JEPPIAAR
ENGINEERING COLLEGE

I YEAR / II SEMESTER
BA 4202 – FINANCIAL MANAGEMENT

Dr. E. GOPI
Associate Professor in Management Studies

REGULATION 2021
ANNA UNIVERSITY CHENNAI – 25

JEPPIAAR ENGINEERING COLLEGE

VISION:

Jeppiaar Engineering College intent to be a leading, comprehensive school of management, furthering our global reputation for educational experiences that make a difference in the lives of our students. Through our actions and accomplishments, we will inspire pride among the diverse members of our community. We will be renowned for adding value and engaged service. We continue the upward increase in rankings and scholarly productivity.

MISSION:

- To provide management education to all groups in the community.
- To practice management through scholarly research and education.
- To advance the practice of management within a global context,
- To provide management education to advance professional and community service.

PROGRAMME EDUCATIONAL OBJECTIVES (PEOs):

- To have a thorough understanding of the core aspects of the business
- To provide the learners with the management tools to identify, analyze and create business opportunities as well as solve business problems.
- To inspire and make them practice ethical standards in business.

PROGRAMME OUTCOMES (POs)

- Apply knowledge of management theories and practices to solve business problems.
- Foster Analytical and critical thinking abilities for data-based decision making.
- Ability to develop Value based Leadership ability.
- Ability to understand, analyze and communicate global, economic, legal, and ethical aspects of business.
- Ability to lead themselves and others in the achievement of organizational goals, contributing effectively to a team environment.
- Ability to upgrade their professional and managerial skills in their workplace.
- Ability to pursue lifelong business learning and fulfilling business career.

JEPPIAAR ENGINEERING COLLEGE [MBA]

VISION:

To build Jeppiaar Engineering College [MBA] as an institution of academic excellence in management education, leading to become a world class university.

MISSION:

- To excel in teaching and learning, research and innovation by promoting the principles of scientific analysis and creative thinking.
- To participate in the production, development and dissemination of knowledge and interact with national and international communities.
- To equip students with values, ethics and life skills needed to enrich their lives and enable them to contribute for the progress of society.
- To prepare students for higher studies and lifelong learning, enrich them with the practical skills necessary to excel as future professionals and entrepreneurs for the benefit of Nation's economy.

COURSE OBJECTIVES:

Facilitate student

- Understand the operational nuances of a Finance Manager.

Comprehend the technique of making decisions related to finance function

COURSE OUTCOMES

1. Identify the concepts of financial decision of an organisation
2. Recognize the time value of money
3. Learn the capital budgeting and cost of capital techniques
4. Understand how to decide the decision of capital structure and distribution of dividend
5. Assess the short-term and long-term sources of finance

CO PO MATRIX

Course Outcomes	Program Outcomes					
	PO1	PO2	PO3	PO4	PO5	PO6
CO1	3	3	0	3	0	2
CO2	3	3	0	3	0	2
CO3	3	3	0	3	0	2
CO4	3	3	0	3	0	2
CO5	3	3	0	3	0	2
Average	3	3	0	3	0	2

CONTENT

SYLLABUS

UNIT – I FOUNDATIONS OF FINANCE:

Financial management – An overview- Time value of money- Introduction to the concept of risk and return of a single asset and of a portfolio- Valuation of bonds and shares-Option valuation.

UNIT – II INVESTMENT DECISIONS:

Capital Budgeting: Principles and techniques - Nature of capital budgeting- Identifying relevant cash flows - Evaluation Techniques: Payback, Accounting rate of return, Net Present Value, Internal Rate of Return, Profitability Index - Comparison of DCF techniques - Project selection under capital rationing - Inflation and capital budgeting - Concept and measurement of cost of capital - Specific cost and overall cost of capital

UNIT – III FINANCING AND DIVIDEND DECISION:

Financial and operating leverage - capital structure - Cost of capital and valuation - designing capital structure.

Dividend policy - Aspects of dividend policy - practical consideration - forms of dividend policy - forms of dividends - share splits.

UNIT – IV WORKING CAPITAL MANAGEMENT:

Principles of working capital: Concepts, Needs, Determinants, issues and estimation of working capital - Accounts Receivables Management and factoring - Inventory management - Cash management - Working capital finance: Trade credit, Bank finance and Commercial paper.

UNIT – V LONG TERM SOURCES OF FINANCE:

Indian capital and stock market, New issues market Long term finance: Shares, debentures and term loans, lease, hire purchase, venture capital financing, Private Equity.

Text Books:

1. M.Y. Khan and P.K.Jain Financial management, Text, Problems and cases Tata McGraw Hill, 6th edition, 2011.

2. M. Pandey Financial Management, Vikas Publishing House Pvt. Ltd., 10th edition, 2012.

Reference books:

1. Prasanna Chandra, Financial Management, 9th edition, Tata McGraw Hill, 2012.

2. Srivatsava, Mishra, Financial Management, Oxford University Press, 2011

LESSON PLAN

Subject Code : BA 4204	Degree/Branch : MBA/Core
Subject Name : Financial Management	Year/Sem/Sec :I/II/ B
Faculty Name : Dr. E. Gopi	No. of. Hours : 45 Hours

S.No	Topic	No. of Classes	Text /Ref	Page No.
1.	**UNIT I: FOUNDATIONS OF FINANCE:** Financial management – An overview , Time value of money	4	T2	1
2.	Introduction to the concept of risk and return of a single asset and of a portfolio	2	T2	75,77
3.	Valuation of bonds and shares-Option valuation	3	T2	44,129
4.	**UNIT II: INVESTMENT DECISIONS:** Capital Budgeting: Principles and techniques - Nature of capital budgeting- Identifying relevant cash flows.	3	T2	156-160
5.	Evaluation Techniques: Payback, Accounting rate of return, Net Present Value, Internal Rate of Return, Profitability Index - Comparison of DCF techniques.	3	T2	165-169
6.	Project selection under capital rationing - Inflation and capital budgeting - Concept and measurement of cost of capital - Specific cost and overall cost of capital	3	T2	175-176
7.	**UNIT III: FINANCING AND DIVIDEND DECISION:** Financial and operating leverage	3	R2	499,502
8.	Capital structure - Cost of capital and valuation – designing capital structure.	3	R2	493,502
9.	Dividend policy - Aspects of dividend policy - practical consideration - forms of dividend policy - forms of dividends - share splits.	3	R2	53,546
10.	**UNIT IV: WORKING CAPITAL MANAGEMENT:** Principles of working capital: Concepts, Needs, Determinants, issues and estimation of working capital.	3	T2	656,662
11.	Accounts Receivables Management and factoring. Inventory management – Cash management	4	T2	681,685
12.	Working capital finance: Trade credit, Bank finance and Commercial paper.	2	T2	747,750
13.	**UNIT V: LONG TERM SOURCES OF FINANCE:** Indian capital and stock market, New issues market.	3	T2	462,469
14.	Long term finance: Shares, debentures and term loans.	3	T2	479,487
15.	Lease, hire purchase, venture capital financing, Private Equity.	3	T2	508,534
	Total hours	**45 Hours**		

Text Books	
T1	M.Y. Khan and P.K.Jain Financial management, Text, Problems and cases Tata McGraw Hill, 6th edition, 2011.
T2	M. Pandey Financial Management, Vikas Publishing House Pvt. Ltd., 10th edition, 2012.
	Reference books
R1	Prasanna Chandra, Financial Management, 9th edition, Tata McGraw Hill, 2012.
R2	Srivatsava, Mishra, Financial Management, Oxford University Press, 2011

STUDY MATERIAL
UNIT I

UNIT – I FOUNDATIONS OF FINANCE:

Financial management – An overview- Time value of money- Introduction to the concept of risk and return of a single asset and of a portfolio- Valuation of bonds and shares-Option valuation.

INTRODUCTION

Financial Management is concerned with planning, directing, monitoring, organizing and controlling monetary resources of an organization. Financial Management simply deals with management of money matters. Management of funds is a critical aspect of financial management. The process of financial management takes place: at the individual as well as organization levels. Our area of dealing is from the view- point of organization.

'Financial Management' is a combination of two words, 'Finance' and 'Management'. Finance is the lifeblood of any business enterprise. No business activity can be imagined, without finance. It has been rightly said that business needs money to make more money. However, money begets money, when it is properly managed. Efficient management of business is closely linked with efficient management of its finances. Financial Management is that specialized function of general management, which is related to the procurement of finance and its effective utilization for the achievement of common goal of the organization.

MEANING OF FINANCE

Finance is defined as the provision of money at the time, it is required. Finance is the art and science of managing money. There is no human being, without blood. Similarly, there is no organization that does not require finance, irrespective of the activity, it is engaged in. The way blood is needed for a person to live, so is the requirement of finance to any firm for its survival and growth. Without adequate finance, no organization can possibly achieve its objectives.

Ray G. Jones and Dean Dudley observe that the word 'finance' comes directly from the Latin word 'finis. As a management function, finance has special meaning. Finance function may be defined as the procurement of funds and their effective utilization.

Howard and Uption (1952) defined finance as "the administrative area or set of administrative function in an organization which have to do with the management of flow of cash so that the organization will have the means to carry out its objectives as satisfactory as possible and, at the same time, meet its obligations as they become due."

Distinction between Money and Finance: Money is expressed in currency. Money can be any country's currency, which is in the hands of any person or organization. Finance is also money, any country's currency, which is owned by any person or organization, but lent to others, used to buy an asset or make investment opportunities. The distinction between money and finance can be explained in another way.

If you hold currency, it is money, while you lend it over to others for buying or investing in investment opportunities, it becomes finance.

It is curious to find that the same currency changes its role from 'Money' to 'Finance', with the change of hands. Let us illustrate. Money raised by a bank, in the form of deposits from public, becomes finance when it is lent to borrowers. If it is granted to buy/ construct a home, it becomes

a home loan. It is a vehicle loan, when the amount is lent for buying a car. The amount becomes 'Project Finance', if lent to entrepreneur to start or expand a project.

If you hold money, it does not give any return. You part money in the form of finance, either by way of loan or investment, it starts getting return. Is it not interesting?

MEANING AND DEFINITION—FINANCIAL MANAGEMENT:

The general meaning of finance refers to the provision of funds, as and when needed. However, as management function, the term 'Financial Management' has a distinct meaning. Financial management deals with the study of procuring funds and its effective and judicious utilization, in terms of the overall objectives of the firm, and expectations of the providers of funds. The basic objective is to maximize the value of the firm. The purpose is to achieve maximization of share value to the owners, i.e. equity shareholders.

The objective of every company is to create value for its shareholders. Market price of equity share is the barometer for showing the real 'Value'. The basic objective of financial management is to maximize the shareholders' wealth, represented by the market value of equity shares.

Financial Management is concerned with three activities:

• Anticipating financial needs, which means estimating requirements of the firm in terms of long-term and short-term needs or investment in fixed and current assets.

• Acquiring financial resources from different sources to meet the financial needs.

• Allocating funds to maximize shareholders' wealth.

The term financial management has been defined differently by various authors. Some of the authoritative definitions are given below:

1. "Financial Management is concerned with the efficient use of an important Economic resource, namely, Capital Funds." – Solomon
2. "Financial Management is concerned with the managerial decisions that result in the acquisition and financing of short-term and long-term credits for the firm." – Phillioppatus
3. "Financial Management is concerned with the acquisition, financing and Management of assets with some overall goal in mind."– James C. Van Horne
4. "Financial Management deals with procurement of funds and their effective utilization in the business." – S.C. Kuchhal From the above definitions, two basic aspects of financial management emerge.

Functions of financial management:

Functions of financial management can be broadly divided into two groups.

1. **Executive** functions of financial management, and
2. **Routine** functions of financial management.

This division of functions of financial management is depicted below.

Executive Functions of Financial Management:

The executive functions of financial management are depicted & listed below.

Eight executive functions of financial management (FM) are:-

1. **Estimating capital requirements** : The company must estimate its capital requirements (needs) very carefully. This must be done at the promotion stage. The company must estimate its fixed capital needs and working capital need. If not, the company will become over-capitalized or under-capitalized.

