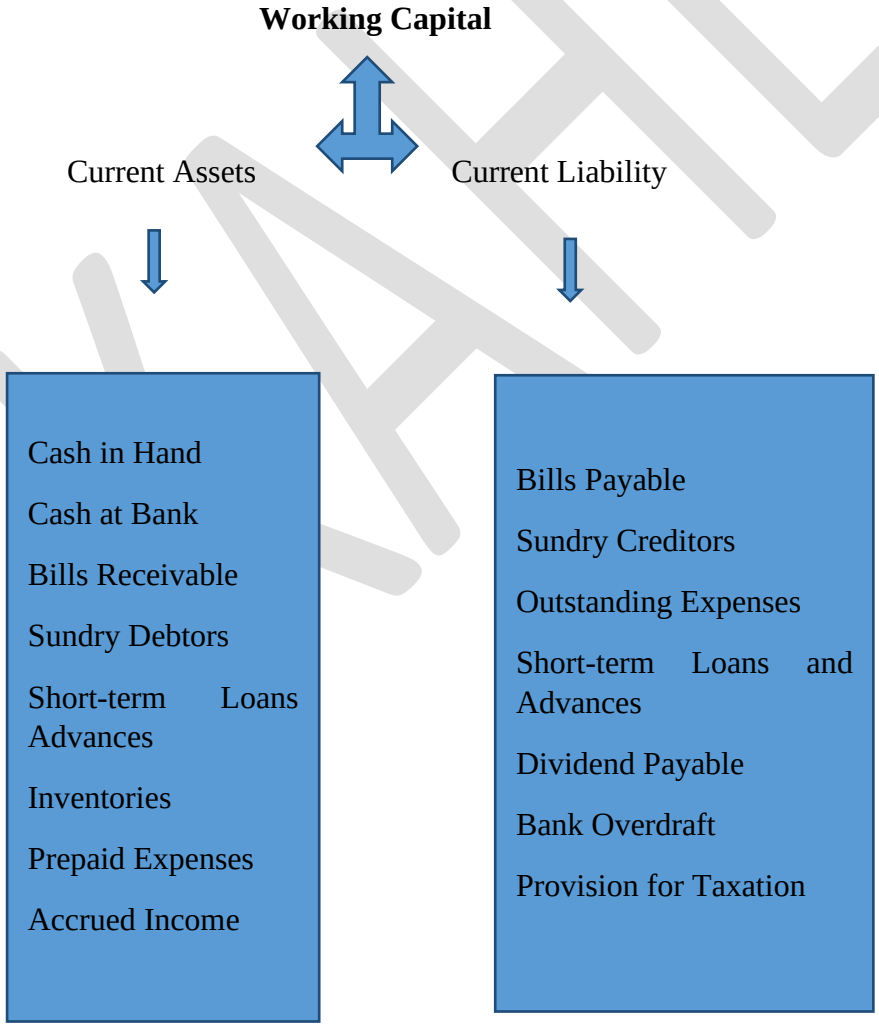
Net Working Capital is the specific concept, which considers both current assets and current liability of the concern.Net Working Capital is the excess of current assets over the current liability of the concern during a particular period.

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.