2. **Determining capital structure** : Capital structure is the ratio between owned capital and borrowed capital. There must be a balance between owned capital and borrowed capital. If the company has too much owned capital, then the shareholders will get fewer dividends. Whereas, if the company has too much of borrowed capital, it has to pay a lot of interest. It also has to repay the borrowed capital after some time. So the finance managers must prepare a balanced capital structure.
3. **Estimating cash flow** : Cash flow refers to the cash which comes in and the cash which goes out of the business. The cash comes in mostly from sales. The cash goes out for business expenses. So, the finance manager must estimate the future sales of the business. This is called Sales forecasting. He also has to estimate the future business expenses.
4. **Investment Decisions** : The business gets cash, mainly from sales. It also gets cash from other sources. It gets long-term cash from equity shares, debentures, term loans from financial institutions, etc. It gets short-term loans from banks, fixed deposits, dealer deposits, etc. The finance manager must invest the cash properly. Long-term cash must be used for purchasing fixed assets. Short-term cash must be used as a working capital.
5. **Allocation of surplus** : Surplus means profits earned by the company. When the company has a surplus, it has three options, viz.,
    1. It can pay dividend to shareholders.
    2. It can save the surplus. That is, it can have retained earnings.
    3. It can give bonus to the employees.
6. **Deciding Additional finance** : Sometimes, a company needs additional finance for modernization, expansion, diversification, etc. The finance manager has to decide on following questions.
    1. When the additional finance will be needed?
    2. For how long will this finance be needed?
    3. From which sources to collect this finance?
    4. How to repay this finance?

    Additional finance can be collected from shares, debentures, loans from financial institutions, fixed deposits from public, etc.
7. **Negotiating for additional finance** : The finance manager has to negotiate for additional finance. That is, he has to speak to many bank managers. He has to persuade and convince them to give loans to his company. There are two types of loans, viz., short-term loans and long-term loans. It is easy to get short-term loans from banks. However, it is very difficult to get long-term loans.
8. **Checking the financial performance** : The finance manager has to check the financial performance of the company. This is a very important finance function. It must be done regularly. This will improve the financial performance of the company. Investors will invest their money in the company only if the financial performance is good. The finance manager must compare the financial performance of the company with the established standards. He must find ways for improving the financial performance of the company.

Routine Functions of Financial Management:

The routine functions are also called as **incidental** functions. Routine functions are clerical functions. They help to perform the Executive functions of financial management. The routine functions of financial management are briefly listed below. Six routine functions of financial management (FM) are:-

1. Supervision of cash receipts and payments.

2. Safeguarding of cash balances.
3. Safeguarding of securities, insurance policies and other valuable papers.
4. Taking proper care of mechanical details of financing.
5. Record keeping and reporting.
6. Credit Management.

- Understanding Capital Markets

Objectives of Financial Management:

- **Profit maximization :** The main objective of financial management is profit maximization. The finance manager tries to earn maximum profits for the company in the short-term and the long-term. He cannot guarantee profits in the long term because of business uncertainties. However, a company can earn maximum profits even in the long-term, if:-
- The Finance manager takes proper financial decisions. He uses the finance of the company properly.
- **Wealth maximization :** Wealth maximization (shareholders' value maximization) is also a main objective of financial management. Wealth maximization means to earn maximum wealth for the shareholders. So, the finance manager tries to give a maximum dividend to the shareholders. He also tries to increase the market value of the shares. The market value of the shares is directly related to the performance of the company. Better the performance, higher is the market value of shares and vice-versa. So, the finance manager must try to maximize shareholder's value.
- **Proper estimation of total financial requirements :** Proper estimation of total financial requirements is a very important objective of financial management. The finance manager must estimate the total financial requirements of the company. He must find out how much finance is required to start and run the company. He must find out the fixed capital and working capital requirements of the company. His estimation must be correct. If not, there will be shortage or surplus of finance. Estimating the financial requirements is a very difficult job. The finance manager must consider many factors, such as the type of technology used by company, number of employees employed, scale of operations, legal requirements, etc.
- **Proper mobilization :** Mobilization (collection) of finance is an important objective of financial management. After estimating the financial requirements, the finance manager must decide about the sources of finance. He can collect finance from many sources such as shares, debentures, bank loans, etc. There must be a proper balance between owned finance and borrowed finance. The company must borrow money at a low rate of interest.
- **Proper utilization of finance :** Proper utilization of finance is an important objective of financial management. The finance manager must make optimum utilization of finance. He must use the finance profitable. He must not waste the finance of the company. He must not invest the company's finance in unprofitable projects. He must not block the company's finance in inventories. He must have a short credit period.
- **Maintaining proper cash flow :** Maintaining proper cash flow is a short-term objective of financial management. The company must have a proper cash flow to pay the day-to-day expenses such as purchase of raw materials, payment of wages and salaries, rent, electricity bills, etc. If the company has a good cash flow, it can take advantage of many opportunities such as getting cash discounts on purchases, large-scale purchasing, giving

credit to customers, etc. A healthy cash flow improves the chances of survival and success of the company.

- **Survival of company :** Survival is the most important objective of financial management. The company must survive in this competitive business world. The finance manager must be very careful while making financial decisions. One wrong decision can make the company sick, and it will close down.
- **Creating reserves :** One of the objectives of financial management is to create reserves. The company must not distribute the full profit as a dividend to the shareholders. It must keep a part of it profit as reserves. Reserves can be used for future growth and expansion. It can also be used to face contingencies in the future.
- **Proper coordination :** Financial management must try to have proper coordination between the finance department and other departments of the company.
- **Create goodwill :** Financial management must try to create goodwill for the company. It must improve the image and reputation of the company. Goodwill helps the company to survive in the short-term and succeed in the long-term. It also helps the company during bad times.
- **Increase efficiency :** Financial management also tries to increase the efficiency of all the departments of the company. Proper distribution of finance to all the departments will increase the efficiency of the entire company.
- **Financial discipline :** Financial management also tries to create a financial discipline. Financial discipline means:-
- To invest finance only in productive areas. This will bring high returns (profits) to the company.
- To avoid wastage and misuse of finance.
- **Reduce cost of capital :** Financial management tries to reduce the cost of capital. That is, it tries to borrow money at a low rate of interest. The finance manager must plan the capital structure in such a way that the cost of capital it minimized.
- **Reduce operating risks :** Financial management also tries to reduce the operating risks. There are many risks and uncertainties in a business. The finance manager must take steps to reduce these risks. He must avoid high-risk projects. He must also take proper insurance.
- **Prepare capital structure :** Financial management also prepares the capital structure. It decides the ratio between owned finance and borrowed finance. It brings a proper balance between the different sources of. capital. This balance is necessary for liquidity, economy, flexibility and stability.

Features of Financial Management:

- According to **Solomon**, "Financial management is concerned with the efficient use of an important economic resource, namely, capital funds."
- According to **J. L. Massie**, "Financial management is the operational activity of a business that is responsible for obtaining and effectively utilizing the funds necessary for efficient operation."
- According to **Weston & Brigham**, "Financial management is an area of financial decision making harmonizing individual motives & enterprise goals."
- According to **Howard & Upton**, "Financial management is the application of the planning & control functions of the finance function."

- According to **J. F. Bradley**, "Financial management is the area of business management devoted to the judicious use of capital & careful selection of sources of capital in order to enable a spending unit to move in the direction of reaching its goals."

Main features of financial management:

On the basis of the above definitions, the following are the main characteristics of the financial management-

- **Analytical Thinking-**Under financial management financial problems are analyzed and considered. Study of trend of actual figures is made and ratio analysis is done.
- **Continuous Process-**previously financial management was required rarely but now the financial manager remains busy throughout the year.
- **Basis of Managerial Decisions-** All managerial decisions relating to finance are taken after considering the report prepared by the finance manager. The financial management is the base of managerial decisions.
- **Maintaining Balance between Risk and Profitability-**Larger the risk in the business larger is the expectation of profits. Financial management maintains balance between the risk and profitability.
- **Coordination between Process-** There is always a coordination between various processed of the business.
- **Centralized Nature-** Financial management is of a centralized nature. Other activities can be decentralized but there is only one department for financial management.

Responsibility of Financial Management:

The responsibilities of financial management or financial manager vary widely from one business unit to another, depending upon the size and the nature of the business.

In the light of this wide diversity of organizational practices, it is not surprising to find that in most of the company, financial officer is responsible for the routine finance functions. The main responsibilities of the financial officer are as follows:

1. Financial Planning

The main responsibility of the chief financial officer in a large concern is to forecast the needs and sources of finance and ensure the adequate supply cash at proper time for the smooth running of the business. He is to see that cash inflow and outflow must be uninterrupted and continuous. For this purpose, financial planning is necessary, i.e., he must decide the time when he needs money, the sources of supply of money and the investments patters so that the company may meet its obligations properly and maintain its goodwill in the market. The financial manager is also to see that there is no surplus money in the business which earns nothing.

2. Raising of Necessary Funds

The second main responsibility of the financial officer is to see the nature of the need, i.e., whether finances are required for long-term or for short-term. He must assess the alternative sources of supply of finance taking into view the cost of raising funds, its effect on various concerned parties, i.e. shareholders, creditors, employees and the society, control and risk in financing and elasticity in capital structure etc.

3. Controlling the Use of Funds

The financial manager is also responsible for the proper utilization of funds. Assets must be used effectively so as to earn higher profits; inflow and outflow of cash must be controlled in a

manner so as to meet the current as well as future obligations; unnecessary expenditure should be curtailed and there should be left no possibility for misappropriation of money.

4. Disposition of profits

Appropriation of profits is one of the main responsibilities of the financial manager. He is to advise to the top executives as how much of the profits should be retained in the business as reserves for future expansion; how much to be used in repaying the debts; and how much to be distributed to the shareholders as dividend. On the basis of the advice given by the financial manage, the resolutions regarding deprecations, reserves, general reserves and distribution of dividends are carried out in the meeting of board of directors of the company.

5. Other Responsibilities

Over and above, the responsibilities sated above, there are certain other responsibilities of the financial manager. These are:

a) Responsibility to owners

Shareholders or stock-holders are the real owners of the concern. Financial manager has the prime responsibility to those who have committed funds to the enterprise. He should not only maintain the financial health of the enterprise, but should also help to produce a rate of earning that will reward the owners adequately for the risk capital they provide.

b) Legal obligations

Financial manager is also under an obligation to consider the enterprise in the light of its legal obligations. A host of laws, taxes and rules and regulations cover neatly every move and policy. Good financial management help to develop a sound legal framework

c) Responsibilities of Employees

The financial management must try to produce a healthy going concern capable of maintaining regular employment at satisfactory rate of pay under favorable working conditions. The long term financial interests of management, employee's, owners are common.

d) Responsibilities to customers

In order to make the payments of its customers' bill, the effective financial management is necessary. Sound financial management ensures the creditors continued supply of raw material

e) Wealth Maximization

Prof. Soloman of Standford University has argued that the main goal of the finance function is wealth maximization. The other goals may be achieved automatically

In the light of the above discussion, we can conclude that the main responsibility of the financial manager is not only to maintain the financial health of the organization but also to increase the economic welfare of the shareholders by utilizing the funds in an effective manner.

Scope of financial management in any organization of your choice:

Scope of Financial Management:

Financial management has a wide scope. According to Dr. S. C. Saxena, the scope of financial management includes the following five 'A's.

Anticipation : Financial management estimates the financial needs of the company. That is, it finds out how much finance is required by the company.

Acquisition : It collects finance for the company from different sources.

Allocation : It uses this collected finance to purchase fixed and current assets for the company.

Appropriation : It divides the company's profits among the shareholders, debenture holders, etc. It keeps a part of the profits as reserves.

Assessment : It also controls all the financial activities of the company. Financial management is the most important functional area of management. All other functional areas such as production management, marketing management, personnel management, etc. depends on Financial management. Efficient financial management is required for survival, growth and success of the company or firm.

"The goal of profit maximization does not provide an operationally useful criterion" – Explain:

Profit maximization refers to the maximization of income or earnings of a firm. The arguments in favour of profit maximization as the objectives of financial management are

1. **Nature Goal :** Profit is the aim of any business. Naturally, the goal of financial management should be profit maximization.
2. **Measure of Efficiency :** Profit is a measure of efficiency. Higher profits imply greater efficiently. Hence, the objective of profit maximization is quite rational.
3. Internal Generation of Funds Profit lead to internal generation of funds. It helps to finance the growth of the business.
4. **Protection against Risks** : Profits provide protection against risks when a company is faced with unfavourable conditions, (such as fall in prices, increase n costs and severe competition). Accumulated profits serve as a cushion to absorb the shocks.
5. **Fulfillment of Social Obligations:** Profits are essential for fulfilling social obligations of the business. The goal or profit maximization helps to maximize social welfare.
1. **Vague :** The term profit is vague. It has different meanings. For instance, profit may refer to long-term profits or short-term profits. It may refer to profit before tax or profit after tax or short-term profits. It may refer to profit before tax or profit after tax or even operating profits.
2. **Neglects Time Value of Money :** The objective of profit maximization neglects time value of money. Profits of today are more valuable than profits to be earned after five years. But profit maximization objective treats all profits as equal, irrespective of the timing.
3. **Ignores Risk Factor.** Some projects are more risky than the others though the expected earnings may be equal. But, the risk factor is not considered by the profit maximization goal.
4. **Taint of Immorality:** Profit maximization implies exploitation of consumers, workers and the society. Hence, it is regarded as immoral.
5. **Invalid:** Profit maximization may be a valid objective under conditions of perfect competition. As the markets are not perfect, it cannot be a valid objective.
6. **Inadequate:** In company form of a organization, there is separation of ownership and control. Share holders are the owners. But, control is in the hands of professional managers. Creditors, financial institutions, workers, consumers and the society are concerned with the company's operations. The management has to reconcile the conflicting interests of these stake holders. Profit maximization goal is inadequate for the purpose.

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 variants of profit maximization goal are :

To overcome the problem of vagueness, the term profit may be defined specifically as profit after taxes. But this objective is also not sound as it will not maximize the economic welfare of the share holders.

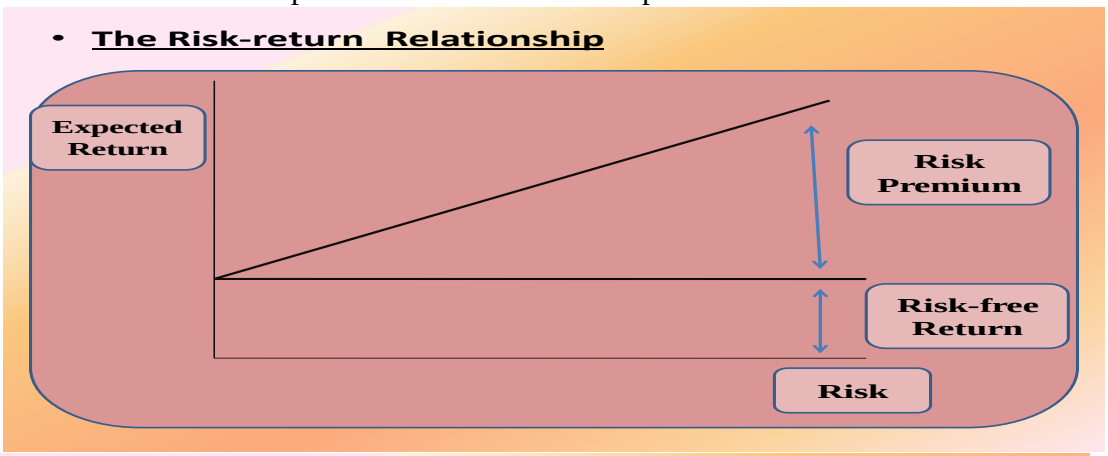
For example, A Ltd has 10,000 equity and earns a profit of Rs.50,000. The earnings per share (EPS) are Rs.5. The company issues 5000 additional shares and invests the proceeds in the business. If profit after tax increases to Rs.60,000 the EPS will decline to Rs.4 (Rs.60,000 divided by 15,000). It is clear that maximizing profit after tax is not necessarily advantageous to the share holders.

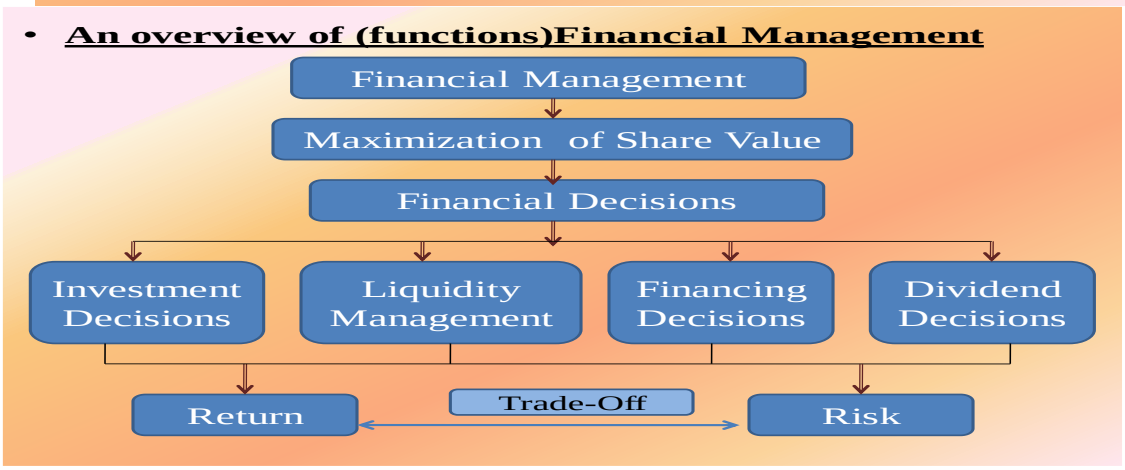
ii) **Maximizing the EPS**

The objective of maximization of earnings per share also suffers from draw backs. It ignores time value of money and the risk element. Because of the drawbacks profit maximization, as an objective of financial management has been rejected.

Risk-return Trade-off

- Risk and expected return move in tandem; the greater the risk, the greater the expected return.
- Financial decisions of the firm are guided by the **risk-return trade-off**.
- The return and risk relationship: Return = Risk-free rate + Risk premium
- Risk-free rate is a compensation for time and risk premium for risk.





Managers versus Shareholders' Goals

- A company has stakeholders such as employees, debt-holders, consumers, suppliers, government and society.
- Managers may perceive their role as reconciling conflicting objectives of stakeholders. This stakeholders' view of managers' role may compromise with the objective of SWM.
- Managers may pursue their own personal goals at the cost of shareholders, or may play safe and create satisfactory wealth for shareholders than the maximum.
- Managers may avoid taking high investment and financing risks that may otherwise be needed to maximize shareholders' wealth. Such "satisfying" behaviour of managers will frustrate the objective of SWM as a normative guide.

Financial Goals and Firm's Mission and Objectives

- Firms' primary objective is maximizing the welfare of owners, but, in operational terms, they focus on the satisfaction of its customers through the production of goods and services needed by them
- Firms state their vision, mission and values in broad terms
- Wealth maximization is more appropriately a decision criterion, rather than an objective or a goal.
- Goals or objectives are missions or basic purposes of a firm's existence
- The shareholders' wealth maximization is the second-level criterion ensuring that the decision meets the minimum standard of the economic performance.
- In the final decision-making, the judgement of management plays the crucial role. The wealth maximization criterion would simply indicate whether an action is economically viable or not.

Organisation of the Finance Functions

- Reason for placing the finance functions in the hands of top management
  - Financial decisions are crucial for the survival of the firm.
  - The financial actions determine solvency of the firm
  - Centralisation of the finance functions can result in a number of economies to the firm.

Status and Duties of Finance Executives

- The exact organisation structure for financial management will differ across firms.
- The financial officer may be known as the financial manager in some organisations, while in others as the vice-president of finance or the director of finance or the financial controller.

Role of Treasurer and Controller

- Two more officers—the **treasurer** and the **controller**—may be appointed under the direct supervision of CFO to assist him or her.
- The treasurer's function is to raise and manage company funds while the controller oversees whether funds are correctly applied.

Time Preference for Money

- Most individuals value the opportunity to receive money now higher than waiting for one or more periods to receive the same amount.
- **Time preference for money** is an individual's preference for possession of a given amount of money now, rather than the same amount at some future time.
- Three reasons may be attributed to the individual's time preference for money:
  - risk
  - preference for consumption
  - investment opportunities

Required Rate of Return

- The time preference for money is generally expressed by an interest rate. This rate will be positive even in the absence of any risk. It may be therefore called the **risk-free rate.**
- An investor requires compensation for assuming risk, which is called **risk premium**.
- The investor's **required rate of return** is:

  Risk-free rate + Risk premium
  - **The Required rate of return may also be called the opportunity cost of capital**

Time Value Adjustment

- Two most common methods of adjusting cash flows for time value of money:
  - **Compounding**—the process of calculating **future values** of cash flows and
  - **Discounting**—the process of calculating **present values** of cash flows.

Future Value

- **Compounding** is the process of finding the future values of cash flows by applying the concept of compound interest.
- **Compound interest** is the interest that is received on the original amount (principal) as well as on any interest earned but not withdrawn during earlier periods.
- **Simple interest** is the interest that is calculated only on the original amount (principal), and thus, no compounding of interest takes place.

Present Value

- **Present value** of a future cash flow (inflow or outflow) is the amount of current cash that is of equivalent value to the decision-maker.
- **Discounting** is the process of determining present value of a series of future cash flows.
- The interest rate used for discounting cash flows is also called the discount rate.

Generally individuals show a time preference for money. Give reasons for such a preference:

The concept of time value of money is simple. According to this concept, the same amount of cast, receivable during different time periods has different values. The value of money received today is greater than the value of the same amount receivable after 5 to 10 years. The sooner the money is received the better it is. If Mr. Rajesh is given the option of receiving Rs.10,000 today or after one year he will definitely prefer to receive the amount, today itself. This is called time preference for money. However, he may be ready to receive the money after one year. If he is suitable rewarded for his waiting. The reward is called interest. Mrs. Rajesh may agree to receive Rs.10,000 after 1 year if he is paid an interest of Rs.1200. So, time preference for money is expressed as interest rate. Hence, time value of money is to be recognized in making financial decisions. This is done by making appropriate adjustments through discounting or compounding of cash flows. Reasons for Time Preference for Money People prefer to receive money, earlier than later. The reasons are :

1. **Uncertainty:** Future is uncertain. There is a chance of not getting the money at all. Hence, people like to receive the money today itself rather than waiting for the future.
2. **Preference for Consumption:** The money may be needed to meet urgent current needs. Therefore, people prefer to receive money as early as possible.
3. **Investment Opportunities:** Money has time value. If Mr.Chandran received Rs.50,000 today, he can invest the amount and earn interest. Suppose he gets an interest of 10% he will have Rs.55,000 at the end of 1 year. Therefore, it is good fro him to receive Rs.50,000 now as it will grow into Rs.55,000 after one year.

What is annuity? Explain with an example explain how can future value of an annuity be determined:

"A Rupee today is better than a Rupee tomorrow"

The earlier the money is received, greater the potential for increasing the wealth. Due to inflation, money may lose its purchasing power overtime.

Present Value Factor (PVF) = $1 / (1 + r)^n$

Present value (PV) = Cash flows * PVF

Illustration

What is the present value of Rs. 10,000 to be received after 5 years when the rate of interest is 10%?

Solution:

PVF = $1 / (1 + r)^n = 1 / (1 + 0.10)^5 = 0.621$

PV = 10,000 * 0.621 = 6,210

Illustration

A Rs. 10,000 par value bond bearing a coupon rate of 12% will mature after 5 years. **What is the value of the bond**, if the discount rate is 15%?

Solution:

Interest earned p.a. = 10,000 * 12/100 = Rs. 1,200

Principal = Rs. 10,000

PVAF = $(1 – [1 / (1 + r)^n]) / r$

PVAF = $\{1 – [1 / (1 + 0.15)^5] / 0.15 \} = 3.352$

PVF = $1 / (1 + r)^n = 1 / (1 + 0.15)^5 = 0.497$

Value of bond = (3.352 * 1,200) + (0.497 * 10,000)

= 4,022 + 4970 = Rs. 8,992

Relationship between effective rate of interest and nominal rate of interest:

The nominal interest rate is the periodic interest rate times the number of periods per year. For example, a nominal annual interest rate of 12% based on monthly compounding means a 1% interest rate per month (compounded). A nominal interest rate for compounding periods less than a year is always lower than the equivalent rate with annual compounding (this immediately follows from elementary algebraic manipulations of the formula for compound interest). Note that a nominal rate without the compounding frequency is not fully defined: for any interest rate, the effective interest rate cannot be specified without knowing the compounding frequency and the rate. Although some conventions are used where the compounding frequency is understood, consumers in particular may fail to understand the importance of knowing the effective rate.