NWC = C A – CL

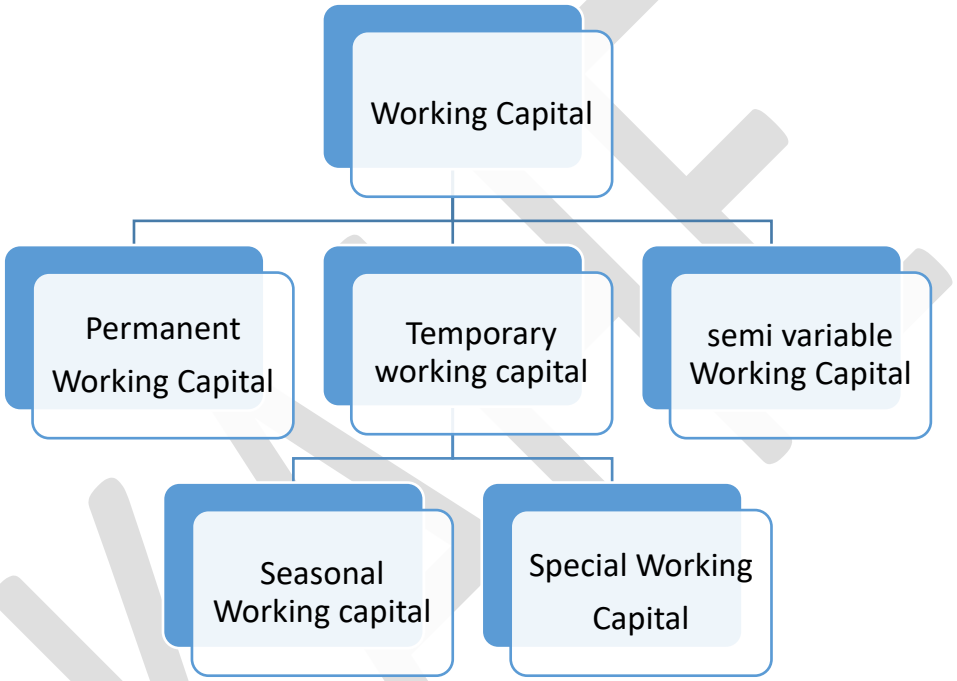
Component of Working Capital

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.

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.

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 processes, 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 leads 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.

The important ones are discussed in brief as given below:

i. **Nature of Enterprise**

The nature and the working capital requirements of an enterprise are interlinked. While a manufacturing industry has a long cycle of operation of the working capital, the same would be short in an enterprise involved in providing services. The amount required also varies as per the nature; an enterprise involved in production would require more working capital than a service sector enterprise.

ii. **Manufacturing/Production Policy**

Each enterprise in the manufacturing sector has its own production policy, some follow the policy of uniform production even if the demand varies from time to time, and

others may follow the principle of 'demand-based production in which production is based on the demand during that particular phase of time. Accordingly, the working capital requirements vary for both of them.

iii. **Operations**

The requirement of working capital fluctuates for seasonal business. The working capital needs of such businesses may increase considerably during the busy season and decrease during the slack season. Ice creams and cold drinks have a great demand during summers, while in winters the sales are negligible.

iv. **Market Condition**

If there is high competition in the chosen product category, then one shall need to offer sops like credit, immediate delivery of goods etc. for which the working capital requirement will be high. Otherwise, if there is no competition or less competition in the market then the working capital requirements will be low.

v. **Availability of Raw Material**

If raw material is readily available then one need not maintain a large stock of the same, thereby reducing the working capital investment in raw material stock. On the other hand, if raw material is not readily available then a large inventory/stock needs to be maintained, thereby calling for substantial investment in the same.

vi. **Growth and Expansion**

Growth and expansion in the volume of business results in enhancement of the working capital requirement. As business grows and expands, it needs a larger amount of working capital. Normally, the need for increased working capital funds precedes growth in business activities.

vii. **Price Level Changes**

Generally, rising price level requires a higher investment in the working capital. With increasing prices, the same level of current assets needs enhanced investment.

viii. **Manufacturing Cycle**

The manufacturing cycle starts with the purchase of raw material and is completed with the production of finished goods. If the manufacturing cycle involves a longer period, the need for working capital would be more. At times, business needs to estimate the requirement of working capital in advance for proper control and management. The factors discussed above influence the quantum of working capital in the business. The assessment of

working capital requirement is made keeping these factors in view. Each constituent of working capital retains its form for a certain period and that holding period is determined by the factors discussed above. So for correct assessment of the working capital requirement, the duration at various stages of the working capital cycle is estimated. Thereafter, proper value is assigned to the respective current assets, depending on its level of completion each constituent of the working capital is valued on the basis of valuation enumerated above for the holding period estimated. The total of all such valuation becomes the total estimated working capital requirement.

The assessment of the working capital should be accurate even in the case of small and micro enterprises where business operation is not very large. We know that working capital has a very close relationship with day-to-day operations of a business. Negligence in proper assessment of the working capital, therefore, can affect the day-to-day operations severely. It may lead to cash crisis and ultimately to liquidation. An inaccurate assessment of the working capital may cause either under-assessment or over-assessment of the working capital and both of them are dangerous.

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.

- **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.
- **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.

- **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.
- **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.
- **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.
- **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.
- **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.

COMPUTATION (OR ESTIMATION) OF WORKING CAPITAL

Working Capital requirement depends upon number of factors, which are already discussed in the previous parts. Now the discussion is on how to calculate the Working Capital needs of the business concern. It may also depend upon various factors but some of the common methods are used to estimate the Working Capital.

A. Estimation of components of working capital method

Working capital consists of various current assets and current liabilities. Hence, we have to estimate how much current assets as inventories required and how much cash required to meet the short term obligations. Finance Manager first estimates the assets and required Working Capital for a particular period.