Nominal interest rates are not comparable unless their compounding periods are the same; effective interest rates correct for this by "converting" nominal rates into annual compound interest. In many cases, depending on local regulations, interest rates as quoted by lenders and in advertisements are based on nominal, not effective interest rates, and hence may understate the interest rate compared to the equivalent effective annual rate.

The term should not be confused with simple interest (as opposed to compound interest) which is not compounded.

The effective interest rate is always calculated as if compounded annually. The effective rate is calculated in the following way, where r is the effective rate, i the nominal rate (as a decimal, e.g. 12% = 0.12), and n the number of compounding periods per year (for example, 12 for monthly compounding):

$$r = (1 + i/n)^n - 1$$

Monthly compounding:

Example 1: A nominal interest rate of 6%/a compounded monthly is equivalent to an effective interest rate of 6.17%.

Example 2: 6% annually is credited as 6%/12 = 0.5% every month. After one year, the initial capital is increased by the factor $(1+0.005)^{12} \approx 1.0617$.

Daily compounding:

A loan with daily compounding will have a substantially higher rate in effective annual terms. For a loan with a 10% nominal annual rate and daily compounding, the effective annual rate is

10.516%. For a loan of $10,000 (paid at the end of the year in a single lump sum), the borrower would pay $51.56 more than one who was charged 10% interest, compounded annually.

"Financial management is nothing but managerial decision making on asset mix, capital mix and profit allocation" – Explain:

a. Investment Decision

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

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

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

b. Financial Decision

Financial decision is yet another important function which a financial manger must perform. It is important to make wise decisions about when, where and how should a business acquire funds. Funds can be acquired through many ways and channels. Broadly speaking a correct ratio of an equity and debt has to be maintained. This mix of equity capital and debt is known as a firm's capital structure. A firm tends to benefit most when the market value of a company's share maximizes this not only is a sign of growth for the firm but also maximizes shareholders wealth. On the other hand the use of debt affects the risk and return of a shareholder. It is more risky though it may increase the return on equity funds. A sound financial structure is said to be one which aims at maximizing shareholders return with minimum risk. In such a scenario the market value of the firm will maximize and hence an optimum capital structure would be achieved. Other than equity and debt there are several other tools which are used in deciding a firm capital structure.

c. Dividend Decision

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

d. Liquidity Decision

It is very important to maintain a liquidity position of a firm to avoid insolvency. Firm's profitability, liquidity and risk all are associated with the investment in current assets. In order to maintain a tradeoff between profitability and liquidity it is important to invest sufficient funds in current assets. But since current assets do not earn anything for business therefore a proper calculation must be done before investing in current assets. Current assets should properly be valued and disposed of from time to time once they become non

profitable. Currents assets must be used in times of liquidity problems and times of insolvency

Options

- An option is a contract that gives the holder a right, without any obligation, to buy or sell an asset at an agreed price on or before a specified period of time.
- The option to buy an asset is known as a **call option.**
- The option to sell an asset is called a **put option**.
- The price at which option can be exercised is called an exercise **price** or a strike price.
- The asset on which the put or call option is created is referred to as the **underlying asset**.
- The **option premium** is price that the holder of an option has to pay for obtaining a call or a put option.

When an Option can be exercised

- **European option** When an option is allowed to be exercised only on the maturity date, it is called a European option.
- **American option** When the option can be exercised any time before its maturity, it is called an American option.

Possibilities at Expiration

- **In-the-money** A put or a call option is said to in-the-money when it is advantageous for the investor to exercise it.
- **Out-of-the-money** A put or a call option is out-of-the-money if it is not advantageous for the investor to exercise it.
- **At-the-money** When the holder of a put or a call option does not lose or gain whether or not he exercises his option.

Call Option

Buy a call option

a. You should exercise call option when:
   Share price at expiration > Exercise price.
b. Do not exercise call option when:
   Share price at expiration < Exercise price.
c. The value of the call option at expiration is:
   Value of call option at expiration = Maximum
   [Share price – Exercise price, 0].
d. The expression above indicates that the value of a call option at expiration is the maximum of the share price minus the exercise price or zero.

The call buyer's gain is call seller's loss.

Put Option

Buy a put option

- Exercise the put option when:
  - Exercise price > Share price at expiration.
- Do not exercise the put option when:
  - Exercise price < Share price at expiration.
- The value or payoff of a put option at expiration will be:

Value of put option at expiration = Maximum [Exercise price – Share price at expiration, 0].

The put option buyer's gain is the seller's loss.

Options Trading in India

i. The Security Exchange Board of India (SEBI) has announced a list of 31 shares for the stock-based option trading from July 2002. SEBI selected these shares for option trading on the basis of the following criteria:
ii. Shares must be among the top 200 in terms of market capitalisation and trading volume.
iii. Shares must be traded in at least 90 per cent of the trading days.
iv. The non-promoter holding should be at least 30 per cent and the market capitalisation of free-float shares should be Rs 750 crore.
v. The six-month average trading volume in the share in the underlying cash market should be a minimum of Rs 5 crore.
vi. The ratio of daily volatility of the share vis-à-vis the daily volatility of the index should not be more than four times at any time during the previous six months.
vii. The minimum size of the contract is Rs 2 lakh. For the first six months, there would be cash settlement in options contracts and afterwards, there would be physical settlement. The option sellers will have to pay the margin, but the buyers will have to only pay the premium in advance. The stock exchanges can set limits on exercise price.

Index Options

i. Index options are call or put options on the stock market indices. In India, there are options on the Bombay Stock Exchange (BSE)—Sensex and the National Stock Exchange (NSE)—Nifty.
ii. The Sensex options are European-type options and expire on the last Thursday of the contract month. The put and call index option contracts with 1-month, 2-month and 3-month maturity are available. The settlement is done in cash on a T + 1 basis and the prices are based on expiration price as may be decided by the Exchange. Option contracts will have a multiplier of 100.
iii. The multiplier for the NSE Nifty Options is 200 with a minimum price change of Rs 10 (200×0.05).

Factors Determining Option Value

1. Exercise price and the share (underlying asset) price
2. Volatility of returns on share
3. Time to expiration
4. Interest rates

Model for Option Valuation

- Simple binomial tree approach to option valuation.
- Black-Scholes option valuation model.

Simple Binomial Tree Approach

- Sell a call option on the share. We can create a portfolio of certain number of shares (let us call it delta, D) and one call option by going long on shares and short on options that there is no uncertainty of the value of portfolio at the end of one year.
- Formula for determining the **option delta**, represented by symbol D, can be written as follows:
- Option Delta = Difference in option Values / Difference in Share Prices.
- The value of portfolio at the end of one year remains same irrespective of the increase or decrease in the share price.
- The value of the call option will remain the same irrespective of any probabilities of increase or decrease in the share price. This is so because the option is valued in terms of

the price of the underlying share, and the share price already includes the probabilities of its rise or fall.

Black and Scholes Model for Option Valuation

- The B–S model is based on the following assumptions:
- The rates of return on a share are log normally distributed.
- The value of the share (the underlying asset) and the risk-free rate are constant during the life of the option.
- The market is efficient and there are no transaction costs and taxes.
- There is no dividend to be paid on the share during the life of the option.
- The B–S model is as follows:
  - $C_0 = S_0 N(d_1) - Ee^{-rft} N(d_2)$
- where
- C_0 = the current value of call option
- S_0 = the current market value of the share
- E = the exercise price
- e = 2.7183, the exponential constant
- r_f = the risk-free rate of interest
- t = the time to expiration (in years)
- $N(d_1)$ = the cumulative normal probability density function

Features of B–S Model

- Black–Scholes model has two features-
  - The parameters of the model, except the share price volatility, are contained in the agreement between the option buyer and seller.
  - In spite of its unrealistic assumptions, the model is able to predict the true price of option reasonably well.

The model is applicable to both European and American options with a few adjustments

Option's Delta or Hedge Ratio

- The **hedge ratio** is a tool that enables us to summaries the overall exposure of portfolios of options with various exercise prices and maturity periods.
- An option's hedge ratio is the change in the option price for a Re 1 increase in the share price.
- A call option has a positive hedge ratio and a put option has a negative hedge ratio.
- Under the Black–Scholes option valuation formula, the hedge ratio of a call option is $N(d_1)$ and the hedge ratio for a put is $N(d_1) - 1$.

Dividend-Paying Share Option

- We can use slightly modified

  B–S model for this purpose. The share price will go down by an amount reflecting the payment of dividend. As a consequence, the value of a call option will decrease and the value of a put option will increase.
- We also need to adjust the volatility in case of a dividend-paying share since in the B–S model it is the volatility of the risky part of the share price. This is generally ignored in practice.

Ordinary Share as an Option

- The limited liability feature provides an opportunity to the shareholders to default on a debt.

- The debt-holders are the sellers of call option to the shareholders. The amount of debt to be repaid is the exercise price and the maturity of debt is the time to expiration.
- The shareholders' option can be interpreted as a put option. The shareholders can sell (hand-over) the firm to the debt-holders at zero exercise price if they do not want to make the payment that is due.

PROBLEMS & SOLUTIONS

1. A patent has been purchased for Rs.17,50,000 has a remaining life of 13 years ad Rs.2,50,000 salvage value. It is estimated that the patent will generate operating revenues Rs.3,50.000 per year through out its life. Operating cost will be Rs.80,000 per year from year 2 to 13. Using an interest rate of 12% p.a. find the present values of this investment. **(May/June 2007)**

Solution:

CIF = Revenue – cost

3,50,000 – 80,000 = 2,70,000 (PVF for 13 years)

= 2, 70,000

Present Value of CIF = 2, 70,000 * PVF (2-13 years)

Present Value of Salvage value = 2,50,000 * PVF @12%

Net present value = Present value of CIF + Present Value of Salvage Value

= 17,50,000

2. The required rate of return on a portfolio with beta of 1.2 is 18% and the risk-free is 6%. According to CAPM:

1. What is the expected rate of return on the market portfolio?
2. A stock, say delta, with beta of 1.5, sells for Rs.50, one year from now it is expected to yield a dividend income of Rs.6. What price do investors expect after one year? **(May/June 2007)**

Solution:

1) Expected return = $R_f + \beta(R_m - R_f)$

$18\% = 6\% + 1.2 (R_m - 6\%)$

$R_m = 16\%$

2) Expected return after one year:

$= 6\% + (16\% - 6\%)$

$= 6\% + 15\% = 21\%$

3.On 31st December 1980, the balance sheet of a limited company disclosed the following position: **(Nov/Dec 2007)**

Balance Sheet as on 31.12.1980

Equity Share Capital (40,000 equity shares of Rs.10 each fully paid)	4,00,000	Goodwill	40,000
		Fixed Assets	5,00,000
General reserve	90,000	Current assets	2,00,000
P/L account	20,000		
5% Debentures	1,00,000		
Current Liabilities	1,30,000		
	7,40,000		7,40,000

On 31st December 1970, the fixed assets were independently valued at Rs.5,50,000 and the good will at Rs. 50,000. The net profits for the last three years were as under

1968	Rs.51,600
1969	Rs.52,000
1970	Rs.51,650

Of which 20% was placed to reserve, this proportion being considered reasonable in the industry in which this company is engaged and where a fair return is estimated at the rate of 10%. Calculate the value of the company's share by a

a) The assets method and
b) The yield method

Solution:

Assets Method:

Goodwill as revalued		Rs.50,000
Tangible assets		Rs. 5,50,000
Current Assets as per Balance sheet		Rs. 2,00,000
		8,00,000
Less: 5% Debentures	Rs. 1,00,000	
Current Liabilities	Rs. 1,30,000	
	2,30,000	
		5,70,000
Value per share	5,70,000 /40,000 =	Rs. 14.25

Yield Method:

Total Profit =	51,600+52,000+51,650	= 1,55,250
Average profit =	1,55,250/3	= 51,750
Less: Transfer to General reserve @ 20%		10,350
		41,400

Expected rate of return on Equity capital

= 41,400 /4,00,000 * 100

= 10.35%

Value per share = Expected Rate of return /Normal rate * paid up value per share

Value per share = 10.35 /10 *10 = Rs. 10.35

4. A share is quoted is Rs.60. An investor expects the company to pay a dividend of Rs.3 per share, one year from now. The expected price one year from now is Rs.78.50

Share price at present	=	Rs.60
Expected Dividend	=	Rs.3 per share
Expected share price one year from now	=	Rs.78.50

i. What is the expected dividend yield, the rate of price change and holding period yield?

PO = D1 / 1+ke+P1 / 1+ke

60 = 3 / 1+ke + 78.50 / 1+ke

60 = 81.50 / 1+ke

60 + 60 ke = 81.50

Ke = 35.83%

ii. If the beta of the share is 1.5,the risk free rate is 6 percent and the market risk premium is 10 percent, what is the required rate of return?

Risk Free Rate = Rf = 6%
Market Risk Premium = Rm = 10%
Beta of the share =?= 105
Required Rate of return =Ri= Rf + (Rm – Rf)?
= 6+(10-6) 1.5
= 6+6 = 12%

5. Using the following details, calculate, i) expected rate of returns of portfolio in each using capital asset pricing model, ii) average return of portfolio. **(May/June 2009)**

Investment in	Initial Price	Dividends	Market Price at the end of the	Beta factor year
	Rs.	Rs.	Rs.	
A) Equity share of L&T Ltd.	250	20	500	0.8
H&T Ltd	350	20	600	0.7
P&G Ltd.	450	20	1350	0.5
B) 14% GOI Bonds risk free rate of return 14%	1000		1005	0.99

Solution: i) Calculation of Expected Rate or returns of Portfolio using Capital Asset Pricing Mode :

= (Dividend Earned + Capital Appreciation) / Initial Investment *100
= (20+20+20+140) + (3455 – 2050) / (250+350+450+1000) *100
= (200 + 1405) / 2050 *100
= 78.29 %

By using CAPM Formula :

$K_e = R_f + b (R_m – R_f)$
R_f = Risk Free Rate of Return = 14%
R_m = Market Return = 78.29%
b = Beta Factor
L&T = 14% + 0.8 (78.29% - 14%) = 65.43%
H&L = 14% + 0.7 (78.29% - 14%) = 59.00%
P&G = 14% + 0.5 (78.29% - 14%) = 46.145%
14% GOI = 14% + 0.99 (78.29% - 14%) = 77.65%
ii).Average Return of Portfolio = (65.43 + 59 + 46.145 + 77.65) / 4 = 62.06%.

Options:

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- Option Delta = Difference in option Values / Difference in Share Prices.
- The value of portfolio at the end of one year remains same irrespective of the increase or decrease in the share price.
- The value of the call option will remain the same irrespective of any probabilities of increase or decrease in the share price. This is so because the option is valued in terms of the price of the underlying share, and the share price already includes the probabilities of its rise or fall.

Black and Scholes Model for Option Valuation: The B–S model is based on the following assumptions: The rates of return on a share are log normally distributed.

- ❖ The value of the share (the underlying asset) and the risk-free rate are constant during the life of the option.
- ❖ The market is efficient and there are no transaction costs and taxes.
- ❖ There is no dividend to be paid on the share during the life of the option.
    - The B–S model is as follows: $C_0 = S_0 N(d_1) - Ee^{-rft} N(d_2)$
- ❖ Where C_0 = the current value of call option

- S_0 = the current market value of the share
- E = the exercise price
- e = 2.7183, the exponential constant
- r_f = the risk-free rate of interest
- t = the time to expiration (in years)
- $N(d_1)$ = the cumulative normal probability density function

UNIT-II

INVESTMENT DECISIONS:

Capital Budgeting: Principles and techniques - Nature of capital budgeting- Identifying relevant cash flows - Evaluation Techniques: Payback, Accounting rate of return, Net Present Value, Internal Rate of Return, Profitability Index - Comparison of DCF techniques - Project selection under capital rationing - Inflation and capital budgeting - Concept and measurement of cost of capital - Specific cost and overall cost of capital

Capital budgeting proposal:

Traditional Techniques: These techniques are generally very simple and easily understandable. But the main drawback of these techniques is that they don't consider the time value of money. But in many industries where an instant decision is to be taken, these methods offer the quicker way out. There are mainly two techniques under this category of methods. They are – Accounting rate of return and Payback period.

Accounting rate of return (ARR):

This method relies on the rate of return each project will earn over its life. It takes the help of accounting profit while calculating the returns. There are 2 methods of calculating ARR

(i) On the basis of original investment,

$$\text{ARR} = \frac{\text{average after tax annual net profit}}{\text{Original investment}}$$

This method of calculation was rejected on the ground that the original outlay is gradually recovered over the project life because of depreciation charge.

(ii) On the basis of average investment,

$$\text{ARR} = \frac{\text{average annual net profit}}{\text{Original investment} / 2}$$

When depreciation is to be taken on a straight line basis and no salvage value is assumed, the average investment is always equal to one-half of the original investment, and the resulting rate of return is always twice the rate determined on the basis of original investment.

Advantages of ARR:

- It is easy to understand and simple to calculate
- With the help of this method, direct comparisons among proposed projected of varying lives without a built-in-prejudice in favor of short-term ventures can be made.

Disadvantages of ARR:

- This method ignores time value of money.
- It fails to shed light on yearly rate if return of the project. It may be possible for the project producing higher earnings in the early years to show a lower average rate of return and be rejected in favor of other projects.
- Serious errors can occur in selection of projects if corporate managers accept projects whose accounting rates are equal to or above some arbitrarily selected

cut-off rate, and they reject projects whose accounting rates fall short of the cut-off rate.

- Accounting information is not suitable for investment decision because if fails to distinguish between cash flowing in and out of the company and book keeping transactions.
- There is no full agreement on the proper measure of the term investment. Thus, different managers have different meanings when they refer to ARR.

Payback period (PBP):

This is the most popular method employed by industrial practitioners for ranking investment projects. This is defined as the "period required for a proposal's initial cash outlay to be recovered by future additional cash savings generated from the proposal". The cash flow (after tax & depreciation) is used in calculating the payback period.

PBP = CO/CF

Where CO = cash outflow of the project and CF = cash inflow

When the cash gains generated by the project are unevenly distributed, cumulative cash gains resulting from the project are to be calculated until the year in which the running total is equal to the amount of investment outlay.

Accept-Reject Rule:

The decision rule is to accept the project if the computed payback period is less than the standard. Otherwise, reject it. While ranking the projects, project with shortest payback period is assigned the highest rank.

Advantages:

- It is easy to understand and calculate
- With the help of this method, projects can be ranked in terms of their economic merits without much of complication.
- It indirectly considers factors like obsolescence and liquidity of investments because project with shortest payback period is exposed to fewer risks.
- This method is useful to the company experiencing shortage of cash because it helps in choosing a project that will yield a quick return of cash fund regardless of its long-term profitability.

Disadvantages:

- It does not measure the profitability of the projects.
- It fails to consider any receipts after the pay-back period, no matter how great they might be. As a result, a project with shorter payback period may be selected against a project with a longer pay back period but longer income producing life and greater return on investment.
- It ignores time value of money.

A survey conducted by the Machinery and Allied Products Institute disclosed that about 2/3rd of the American companies employ pay back approach to appraise merit of projects. This is because, in countries where technological changes are rapid, companies are usually exposed to greater obsolescence risks and where uncertainty surrounding the outcome estimates is great, prime consideration is the speed of capital investment recovery.

Modern / Discounting Cash Flow Techniques: These techniques usually are of more use to businesses in their investment decisions. They take into account the time value of money and adjust their cash flows accordingly before taking a decision. That is the reason why they are

considered superior to the traditional techniques. There are four techniques under this category of methods. They are –

- Net present value (NPV)
- Internal rate of return (IRR)
- Profitability index (PI)
- Discounted Payback Period (DPBP)

Net Present Value (NPV):

In this method, future cash flows are discounted to the present and then compared with the investment outlay. The basic discount rate is usually the cost of capital to the enterprise. For ranking the projects according to this method, the NPVs of various alternative projects are compared. Project with highest positive NPV or a project with highest NPV is given highest rank.

Accept-Reject Rule:

In the case of independent projects, if the present value of cash inflows of a project is higher than the present value of investment outlay of the project, it should be accepted. Otherwise, it should be rejected. In the case of mutually exclusive projects, a project with highest NPV should be accepted.

Advantages:

- It is simple to understand
- Where a company has several mutually exclusive projects in hand, this method helps the management to choose the most profitable one.

Disadvantages:

- It does not take into consideration the magnitude of the investment outlay and net cash benefits together.

Internal Rate of Return (IRR):

This rate tries to find the earnings rate which equates the present value of the streams of earnings to the investment outlay. IRR is defined as the rate of return which discounts all the future cash inflows to exactly equal the outlay.

Accept-Reject Rule:

The project with IRR higher than the cut-off rate will be accepted. Otherwise, it will be rejected. The management will be indifferent if the IRR = cut-off rate.

Advantages:

- It is useful and has many positive points
- It recognizes the time value of money
- It helps the management in selecting the most profitable project

Disadvantages:

- It is complicated to calculate by trial and error method
- It assumes that the funds received at the end of each year can be invested at the same rate of return.
- It does not provide weight age of the volume of funds committed in the project.
- Under certain conditions it becomes very difficult to take any decisions like – under conditions of irregular cash flows, IRR may give 2 or more answers.

Profitability Index (PI):

It is a ratio of the present value of the net cash benefits to the present value of the net cash outlay. The higher the PI, the greater the return. Any project with a PI higher than ONE is acceptable since benefits exceed outlay. Projects with PI less than ONE are rejected.

Advantages:

- It places the present value of each investment project on a relative basis so that projects of different sizes of capital outlays can be compared.

Discounted Payback Period (DPBP):

The discounted payback period is the no of periods taken in recovering the investment outlay on the present value basis? Discounted payback period will always be higher than simple payback period for a project because its calculation is based on the discounted cash flows. It differs from the simple pay period in that it takes into account the time value of money. But still, it does not account for post pay back profitability of the project.

Factors influencing capital expenditure decisions:

1. Availability of funds

Generally, capital expenditure projects require large funds. A project, however profitable, may not be taken for want of funds. So, projects with a lesser profitability may be sometimes preferred due to lesser pay back period for want of liquidity.

2. Urgency

Sometimes an investment is to be made on the grounds of urgency for the firm's survival or to avoid heavy losses. In such circumstances, proper evaluation of proposal cannot be made through profitability test. E.g. break down of machinery, fire accident etc.

3. Legal Compulsion

When statutory compulsion arises, investment has to be made in a project though it may not be profitable one. For example, waste disposal plants have to be installed to satisfy environmental laws.

4. Degree of uncertainty

Profitability is directly related to risk. Normally, higher the profits, greater is the risk or uncertainty. Sometimes, a project with lower profitability may be selected due to constant flow of income as compared to another project with an irregular and uncertain flow of income.

5. Intangible factors:

Sometimes, a capital expenditure has to be made due to certain emotional and intangible factors such as safety and welfare of workers, prestigious project, social welfare, goodwill of the firm etc., though such investments are not profitable.

6. Obsolescence:

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

7. Research and Development

It is necessary for the long term survival of the business to invest in research and development projects though it may not loom to be a profitable investment.

8. Competitors' activities

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

9. Future Earnings

A project may not be profitable today when compared to another one, but it may promise better future earnings. In such cases, it may be preferred to increase earnings.

Capital budgeting process / Phases of capital budgeting:

The entire Capital budgeting process can be divided into following steps:

1) **Identification of potential investment opportunities**: the process of Capital budgeting begins with identifying potential investment opportunities. An individual or a planning committee is responsible for developing estimates of future sales, which form the basis

for setting future production targets. Based on such information, estimates of required investment can be made

For imaginative identification of investment ideas it is helpful to

i) monitor external environment (PEST analysis) regularly to scout investment opportunities
ii) formulate a well defined corporate strategy based on a thorough analysis of strength weakness opportunities and threats
iii) share corporate strategy and perspective with persons who are involved in process of Capital budgeting
iv) motivate employees to make suggestions

2) Assembling of investment proposals: various investment proposals identified by departments of a company are submitted in a standardized capital investment proposal form. These proposals are routed through various persons in order to evaluate the capital investment decision from different angles. Projects can be classified as expansion replacement new product diversification or welfare projects.