B. Percent of sales method

Based on the past experience between Sales and Working Capital requirements, a ratio can be determined for estimating the Working Capital requirement in future. It is the simple and tradition method to estimate the Working Capital requirements. Under this method, first we have to find out the sales to Working Capital ratio and based on that we have to estimate Working Capital requirements. This method also expresses the relationship between the Sales and Working Capital.

C. 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)

O = R + W + F + D–C

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

R =Average Stock of Raw Material / Average Raw Material Consumption per Day

W= Average Work in Process Inventory / Average Cost of Production per Day

F = Average Finished Stock Inventory / Average Cost of Goods Sold Per Day

D = Average Book Debts / Average Credit Sales per Day

C = Average Trade Creditors / Average Credit Purchase Per Day

WORKING CAPITAL MANAGEMENT POLICY

Working Capital Management formulates policies to manage and handle efficiently; for that purpose, the management established three policies based on the relationship between Sales and Working Capital.

1. Conservative Working Capital Policy.

2. Moderate Working Capital Policy.

3. Aggressive Working Capital Policy.

1. Conservative working capital policy: Conservative Working Capital Policy refers to miinimize risk by maintaining a higher level of Working Capital. This type of Working Capital Policy is suitable to meet the seasonal fluctuation of the manufacturing operation.

2. Moderate working capital policy: Moderate Working Capital Policy refers to the moderate level of Working Capital maintenance according to moderate level of sales. It means one percent of change in Working Capital that is Working Capital is equal to sales.

3. Aggressive working capital policy: Aggressive Working Capital Policy is one of the high risky and profitability policies which maintain low level of Aggressive Working Capital against the high level of sales, in the business concern during a particular period.

SOURCES OF WORKING CAPITAL

Working Capital requirement can be normalized from short-term and long-term sources.

Each source will have both merits and limitations up to certain extract. Uses of Working Capital may be differing from stage to stage.

The above sources are also classified into internal sources and external sources of working capital.

Internal sources such as:

• Retained Earnings

• Reserve and Surplus

• Depreciation Funds etc.

External sources such as:

• Debentures and Public Deposits

• Loans from Banks and Financial Institutions

• Advances and Credit

• Financial arrangements like Factoring, etc.

Determining the Finance Mix

Determining the finance mix is an important part of working capital management. Under this decision, the relationship among risk, return and liquidity are measured and also which type of financing is suitable to meet the Working Capital requirements of the business concern. There are three basic approaches for determining an appropriate Working Capital finance mix.

1. Hedging or matching approach

2. Conservative approach

3. Aggressive approach.

Hedging Approach

Hedging approach is also known as matching approach. Under this approach, the business concern can adopt a financial plan which matches the expected life of assets with the expected life of the sources of funds raised to finance assets. When the business follows matching approach, long-term finance shall be used to fixed assets and permanent current assets and short-term financing to finance temporary or variable assets.

Conservative Approach

Under this approach, the entire estimated finance in current assets should be financed from long-term sources and the short-term sources should be used only for emergency requirements. This approach is called as "Low Profit – Low Risk" concept

Aggressive Approach

Under this approach, the entire estimated requirement of current assets should be financed from short-term sources and even a part of fixed assets financing be financed from short- term sources. This approach makes the finance mix more risky, less costly and more profitable.

WORKING CAPITAL AND BANKING COMMITTEE

Banking finance to working capital requirements is a very important part of the business concern. Banks provide finance to business concerns to meet the requirements.

To regulate and control bank finance, RBI constitute committees. These committees submit reports with findings and recommendations to formulate the finance policy of the banks.

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 Technique

- Techniques Based on Order Quantity of Inventories
  - Stock Level
  - Minimum Level
  - Re-order Level
  - Maximum Level
  - Danger Level

- ❖ Average Stock Level
- ❖ Lead Time
- ❖ Safety Stock
- ❖ Economic Order Quantity (EOQ)

- Techniques Based On The Classification Of Inventories
  - ❖ A-B-C analysis
  - ❖ VED Analysis
  - ❖ HML Analysis
- Techniques Based on the Records
  - ❖ Inventory Budget
  - ❖ Inventory Report

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.

Re-order level=maximum consumption × 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.

Maximum level = Re-order level + Re-order quantity

– (Minimum consumption × Minimum delivery period)

❖ **Danger Level**

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

❖ **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.

❖ **Economic Order Quantity (EOQ)**

EOQ refers to the level of inventory at which the total cost of inventory comprising ordering cost and carrying cost. Determining an optimum level involves two types of cost such as ordering cost and carrying cost. The EOQ is that inventory level that minimizes the total of ordering of carrying cost.