3) **Decision Making**: the projects then undergo a preliminary screening to obtain those which merit further consideration. Different executives are vested with the authority to approve investment proposals to certain limits. For e.g. consider a manufacturing concern. The plant superintendent can approve investment outlays up to Rs 20,00,000. Any investment above the mentioned level needs the approval of the board of directors. Such a decision making process breaks up the investment approval process. Different appraisal criteria are used for the project selection such as payback, NPV etc.

4) **Preparation of capital budget and appropriations**: Projects involving smaller outlays, decided at the lower levels of the management are covered by a blanket appropriation. While those involving large cash outlays are included in the budget after getting necessary approvals. A proper appropriation of expenses ensures adequacy of resources during implementation of the capital expenditure decisions.

5) **Implementation**: translating an investment decision into a concrete project is a time consuming process. Delay in implementation can lead to substantial cost and time overruns. To ensure proper implementation, the following points must be kept in mind:

- Adequate formulation of projects- this involves, conducting preliminary studies and a comprehensive and detailed formulation. It brings to light any difficulties likely to be faced in future. Therefore adequate formulation is necessary to ensure right implementation
- Use of the principle of responsibility accounting- assigning specific responsibilities to project managers for completing the project within the defined time frame and cost limit is helpful for the correct implementation of projects
- Use of network techniques- using techniques like CPM, PERT, help easy implementation and monitoring of projects

6) **Performance review:** post completion audit is used as a feedback device. It compares the actual performance with the projected performance. Based on the review corrective steps can be taken. It is useful in following ways

i) it throws light on how realistic were the assumptions underlying the project
ii) it provides a documented log of experience that is highly valuable for decision making
iii) it helps in uncovering judgment biases

iv) It includes a desired caution among project investors.

Capital budgeting decisions/Project classification:

a) **Accept- reject decision**- this is the fundamental decision in capital budgeting. If the project is accepted then the firm invests in it, or else rejects it. In general all projects which yield returns higher than the required rate of return (cost of capital in most cases) are accepted and the rest are rejected. By these criteria all independent projects that satisfy the minimum investment criteria are accepted. An independent Project is a project whose cash flows are not affected by the accept- reject decision for the projects and the selection of one is not dependent on any other project

b) **Mutually exclusive projects**: are set of projects from which at the most one will be accepted. They are set of projects which are to accomplish the same task. The acceptance of one excludes the acceptance of other projects. For e.g. deciding between a capital intensive or labor intensive machine. Thus when choosing between mutually exclusive projects more than one project may satisfy the Capital Budgeting criterion. However only one i.e. the best project can be accepted.

c) **Capital rationing**: Capital rationing is a situation where a constraint or budget is placed on the total size of capital expenditures during a particular period. Often firms draw up their capital budget under the assumption that the availability of financial resources is limited. Capital rationing refers to a situation where a company cannot take all acceptable projects it has identified because of shortage of capital. Under this situation a decision maker is compelled to reject some of the viable projects because of shortage of funds.

Factors leading to capital rationing:

External factors: capital rationing may arise due to external factor such as imperfection of capital market or deficiencies in the market information, which may result in the unavailability of capital. Generally the market itself or the government will not supply unlimited amount of investment capital to company, even though the company has identified investment opportunities which would be able to produce the required return. Because of these imperfections the firm may not necessarily get amount of capital funds to carry out all profitable projects.

Internal factors: capital rationing is also caused by internal factors which are as follows

- Reluctance to take resort to external finance in order to avoid further risk
- Reluctance to broaden the equity share base for fear of losing control
- Reluctance to accept some viable projects because of its inability to manage the firm in the scale of the operation.

d) **Replacement decisions:** in case of Replacement decisions the implications are different. Developing cash flows for new projects or expansion projects is relatively straightforward. In such cases the initial investment, operating cash inflows and terminal cash inflow are the after tax cash flows associated with proposed projects. Estimating the relevant cash inflows for a replacement project is somewhat complicated because you have to determine the incremental cash inflow and outflow in relation to existing project. The three components of the cash flow stream of a replacement project are determined as follows

i) initial investment(cost of new assets+ net working capital required for the new asset)-(after tax salvage value realized from old asset+ net working capital required for the old asset)

ii) Operating cash inflows= operating cash inflow from new asset-cash inflow from old asset that has not been replaced.

iii) Terminal cash flow=(after tax salvage value of new asset+ recovery of net working capital associated with the new asset)-(after tax salvage value of old asset , it had not been replaced+ recovery of net working capital associated with the new asset)

Features of capital budgeting decisions:

1. Existence of potentially large anticipated benefits
2. Involves a relatively high degree of risk
3. Existence of a relatively long time period between the initial outlay and the anticipated returns
4. Generally they are irreversible without incurring loss
5. They involve large volume of capital
6. They are strategic investment decisions and involve blocking of funds for long term and inevitably affect the firm's future cost structure
7. They affect the profitability of a firm
8. They have a bearing on the competitive position of the firm mainly because of the fact that they relate to fixed assets, which in a sense are the earning assets of the firm
9. Cash flow and not profit are important in investment decisions

Types of Investment Decisions / Proposals

1. Mutually exclusive investment proposals
2. Independent investment proposals
3. Contingent investment proposals
4. Replacements

COST OF CAPITAL

A project's Cost of Capital is the minimum acceptable rate of return/required rate of return on funds committed to the project. It is a compensation for time and risk in the use of capital by the project. Since the investment projects may differ in risk, each one of them will have its own unique cost of capital.

The Firm represents the aggregate of investment projects undertaken by it. Therefore, the firm's Cost of Capital will be the overall or average, required rate of return on the aggregate of the investment projects.

- In NPV method, the Cost of Capital is the discount rate used for evaluating the desirability of an investment project.
- In IRR method, Cost of Capital is the minimum required rate of return on an investment project. It is also known as the cut off or target rate or the hurdle rate.
- The Cost of Capital is the minimum required rate of return on the investment project. It is also known as the cut off or target rate or the hurdle rate.
- The Cost of Capital is the minimum required rate of return on the investment project that keeps the present wealth of shareholders unchanged.

Basic Assumptions of Cost of Capital

The Cost of Capital is a dynamic concept affected by a variety of economic and firm factors and assumes the following assumptions relating to risk and taxes:

1) Business Risk: It refers to the risk of the inability of the firm to cover its operating costs. This cost is assumed to be unchanged i.e. the firm's acceptance of a given project does not affect its ability to meet operating costs.

2) Financial Risk: It refers to the risk of the inability of the firm to cover the required financial obligations (interests, lease payments or preference dividend) – is assumed to be unchanged.
3) After Tax Costs: They are considered relevant. The Cost of Capital is measured on an after tax basis.
4) Capital Structure: The firm's financial structure is assumed to remain fixed.

Concepts of Cost of Capital

1. **Explicit Cost And Implicit Cost**
   The explicit cost of any source of finance may be defined as the discount rate that equates the present value of the funds received by the firm net of underwriting costs, with the present value of expected cash outflows. These outflows may be interest payments, dividend, or repayment of principal.
   The implicit cost is the rate of return on the best investment opportunity for the firm and its shareholders which will be foregone if the project presently under consideration by the firm is accepted.
2. **Future Cost And Historical Cost**
   Future cost refers to the expected cost of funds to finance the proposed project whereas Historical cost refers to the cost already incurred for financing a particular project.
3. **Specific Cost And Combined Cost**
   The Cost of each component of capital (i.e. equity shares/preference shares/debentures/loans/etc) is known as Specific Cost of Capital.
   The Composite/Combined Cost of Capital is the total cost of capital from all sources (i.e. equity shares/preference shares/debentures/loans/etc).
4. **Average Cost And Marginal Cost**
   The average cost of capital refers to the weighted average of the cost of each component of funds employed by the firm. The weights are in proportion of the share of each component of the share in the total capital structure.
   Marginal Cost of Capital is the weighted average cost of new funds raised by the firm.

Factors affecting the cost of capital of a firm

1. The capital structure of a firm
2. The demand supply forces existing in the market for debt or equity
3. The existing and potential growth prospects of the firm
4. The risk profile of the majority shareholders
5. The stage of the firm's lifecycle etc

CAPITAL RATIONING

Introduction:

Capital budgeting decisions involve huge outlay of funds. Funds available for projects may be limited. Therefore, a firm has to prioritize the projects on the basis of availability of funds and economic compulsion of the firm. It is not possible for a company to take up all the projects at a time. There is the need to rank them on the basis of strategic compulsion and funds availability. Since companies will have to choose one from among many competing investment proposal the need to develop criteria for Capital rationing cannot be ignored. The companies may have many profitable and viable proposals but cannot execute because of shortage of funds. Another constraint is that the firms may not be able to generate additional funds for the execution of all the projects. When a firm imposes constraints on the total size of firm's capital budget, it is

requires Capital Rationing. When Capital is rationed there is a need to develop a method of selecting the projects that could be executed with the company's resources yet giving the highest possible net present value.

Meaning of Capital Rationing:

Because of the limited financial resources, firms may have to make a choice from among profitable investment opportunities. Capital rationing refers to a situation in which the firm is under a constraint of funds, limiting its capacity to take up and execute all the profitable projects. Such a situation may be due to external factors or due to the need to impose internal constraints, keeping in view of the need to exercise better financial control.

Why Capital Rationing?

Reasons for Capital Rationing:

Capital Rationing may be due to

a. External factors b. internal constraints imposed by management.

External Capital Rationing: External Capital Rationing is due to the imperfections of capital markets Imperfection may be caused by:

a. Deficiencies in market information

b. Rigidities that hamper the force flow of Capital between firms.

When capital markets are not favourable to the company the firm cannot tap the capital market for executing new projects even though the projects have positive net present values. The following reasons attribute to the external capital rationing:

1. Inability of the firm to procure required funds from Capital market because the firm does not command the required investor's confidence.
2. National and international economic factors may make the market highly volatile and instable.
3. Inability of the firm to satisfy the regularity norms for issue of instruments for tapping the market for funds.
4. High Cost of issue of Securities I,e High floatation cost. Smaller firms smaller firms may have to incur high costs of issue of securities. This discourages small firms from tapping the capital markets for funds.

Internal Capital Rationing: Impositions of restrictions by a firm on the funds allocated for fresh investment is called internal capital rationing. This decision may be the result of a conservative policy pursued by a firm. Restriction may be imposed on divisional heads on the total amount that they can commit on new projects. Another internal restriction for Capital budgeting decision may be imposed by a firm based on the need to generate a minimum rate of return. Under this criterion only projects capable of generating the management's expectation on the rate of return will be cleared. Generally internal capital rationing is used by a firm as a means of financial control.

Problems & Solutions

1. An asset has an initial investment of Rs. 6,00,000 with an anticipated life of 4 years. The estimated net annual cash inflows will be Rs. 1,50,000 , Rs, 2,00,000, Rs. 3,00,000 and Rs, 2,00,000 during the year I, II, III and IV respectively. Calculate the internal rate of return. **(May/June 2007)**

Solution:

Years	CIF	DF@10%	Present Value	DF @15%	Present value
1	1,50,000	.909	1,36,350	.870	1,30,500
2	2,00,000	.826	1,65,200	,756	1,51,200

3	3,00,000	.751	2,25,300	.658	1,97,400
4	2,00,000	.683	1,36,600	.572	1,14,400
			6,63,450		5,93,500
Less: Initial investment			6,00,000		6,00,000
Net present value			63,450		(6,500)

IRR = MTR + NPV of the LTR * Diff in TR

Diff between the HTR and LTR

= 10% + 63,450 * 8 5%

69950

IRR = 10% +4.53 = 14.52

2. From the following information, rank the projects according to their desirability under (i) Pay back period, (ii) Accounting rate of returns and (iii) Net present Value Index method assuming the cost of capital is 10%. **(Nov/Dec 2007)**

Projects	Initial Investment (Rs.)	Annual CIF (Rs.)	Life in years
A	60,000	12,000	15
B	88,000	22,500	22
C	2,150	1,500	3
D	20,500	4,500	10
E	4,25,000	2,25,000	20

You may use the following table for calculation:

Period in Years	3	10	15	20	22
P.V of an annuity of Re.1 pa payable for 'n' years at 10%	2.5918	6.3213	7.7688	8.6466	8.8919

Solution:

Projects	**CIF**	**DF@10%**	**GPV**	**Investment**	**NPV**
A	12,000	7.7688	92,225	60,000	32,225
B	22,500	8.8919	2,00,067	88,000	1,12,067
C	1,500	2.5918	3,888	2,150	1,738
D	4,500	6.3213	28,445	20,500	7,495
E	2,25,000	8.6466	19,45,485	4,25,000	15,20,485

Pay back Period Method

PB = Initial Investment / ACIF

A = 60,000 /12,000 = 5years-V

B = 88,000/22,500 = 3.9 years –III

C = 2150/1,500 = 1.43 years – I

D = 20,500/4,500 = 4.55 years –IV

E = 4,25,000/2,25,000 = 1.88 years – II

ARR = (Average Annual Income / Original Investment) *100

A = 12,000/60,000 *100 = 20% V

B = 2,500/88,000*100 = 25.56% III

C = 1,500/2150*100 = 69.76% I

D = 4,500/20,500*100 = 21.95% IV

E = 2,25,500/4,25,00*100 = 52% II
PI = PV of cash inflows / PV of cash outlays
A = 92,225/60,000 = 1.53 –IV
B = 2,00,067/88,000 = 2.27 –II
C = 3,888/2150 = 1.80 –III
D = 28,445/20,500 = 1.38-V
E = 19,45,485/4,25,000 = 4.57

3. The following is the Capital structure of M/S Kurukshetra Earning Works Ltd., (Nov/Dec 2007)

Source of Finance	Amount(Rs)	Projections
Equity share Capital (45,000 shares of Rs. 10 each fully paid)	4,50,000	45%
Retained Earnings	1,50,000	15%
Preference share capital	1,00,000	10%
Debentures	3,00,000	30%
	10,00,000	100%

The firm's after tax component costs of the various sources of funds are as follows:

Equity capital 14%
Preferences share capital 10%
Retained earnings 14%
Debt 4.5%

Calculate the weighted cost of capital

i) By assigning the book-value as weight and
ii) Market values as weight. Assume the market price of equity shares is Rs. 20 per share.

Solution:

Composite cost of capital under BOOK VALUE approach

Sources	**Amount (Rs.)**	**Proportion (weights)**	**CC**	**WCC**
Equity Capital	4,50,000	.45	.14	0.063
Retained Earnings	1,50,000	.15	.14	0.021
Preference Capital	1,00,000	.10	.10	0.010
Debt capital	3,00,000	.30	.045	0.013
Total	10,00,000	1.00		0.107 (or) 10.7%

Composite Cost of capital under MARKET VALUE approach

No of Equity shares = 4,50,000 +1,50,000 = 6,00,000 /10 =60,000
*Market Value = 60,000 *20 = 12,00,000

Sources	**Amount (Rs.)**	**Proportion (weights)**	**CC**	**WCC**
Equity Capital	12,00,000	.75	.14	0.105
Preference Capital	1,00,000	.06	.10	0.006
Debt capital	3,00,000	.19	.045	0.008
Total	16,00,000	1.00		0.119 (or) 11.9%

4.Which Investment is a risky one from the following returns? **(May/June 2008)**

BHEL	12%	14%	16%	18%	20%
SBI	12%	15%	20%	16%	17%
RIL	15%	21%	23%	20%	16%

Solution:

Range = Highest return – Lowest return

BHEL 20%-12% =8%

SBI 20%-12% =8%

RIL 23%-15% =8%

Standard deviation (Risk)

BHEL = 3.16

SBI = 2.91

RIL = 3.39

Therefore RIL is Risky. Since, it has more volatile. (°=3.39)

5. A company's debentures with face value of Rs.100 bear an 8 percent coupon rate. Debentures of this type currently yield 10 percent.

i) What is the market price of debentures of the company?

Given

Face Value of Debenture = Rs.100

Coupon Rate = 8%

Current Yield = 10%

Market price of debentures of the company

Market Price = INT / (1 + kg) + D / (1+ke)

= 8 / (1+10) + 100 / (1+10)

= 7.27 x 90.90

= Rs.98.17

ii) What would happen to the market price of the debentures if interest rises to 16 percent?

Market Price = INT / (1+ke) + D/(1+ke)

= 16 / (1+10) + 100 / (1+10)

= 14.55 + 90.90

= Rs.105.46

iii) What would be the market price of the debentures if it is assumed that debentures were having a maturity period of 4 years from now (bases on situation (i)? (Nov / Dec 2008)

Market Price = INT / (1+ke) + INT / $(1+ke)^2$ + INT / $(1+ke)^3$ + INT / (1+ke0 ?+D / (1+ke)?

= 8 / (1+10) + 8 / $(1+10)^2$ + 8 / $(1+10)^3$ +8 / (1+10)? + 100 / (1+10)?

= 7.27 x 6.60 + 6.01 + 5.46 + 68.30

= Rs.93.65

iv) Would you pay Rs.90 to purchase debentures specified in situation (iii) above. Explain.

If market price is Rs.93.65, it is advisable to Pay Rs.90 to purchase debentures

6. A project has the following pattern of cash flows

Year	0	1	2	3	4	5
Cash flow (Rs)	-40,00,000	15,00,000	8,00,000	7,50,000	-8,00,000	35,23,000

i).Calculate IRR of the project (ii) with i=8% calculate NPV of the project. (May/June 2009)

Year	Cash Flow	Discounting Factor	@12%	@ 13%

		@8%					
		Preset Value	Discounted Cash Flows	P.V.	Discounted Cash flows	P.V.	DCF
1	1500000	0.926	1389000	0.893	1339500	0.885	1327500
2	800000	0.857	685600	0.797	637600	0.783	626400
3	750000	0.794	595500	0.712	534000	0.693	519750
4	-800000	0.735	588000	0.636	508800	0.613	490400
5	3523000	0.681	2399163	0.568	2001064	0.543	1912989
Total Discounted cash inflows			4481263		4003364		3896239

Cash Outflow = Rs.4000000

Total Discounted Cash Inflows

at 12% = Rs.4003364

at 13% = Rs.3896239

It clearly shows that IRR lies between 12% and 13%. In order to find out the exact IRR, the following formula can be applied.

$$IRR = 12\% + \frac{4003364 - 4000000}{4003364 - 3896239} \times (13\% - 12\%)$$

$$= 12\% + \frac{3364}{107125} \times 1\%$$

$$= 12\% + 0.03\%$$

IRR = 12.03%

ii) **Calculation of NPV at 8%**

Total Discounted Cash inflows at 8% = 4481263

(-) Cash Outflows = 4000000

Net Present Value (NPV) = 481263

7. Enumerate is considering investing in a new products. The following annual information is available. (May/June 2009)

* Cash sales Rs.25 Lakhs
* Credit sales Rs.32 lakhs
* Manufacturing cost of sales, excludes depreciation and includes Rs.75,000 of allocated fixed cost Rs.16 lakhs
* Selling a administrative expenses (includes Rs.5,00,000 of allocated costs) Rs.7 Lakhs
* Loss of contribution on other products Rs.2 Lakhs

Credit sales are collected after a year with a bad debt loss of 2%. The capital equipment costs Rs.30 lakhs and is depreciated at 33 1/3% per annum, written down value method. Working capital investment of Rs.20 lakhs is required.

A long-term debt carrying 14% interest rate will increase by Rs.20 lakhs and a short term bank borrowing carrying 18% rate will increase by Rs.10 lakhs. The corporate tax rate is 50%

Compute the cash flows for four years.

Ans : Particulars	**Years**			
	1	2	3	4

Cash Sales	2500000	2500000	2500000	2500000
Credit Sales	3200000	3200000	3200000	3200000
Total Revenue (1)	5700000	5700000	5700000	5700000
Manufacturing Cost	1600000	1600000	1600000	1600000
Selling and Adm. Exp.	700000	700000	700000	700000
Bad Debt. Losses	64000	64000	64000	64000
Depreciation	1000000	666667	444444	296296
Total Payments (2)	3364000	3030667	2808444	26602963
Cash Flow (1-2)	2336000	2669333	2891556	3039704
(-) Tax @ 50%	1168000	1334667	1445778	1519852
Net Cash Flow	1168000	1334666	1445778	1519852

Calculation of Depreciation under WDB Method

Cost of Equipment	=	3000000
(-) Dep. @ 33 1/3%	=	1000000
		2000000
(-) Dep. @ 33 1/3%	=	666667
		1333333
(-) Dep. @ 33 1/3%	=	444444
		8888889
(-) Dep. @ 33 1/3%	=	296296
		592593
(-) Dep. @ 33 1/3%	=	197531

8. ABC Limited is proposing to invest in a project requiring a capital outlay of Rs.50,000. Cost for annual income after depreciation but before tax is as follows :

Year 1 2 3 4 5

Rs.20,000 20,000 16,000 16,000 8,000

Depreciation may be taken at 20% on original cost and taxation at 50% of net income. You are required to evaluate the project according to each of the following method. (May/June 2009)

i) Pay-back method.
ii) Rate of return on original investment method
iii) Rate of return on average investment method
iv) Discount cash flow method taking cost of capital at 10%
v) Excess present value index.

Solution:

Calculation of Adjusted cash inflows:

Particulars	1	2	3	4	5
Cash inflow after Depreciation (-) Tax @ 50%	20000 10000	20000 10000	16000 8000	16000 8000	8000 4000
Cash Inflow after Tax (+) Depreciation	10000 10000	10000 10000	8000 10000	8000 10000	4000 10000
Cash Inflow after tax before dep.	20000	20000	18000	18000	14000

i) Calculation of Pay Back Method:

Year	Cash Inflows	Cumulative Cash Inflows
1	20000	20000
2	20000	40000
3	18000	58000

4	18000	76000
5	14000	90000

Cash Out flow = Rs.50000

$$\text{Pay – Back Period} = 2 + \frac{10000}{18000} = 2 \text{ Years}$$

ii) Rate of Return on Original Investment Method **:**

$$\frac{\text{Average Annual Cash Inflows}}{\text{Original Investments}} = \frac{(10000+10000+8000+8000+4000)/5}{50000} \times 100$$

$$= \frac{8000}{50000} \times 100$$

$$= 16\%$$

iii)

$$\frac{\text{Average Annual Cash Inflows}}{\text{Average Investments}} = \frac{8000}{50000/2} \times 100$$

$$= 32\%$$

iv) Discount cash flow method taking cost of capital at 10%

Year	Cost of Capital @ 10%	Cash Inflows	Discounted Cash Inflows
1	0.909	20000	18180
2	0.826	20000	16520
3	0.751	18000	13518
4	0.683	18000	12294
5	0.621	14000	8694
			69206

Total Discounted Cash Inflows = 69206
(-) Cash Outflows = 50000
Net Present Value = 19206

v)

$$\frac{\text{Discounted Cash Inflows}}{\text{Cash Outflows}} = \frac{69206}{50000} \times 100$$

$$= 138.41\%$$

9. From the following structure of a company, calculate the overall cost of capital, using Book value weights, Market value weights

Equity shares (Rs.10/Share) 45,000 90,000

Retain earnings 15,000 ……..

Preference share capital 10,000 10,000

Debentures 30,000 30,000

The after tax cost of different sources of finance is as follows :

Equity : 14% Preference Share capital : 10%

Retained Earnings : 13% Debentures : 5%, **(May/June 2009)**

Solution:

i) Calculation of Overall Cost of Capital using Book Value Weights :

Sources	**Book Value**	**Weights**	**After-Tax Cost**	**Weighted Cost of Capital**
Equal shares	45000	0.45	14%	6.30
Retired Earnings	15000	0.15	13%	1.95
Pref. Shares	10000	0.10	10%	1.00
Debentures	30000	0.30	5%	1.50
Total	100000			10.75

ii) Calculation of Overall cost of Capital using Market Value Weights:

Sources	Book Value	Weights	After-Tax Cost	Weighted Cost of Capital
Equal shares	90000	0.692	14	9.69
Pref. Shares	10000	0.077	10	0.77
Debentures	30000	0.231	5	1.16
Total	130000			11.62

10. A limited company is considering investment in a project requiring a capital of Rs. 2, 00,000. Forecast for annual income after depreciation but before tax is as follows: **(MAY/JUNE 2012)**

Year	Rs.
1	1,00,000
2	1,00,000
3	80,000
4	80,000
5	40,000

Depreciation may be taken as 20% on original cost and taxation at 40% of the net income. You are required to evaluate the project according to each of the following methods.