B. Techniques Based On the Classification of Inventories

❖ **A-B-C analysis**

It is the inventory management techniques that divide inventory into three categories based on the value and volume of the inventories; 10% of the inventory's item contributes to 70% of value of consumption and this category is known as A category. About 20% of the inventory item contributes about 20% of value of consumption and this category is called category B and 70% of inventory item contributes only 10% of value of consumption and this category is called C category.

- **Aging Schedule of Inventories**

Inventories are classified according to the period of their holding and also this method helps to identify the movement of the inventories. Hence, it is also called as, FNSD analysis—where,

F = Fast moving inventories

N = Normal moving inventories

S = Slow moving inventories

D = Dead moving inventories

This analysis is mainly calculated for the purpose of taking disposal decision of the inventories.

- **VED Analysis**

This technique is ideally suited for spare parts in the inventory management like ABC analysis. Inventories are classified into three categories on the basis of usage of the inventories.

V = Vital item of inventories

E = Essential item of inventories

D = Desirable item of inventories

- **HML Analysis**

Under this analysis, inventories are classified into three categories on the basis of the value of the inventories.

H = High value of inventories

M = Medium value of inventories

L = Low value of inventories

C.Techniques On The Basis Of Records

A. Inventory budget

It is a kind of functional budget which facilitates the estimated inventory required for the business concern during a particular period. This budget is prepared based on the past experience.

B. Inventory reports

Preparation of periodical inventory reports provides information regarding the order level, quantity to be procured and all other information related to inventories. On the basis of these reports, Management takes necessary decision regarding inventory control and Management in the business concern.

- **Valuation of Inventories**

Inventories are valued at different methods depending upon the situation and nature of manufacturing process. Some of the major methods of inventory valuation are mentioned as follows:

1. First in First out Method (FIFO)
2. Last in First out Method (LIFO)
3. Highest in First out Method (HIFO)
4. Nearest in First out Method (NIFO)
5. Average Price Method
6. Base Stock Method
7. Standard Price Method

8. Market Price Method

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 centre's, 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 deposits the cheque in the firms account. Under the lock box system, business concerns hire a post office lockbox 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.

Cash Management Models

Cash management models analyse methods which provide certain framework as to how the cash management is conducted in the firm. Cash management models are the development of the theoretical concepts into analytical approaches with the mathematical

applications. There are three cash management models which are very popular in the field of finance.

1. Baumol model

The basic objective of the Baumol model is to determine the minimum cost amount of cash conversion and the lost opportunity cost. It is a model that provides for cost efficient transactional balances and assumes that the demand for cash can be predicated with certainty and determines the optimal conversion size.

Total conversion cost per period can be calculated with the help of the following formula:

2. Miller-Orr model

This model was suggested by Miller Orr. This model is to determine the optimum cash balance level which minimises the cost of management of cash.

3. Orgler's model

Orgler model provides for integration of cash management with production and other aspects of the business concern. Multiple linear programming is used to determine the optimal cash management.

Orgler's model is formulated, based on the set of objectives of the firm and specifying the set of constrains of the firm.

FUNCTIONS OF CASH MANAGEMENT:

Cash management is concerned with minimizing unproductive cash balances, investing temporarily excess cash advantageously and to make the best possible arrangements for meeting planned and unexpected demands on the firm's cash.

Cash Management must aim to reduce the required level of cash but minimize the risk of being unable to discharge claims against the company as they arise. All these aims and motives of cash management largely depend upon the efficient and effective functioning of cash management. Cash management functions can be studied under five heads, namely, cash

planning, managing cash flow, controlling cash flow, optimizing the cash level and investing idle cash. All these functions are discussed below in details:

1. Cash Planning

Good planning is the very foundation of attaining success. For any management decision, planning is the foremost requirement. "Planning is basically an intellectual process, a menfal pre-disposition to do things in an orderly way, to think before acting and to act in the light of facts rather than of a guess." 16 Cash planning is a technique, which comprises of planning for and controlling of cash. It is a management process of forecasting the future need of cash, its available resources and various uses for a specified period. Cash planning, thus, deals at length with formulation of necessary cash policies and procedures in order to carry on business continuously and on sound lines. A good cash planning aims at providing cash, not only for regular but also for irregular and abnormal requirements.

2.Managing Cash Flows The heading simply suggests an idea of managing properly the flow of cash coming inside the business i.e. cash inflow and cash moving out of the business i.e. cash outflow. These two are said to be properly managed only, if a firm succeeds in accelerating the rate of cash inflow together with minimizing the cash outflow. As observed expediting collections, avoiding unnecessary inventories, improving control over payments etc. contribute to better management of cash. Whereby, a business can conserve cash and thereof would require lesser cash balance for its operations.

3. Controlling the Cash Flows As forecasting is not an exact science because it is based on certain assumptions. Therefore, cash planning will inevitably be at variance with the results actually obtained. For this reason, control becomes an unavoidable function of cash management. Moreover, cash controlling becomes essential as it increases the availability of usable cash from within | the enterprise. As it is obvious that greater the speed of cash flow

cycle, I greater would be the number of times a firm can convert its goods and ' services into cash and so lesser will be the cash requirement to finance the desired volume of business during that period. Furthermore, every enterprise is in possession of some hidden cash, which if traced out substantially decreases the cash requirement of the enterprise.

4. Optimizing the Cash Level A financial manager should concentrate on maintaining sound liquidity position i.e. cash level. All his efforts relating to planning, managing and controlling cash should be diverted towards maintaining an optimum level of cash. The foremost need of maintaining optimum level of cash is to meet the necessary requirements and to settle the obligations well in time. Optimization of cash level may be related to establishing equilibrium between risk and the related profit expected to be earned by the company.

5.Investing Idle Cash Idle cash or surplus cash refers to the excess of cash inflows over cash outflows, which do not have any specific operations or any other purpose to solve currently. Generally, a firm is required to hold cash for meeting working needs facing contingencies and to maintain as well as develop goodwill of bankers.

The problem of investing this excess amount of cash arise simply because it contributes nothing towards profitability of the firm as idle cash precisely earns no returns. Further permanent disposal of such cash is not possible, as the concern may again need this cash after a short while. But, if such cash is deposited with the bank, it definitely would earn a nominal rate of interest paid by the bank. A much better returns than the bank interest can be expected if a company deploys idle cash in marketable securities. There are not yet another group of enterprise that neither invests in marketable securities nor willing to get

interest instead do they prefer to deposit excess cash for improving relations with banks by helping them in meeting bank requirements for compensating balances for services and loans.

GENERAL PRINCIPLES OF CASH MANAGEMENT:

Harry Gross has suggested certain general principles of cash management that, essentially add efficiency to cash management. These principles reflecting cause and effect relationship having universal applications give a scientific outlook to the subject of cash management. While, the application of these principles in accordance with the changing conditions and business environment requiring high degree of skill and tact which places cash management in the category of art. Thus, we can say that cash management like any other subject of management is both science and art for it has well-established principles capable of being skilfully modified as per the requirements. The principles of management are follows as –

1. **Determinable Variations of Cash Needs** A reasonable portion of funds, in the form of cash is required to be kept aside to overcome the period anticipated as the period of cash deficit. This period may either be short and temporary or last for a longer duration of time. Normal and regular payment cf cash leads to small reductions in the cash balance at periodic intervals. Making this payment to different employees on different days of a week can equalize these reductions. Another technique for balancing the level of cash is to schedule i cash disbursements to creditors during that period when accounts receivables collected amounts to a large sum but without putting the goodwill at stake.
2. **Contingency Cash Requirement** There may arise certain instances, which fall beyond the forecast of the management. These constitute unforeseen calamities, which are too difficult to be provided for in the normal course of the business. Such contingencies always demand for special cash requirements that was not estimated and provided for in the cash budget. Rejections of wholesale product, large amount of bad debts, strikes, lockouts etc. are a few among these contingencies. Only a prior

experience and investigation of other similar companies prove helpful as a customary practice. A practical procedure is to protect the business from such calamities like bad-debt losses, fire etc. by way of insurance coverage.

3. **Availability of External Cash** Another factor that is of great importance to the cash management is the availability of funds from outside sources. There resources aid in providing credit facility to the firm, which materialized the firm's objectives of holding minimum cash balance. As such if a firm succeeds in acquiring sufficient funds from external sources like banks or private financers, shareholders, government agencies etc., the need for rnaintaining cash reserves diminishes.

4. **Maximizing Cash Receipts** Every financial manager aims at making the best possible use of cash receipts. Again, cash receipts if tackled prudently results in minimizing cash requirements of a concern. For this purpose, the comparative cost of granting cash discount to customer and the policy of charging interest expense for borrowing must be evaluated on continuous basis to determine the futility of either of the alternative or both of them during that particular period for maximizing cash receipts. Yet, the under mentioned techniques proved helpful in this context: -

(A)Concentration Banking: Under this system, a company establishes banking centers for collection of cash in different areas. Thereby, the company instructs its customers of adjoining areas to send their payments to those centers. The collection amount is then deposited with the local bank by these centers as early as possible. Whereby, the collected funds are transferred to the company's central bank accounts operated by the head office.

(B)Local Box System: Under this system, a company rents out the local post offices boxes of different cities and the customers are asked to \ forward their remittances to it. These remittances are picked by the authorized lock bank from these boxes to be transferred to the company's central bank operated by the head office.

(C)Reviewing Credit Procedures: It aids in determining the impact of slow payers and bad-debtors on cash. The accounts of slow paying customers should be reviewed to determine the volume of cash tied up. Besides this, evaluation of credit policy must also be conducted for introducing essential amendments. As a matter of fact, too strict a credit policy involves rejections of sales. Thus, curtailing the cash

inflow. On the other hand, too lenient, a credit policy would increase the number of slow payments and bad debts again decreasing the cash inflows.

(D)Minimizing Credit Period: Shortening the terms allowed to the customers would definitely accelerate the cash inflow side-by-side revising the discount offered would prevent the customers from using the credit for financing their own operations profitably.

(E)Others: Introducing various procedures for special handling of large to very large remittances or foreign remittances such as, persona! pick up of large sum of cash using airmail, special delivery and simitar techniques to accelerate such collections.

5. Minimizing Cash Disbursements

The motive of minimizing cash payments is the ultimate benefit derived from maximizing cash receipts. Cash disbursement can be brought under control by preventing fraudulent practices, serving time draft to creditors of large sum, making staggered payments to creditors and for payrolls etc.

6. Maximizing Cash Utilization

Although a surplus of cash is a luxury, yet money is costly. Moreover, proper and optimum utilization of cash always makes way for achievement of the motive of maximizing cash receipts and minimizing cash payments. At times, a concern finds itself with funds in excess of its requirement, which lay idle without bringing any return to it. At the same time, the concern finds it unwise to dispose it, as the concern shall soon need it. In such conditions, efforts should be made in investing these funds in some interest bearing securities. There are certain basic strategies suggested by Gitman, which prove evidently helpful in managing cash if employed by the cash management. They are: "Pay accounts payables as late as possible without damaging the firm's credit rating, but take advantage of the favourable cash discount, if any. Turnover, the inventories as quickly as possible, avoiding stock outs that might result in shutting down the productions line or loss of sales. Collect accounts receivables as early as possible without losing future loss sales because of high-pressure collections techniques. Cash discounts, if they are economically justifiable, may be used to accomplish this objective

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:

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 firms maintain 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 ofthe 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.

POSSIBLE QUESTIONS

PART – B

1. Write short notes on Maximum Stock Level?
2. What is the formula for calculating working capital?
3. What do you mean by reorder level
4. Write the formula for Economic Order Quantity?
5. Define the term Cash Management?

PART – C

1. Describe the need and determinants of working capital in a business?
2. Prepare an estimate of working capital requirement from the following information of a trading concern.
3. Elaborate the determinants of working capital with suitable example?
4. Briefly explain the objectives and Techniques of Inventory Management
5. In manufacturing its products, a company uses three raw materials, A,B and C in respect of which of the following apply :

Raw Materials	Usage per unit of product (lbs)	Re - Order quantity (lbs)	Price per Lb (Paisa)	Delivery Period (week)	Order Level (lbs)	Minimum Level (lbs)
A	10	10,000	10	1 to 3	8,000	-
B	6	5,000	30	3 to 5	4,750	-
C	4	10,000	15	2 to 4	-	2,000

Weekly production varies from 175 to 225 units, averaging 200 . What would you expect the quantities of the following to be?

(a) Minimum Stock level of A
(b) Maximum Stock level of B
(c) Re-Order level of C, and
(d) Average Stock level of A.

6. Discuss the importance of working capital for a manufacturing concern.
7. Elaborate the various factors affecting the working capital.

8. (i) Find out the Economic Ordering Quantity (EOQ) from the following particulars.

Annual Usage : 6,000 Units: Cost of material per unit - Rs. 20

Cost of placing and receiving one order – Rs. 60

Annual Carrying Cost of one unit -10% of inventory value.

(ii) Find out the Economic Ordering Quantity (EOQ) from the following particulars.

Annual Usage : 10,000 Units: Cost of material per unit - Rs. 20

Cost of placing and receiving one order – Rs. 50

Annual Carrying Cost of one unit -10% of inventory value.

9. Briefly explain the various concepts of Receivables Management?

10. In manufacturing its products, a company uses three raw materials, A,B and C in respect of which of the following apply :

Raw Materials	Usage per unit of product (lbs)	Re - Order quantity (lbs)	Price per Lb (Paisa)	Delivery Period (week)	Order Level (lbs)	Minimum Level (lbs)
A	10	50,000	10	1 to 3	10,000	-
B	6	10,000	30	3 to 5	5,000	-
C	4	5,000	15	2 to 4	-	3,000

Weekly production varies from 175 to 225 units, averaging 200 . What would you expect the quantities of the following to be?

(a) Minimum Stock level of A

(b) Maximum Stock level of B

(c) Re-Order level of C, and

(d) Average Stock level of A.

	UNIT V					
S. NO.	QUESTION	OPTION A	OPTION B	OPTION C	OPTION D	ANSWER
1	What do you mean by working capital management?	management of current assets	Land	Reserve	Loan	management of current assets
2	Which of the following is not an element of credit policy?	Credit Terms	collection policy	cash discount policy	Sales price	Sales price
3	Which of the following is related to Receivables	cash budget	EOQ	Stock Level	Ageing Schedule	Ageing Schedule
4	EOQ stands for	Economic Order Quantity	Economic order Quandum	Equal Order Quantity	Economic One Quantity	Economic Order Quantity
5	In which current asset is vital to the daily operations of manufacturing companies	Inventory	cash	Bills receivables	Debtors	Inventory
6	Which is the principal tool of cash management?	Bank deposit	Cash budget	Lock box system	Flexible budget	Cash budget
7	Current assets are also known as	Inventory	cash	Gross working capital	fixed asset	Gross working capital
8	Which is the principal method of short term cash forecasting?	Funds flow method	Cash flow method	Receipts and payments method	Financial statement	Cash flow method
9	ABC Analysis is used in	Inventory Management	Receivable Management	Accounts payable management	Corporate Goverances	Inventory Management
10	Advantages of adequate working capital funds include	Cash Discount	Liquidity and Solvency	High morale	All of the above	All of the above
11	Working capital management encompass ---------- problem	Availability of ample funds	To decide upon optimal mix of funds	To find internal source of funds	To find external source of funds	Availability of ample funds
12	What is circulating capital?	Working capital	Share capital	deposits in the bank	Current assets	Working capital
13	Which is not considered as current asset ?	prepaid expenses	Debtors	Furniture	Work in Progress	Furniture
14	Net working means	Current Assets- Current Liabilities	Current Assets+Current Liabilities	Current Assets* Current Liabilities	Current Assets/Current Liabilities	Current Assets- Current Liabilities
15	Net working capital can be	Positive	Gross	Medium	Average	Positive
16	Positive working capital arises when	Current Assets exceeds Current Liabilities	Current Liabilities exceeds Current Assets	Current Assets equal Current Liabilities	Current assets average current liabilities	Current Assets exceeds Current Liabilities
17	Which equation is correct ?	WC =CA- CL	WC= current liability	Both a & b	WC= CA	WC =CA- CL
18	Net working capital indicates ----------concept	Liquidity position	current assets position	Current liabilities positions	Prpfitability position	Liquidity position
19	The changes in the level of working capital occur due to	Policy changes	Economic changes	Environment changes	Political changes	Policy changes
20	Current asset policy is the relationship between current	Current liability	sales volume	Inventory	working capital	Current liability
21	ABC Analaysis stands for	Always Better Control	Always Best Control	All Better Control	All better Cost	Always Better Control
22	Growth industries require ----------	Less working capital	Less fixed assets	More working capital	Increase fixed assets	More working capital
23	VED stands for	Vital End Desirable	Vital Essential Desirable	Very Essential Desirable	Vital Essential Dot	Vital Essential Desirable
24	Trade creditor is	Source of finance	A current liability	Fixed asset	Current assets	A current liability
25	opeation cycle starts with raw material and end with	Finished goods	Work in progress	cash	Receivables	Cash
26	What is Economic Order Quantity?	Cost of an order	Cost of Stock	Reorder level	Optitum order size	Optitum order size
27	Which of the following is not included in cost of	purchase cost	transport cost	import duty	Selling costs	Selling costs
28	--------sources of working capital	Credit papers	Public deposits	Debtors	Creditors	Debtors
29	If A = Annual Requirement, O = Order Cost and C = Carrying Cost per unit per annum, then EOQ	$(2AO/C)^2$	$\sqrt{2AO/C}$	2A÷OC	2A+OC	$\sqrt{2AO/C}$
30	which of the following is not an application of working capital	Day to day expenditure of busine	current obligations for payment	expenditure in the usu	Expenditure to acquire capit	Expenditure to acquire capital
31	Cash ratio shows the availability of --------balances to meet the current assets	cash	Bank	Overdraft	Loan	cash
32	Ageing schedule incorporates the relationship between	Creditors and Days Outstanding	Debtors and Days outstanding	Average Age of Directo	Average age of all employees	Debtors and Days outstanding
33	Which of the following is not a technique of receivables Management?	Collection matrix	fund flow analysis	aging schedule	Days sales outstanding	fund flow analysis
34	Receivables Management deals with	Receipts of raw materials	creditors management	Debtors collection	Inventory Management	Debtors collection
35	EOQ is the quantity that minimizes	Total ordering cost	Total inventory cost	Total interest cost	Safety stock level	Total ordering cost
36	In ABC inventory management system, class A items may require	Higher Safety Stock	Frequent Deliveries	Periodic Inventory syst	updating of inventory records	Higher Safety Stock
37	Equity shares also known as ----------	Ordinary shares	preference shares	equity shares	Share premium	Ordinary shares
38	_____ refers to the amount invested in various components of current assets.	Temporary working capital	Net working capital	Gross working capita	Permanent working capital	Gross working capital
39	_____ is the length of time between the firm's actual cash expenditure and its own cash receipt.	Net operating cycle	Cash conversion cycle	Working capital cycle	Gross operating cycle	Net operating cycle
40	have adequate working capital. It fails to meet its current obligation, which leads to bankruptcy. Identify the type of decision involved to prevent risk of bankruptcy.	Investment decision	Dividend decision	Liquidity decision	Finance decision	Liquidity decision
41	The addition of all current assets investment is known	Net Working Capital	Gross Working capital	Temporary Working (	All of these	Gross Working capital
42	When total current assets exceeds total current	Gross Working Capital	Temporary Working C	Both a and b	Net Working Capital	Net Working Capital
43	Which of the following would not be financed from working capital?	Cash float.	Accounts receivable.	Credit sales.	A new personal computer for	A new personal computer for the office.
44	Current ratio of a concern is 1,its net working capital	Positive	Negative	Nil	Infinitive	Nil
45	Good inventory management is good _____	financial.	marketing.	packaging	purchasing.	purchasing.
46	Ageing schedule incorporates the relationship between	Creditors and Days Outstanding,	Debtors and DaysOutst	Average Age of Direc	Average Age of Average all	Debtors and DaysOutstanding,
47	When using the 'ABC' approach to stock categorisation. Which of the following describes class	High value, high risk	High value, low risk	Low value, high risk	Low value, low risk.	Low value, low risk.
48	Total of all current assets is called	Gross Working Capital	Net working capital	Fixed working capita	Seasonal working capital	Gross Working Capital
49	Which are not types of working capital	Gross Working Capital	Net working capital	Seasonal working cap	Working capital Turnover	Working capital Turnover
50	WC stands for	Working capital	Worth Capital	Working cost	Working change	Working capital
51	which of the following is not current liabilitiy	Bank overdraft	Sundry creditor	Outstanding expenses	debenture	debenture
52	Net working capital=---------- (-) current liability	current assets	fixed assets	Stock	bills receivable	current assets
53	ABC Analaysis stands for	Always Better Control	Always Best Control	All Better Control	All better Cost	Always Better Control
54	Gross working capital is equal to investment in ----------	current liability	current asset	fixed liability	fixed asset	current asset
55	An example of current asset is ----------	plant	Machinery	furniture	debtors	debtors
56	An example for current liability is ----------	Bills payable	bills receivable	prepaid expenses	loan	Bills payable
57	Bank overdraft is an example for ----------	current liability	current asset	fixed liability	fixed asset	current liability
58	Which of the following is considered for cash coverstion cycle	inventory conversion period	Purchase of fixed assets	Issue of shares	Settlement of Discount	inventory conversion period
59	Current ratio is the relationship between current asset and ----------	current liability	current asset	fixed liability	fixed asset	current liability
60	---------- is the most important tool in cash	cash budget.	flexible budget	master budget	production budget	cash budget.
61	Cash management models include ----------	operating cycle model	inventory model	both	none	both
62	In finance, working capital means the same thing as _____.	total assets	fixed assets.	current liabilties	current assets minus current	current assets minus current liabilities
63	Net working capital refers to _____.	total assets minus fixed assets.	current assets minus cu	current assets minus l	current assets.	current assets minus current liabilities.