(i) pay-back method

(ii) Accounting rate of return on original investment

(iii) Discounted cash flow method taking cost of capital as 10%

(iv) Internal rate of return method

Solution:

(i) pay-back method

Statement of cash inflow

Year	Profit	Tax at 50%	Profit after tax	Depreciation	Cash inflows	Cumulative cash

						inflows
1	1,00,000	50,000	50,000	40,000	90,000	90,000
2	1,00,000	50,000	50,000	40,000	90,000	1,80,000
3	80,000	40,000	40,000	40,000	80,000	2,60,000
4	80,000	40,000	40,000	40,000	80,000	3,40,000
5	40,000	20,000	20,000	40,000	60,000	4,00,000

Payback period = Rs. 1, 80,000 is recovered in 2 years
The balance of Rs. 20,000 = 20,000/80,000*1 = 0.25 years
The Payback period is 2.25 yrs. or 2 years and 3 months.
(ii) Accounting rate of return on original investment

Year	**Net Profit after tax but before depreciation**
1	50,000
2	50,000
3	40,000
4	40,000
5	20,000
Total Profits	**Rs. 2,00,000**

Average annual profits = Rs. 2, 00,000/ 5 = Rs.40, 000
Rate of return = 40,000/2, 00,000*100 = 20%
(iii) Discounted cash flow method taking cost of capital as 10%

Year	Cash inflows	Discount factor @ 10 %	Present value in Rs.
1	90,000	0.909	81,810
2	90,000	0.826	74,340
3	80,000	0.751	60,080
4	80,000	0.683	54,640
5	60,000	0.621	37,260
Present value of cash inflows			3,08,130
Less : Initial Investment			2,00,000
Net Present Value			**1, 08, 130**

(iv) Internal rate of return method
= 40,000/1, 00,000*100 = 40%

11. From the following capital structure of a company, calculate the overall cost of capital, using
(i) Book weight
(ii) Market value weights

Sources	Book value (Rs.)	Market value (Rs.)
Equity share capital (Rs. 10 shares)	45,000	90,000
Retained earnings	15,000	---------
Preference share capital	10,000	10,000
Debentures	30,000	30,000

The after tax cost of different sources of finance is as follows:
Equity share capital – 14%; retained earnings – 13%
Preference share capital – 10%; debentures – 5% . (May/June 2012)

Solution:

i).Calculation of Overall Cost of Capital using Book Value Weights:

Sources	Book Value	Weights	After-Tax	Weighted

			Cost	Cost of Capital
Equal shares	45000	0.45	14%	6.30
Retired Earnings	15000	0.15	13%	1.95
Pref. Shares		0.10	10%	1.00
Debentures	10000	0.30	5%	1.50
	30000			
Total	100000			10.75

ii) .Calculation of Overall cost of Capital using Market Value Weights:

Sources	Book Value	Weights	After-Tax Cost	Weighted Cost of Capital
Equal shares	90000	0.692	14	9.69
Pref. Shares	10000	0.077	10	0.77
Debentures	30000	0.231	5	1.16
Total	130000			11.62

12. A Company is considering two mutually exclusive projects. Both require an initial cash outlay of Rs. 10,000 each and have a life of five years. The company's required rate of return is 10% and pays tax at 50 % rate. The projects will be depreciated on a straight line basis. The before taxes cash flow expected to be generated by the projects are as follows:

	Before tax cash flow (Rs.)				
Project 1	2	3	4	5	
A	4000	4000	4000	4000	4000
B	6000	3000	2000	5000	5000

Calculate for each project (i) the payback (ii) The ARR (iii) the NPV (iv) IRR. Which project should be accepted and why? **(May/June 2013)**

Answer - Project A

Particulars	Amount
Cash flows before tax	4,000
Less : Tax @ 50%	2,000
EAT	2,000
Add: Depreciation	2,000
Earnings after tax but before depreciation	4,000

(i) Pay back period = Investment /AACIF = 10,000/4,000 = 2.5 years
(ii) ARR = AACIF (After dep & tax) / Average investment
= 2,000/ 5,000 = 40%
(iii) NPV = CIF * Df @10% (.909+.826+.751+.683+.621)
= 4000*3.79 = 15,160 – 10,000 = 5,160
(iv) IRR = F = I/C = 10,000/4,000 = 2.5 = 28%

Answer - Project B

Depreciation = 10,000/5= 2,000

CIF (Before tax)	**Tax 50%**	**CIF (after tax)**	**CIF (Before dep, after tax)**	**Df @11%**	**Present Value**
6,000	3,000	3,000	5,000	.909	4545
3,000	1,500	1,500	3,500	.826	2891

2,000	1,000	1,000	3,000	.751	2253
5,000	2,500	2,500	4,500	.683	3073
5,000	2,500	2,500	4,500	.621	2794
		10,500			**15,556**
				Gross Present Value	**15,556**
				Initial Investment	10,000
				NPV	5,556

(i) Pay back period = 3 year + (311/3073) = 3.10 years

(ii) ARR = Average CIF ((After dep & tax) / Average investment

= Average CIF = 10,500/5 = 2,100

= 2,100/5000 = 42%

(iii) IRR

CIF (Before dep, after tax)	Df @10%	Present Value	Df @20%	Present Value	Df @30%	Present Value
5000	0.909	4545	0.833	4165	0.769	3845
3500	0.826	2891	0.694	2429	0.592	2072
3000	0.751	2253	0.579	1737	0.455	1365
4500	0.683	3073	0.482	2169	0.350	1575
4500	0.621	2794	0.402	1809	0.269	1210
Gross present Value		15556		12309		8702
Initial Investment		10000		10000		10000
NPV		5556		2309		(1298)

IRR = 10% +5556 /(5556-(-1298) *20% = 26.21%

	Project A	Project B	Decision
Payback Period	2.5 years	3.1 years	Project A accepted
NPV	5160	5556	Project B accepted
ARR	40%	42%	Project B accepted
IRR	28%	26.21%	Project A accepted

13. Sagar Industries is planning to introduce a new product with a projected life of 8 years. The project, to be set up in a backward region, qualifies for one time (as its starting) tax free subsidiary from the government of Rs. 20 lakhs. Initial equipment cost will be needed at the beginning of the third year. At the end of 8 years, the original equipment will have no resale value, but the supplementary equipment can be sold for Rs.1 lakh. A working capital of Rs. 15 lakhs will be needed. The sales volume over the eight years period have been forecasted as follows:

Years	Units
1	80,000
2	1,20,000
3-5	3,00,000
6-8	2,00,000

A sale price of Rs. 100 per unit is expected and Variable expenses will amount to 40% of sales revenue. Fixed cash operating costs will amount to Rs. 16 lakhs per year. In addition, an extensive advertising campaign will be implemented, requiring annual outlays as follows:

Years Rs. (in lakhs)

1	30
2	15
3-5	10
6-8	4

The company is subject to 50% tax rate and considers 12% to be an appropriate after –Tax cost of capital for this project. The company follows the straight line method of depreciation. Should the project be accepted? Assume that the company has enough income from its existing products. (May/June 2008)

Solution:

Cash outflow

Initial equipment cost	140,00,000
Less Tax free subsidiary	20,00,000
	120,00,000
Add: Working expenses	15,00,000
	135,00,000

Additional equipment in the III year

10,00,000 *0.797 = 7,79,000

Total Cash outflow = 1,35,00,000 +7,79,000

= 142,97,000

Cash inflow:(Rs. in. Thousands)	**1**	**2**	**3-5**	**6-8**
Sales A	80,000	1,20,000	3,00,000	2,00,000
Variable cost	32,000	48,000	1,20,000	80,000
Fixed cost	16,000	16,000	16,000	16,000
Advertisement	30,000	15,000	10,000	4,000
Depreciation	17,500	17,500	19,000	19,000
Total Cost B	95,500	96,500	1,65,000	1,19,000
Profit (A-B)	(15,500)	23,500	1,35,500	81,000
Tax	-	4,000	67,500	40,500
PAT	(15,500)	19,500	67,500	40,500
Cash inflow (PAT+ Dep.)	2,000	37,000	86,500	59,500

Rs. in Thousands

Years	**CIF**	**DF @12%**	**Present Value**
1	2,000	.893	1,786
2	37,000	.797	29,489
3	86,500	.712	61,588
4	86,500	.636	55,014
5	86,500	.567	49,046
6	59,500	.507	30,167
7	59,500	.452	26,894
8	59,500	.404	24,038
WC	15,000	.404	6,060
Scrap	1,000	.404	404
Gross present value			284,28,500

Less: Initial Investment	142,97,000
Net Present Value	141,51,500

NPV is positive; therefore the project will be accepted

UNIT – III

FINANCING AND DIVIDEND DECISION

Financial and operating leverage - capital structure - Cost of capital and valuation - designing capital structure. Dividend policy - Aspects of dividend policy - practical consideration - forms of dividend policy - forms of dividends - share splits.

CAPITAL STRUCTURE:

The term 'capital structure' represents the total long-term investment in a business firm: It includes funds raised through ordinary and preference shares, bonds, debentures, term loans from financial institutions, etc. Any earned revenue and capital surpluses are included.

CAPITAL STRUCTURE DEFINITION:

According to Gerstenberg, Capital structure refers to 'the makeup of a firm's capitalization'. In other words, it represents the mix of different sources of long term funds (such as equity shares, preference shares, long term loans, retained earnings, etc).

Optional Capital Structure may be defined as that of Capital structure or Combination of debt and equity that leads to the maximum value of the firm.

Capital structure planning aims at maximization of profits and the wealth of the shareholders ensures the maximum value of a firm or minimum Cost of capital.

ESSENTIAL FEATURES OF A SOUND CAPITAL MIX

→ Maximum possible use of leverage
→ Capital structure should be flexible
→ To avoid undue financial/business risk with the increase of debt
→ The use of debt should be within the capacity of a firm. The firm should be in a position to meet its obligations in paying the loan and interest charges as and when due.
→ It should involve minimum possible risk of loss of control
→ It must avoid undue restrictions in agreement of debt

Theory of Capital Structure

1. Net Income Theory

This theory gives the idea for increasing market value of firm and decreasing overall cost of capital. A firm can choose a degree of capital structure in which debt is more than equity share capital. It will be helpful to increase the market value of firm and decrease the value of overall cost of capital. Debt is cheap source of finance because its interest is deductible from net profit before taxes. After deduction of interest company has to pay less tax and thus, it will decrease the weighted average cost of capital.

For example if you have equity debt mix is 50:50 but if you increase it as 20: 80, it will increase the market value of firm and its positive effect on the value of per share. High debt content mixture of equity debt mix ratio is also called financial leverage. Increasing of financial leverage will be helpful to for maximize the firm's value.

2. Net Operating income

Net operating income theory or approach does not accept the idea of increasing the financial leverage under NI approach. It means to change the capital structure does not affect overall cost of capital and market value of firm. At each and every level of capital structure, market value of the firm will be same.

3. Traditional Theory of Capital Structure

This theory or approach of capital structure is mix of net income approach and net operating income approach of capital structure. It has three stages which you should understand:

Ist Stage

In the first stage which is also initial stage, company should increase debt contents in its equity debt mix for increasing the market value of firm.

2nd Stage

In second stage, after increasing debt in equity debt mix, company gets the position of optimum capital structure, where weighted cost of capital is minimum and market value of firm is maximum. So, no need to further increase in debt in capital structure.

3rd Stage

Company can get loss in its market value because increasing the amount of debt in capital structure after its optimum level will definitely increase the cost of debt and overall cost of capital.

4. Modigliani and Miller

MM theory or approach is fully opposite of traditional approach. This approach says that there is not any relationship between capital structure and cost of capital. There will not effect of increasing debt on cost of capital. Value of firm and cost of capital is fully affected from investor's expectations. Investors' expectations may be further affected by large numbers of other factors which have been ignored by traditional theorem of capital structure.

FACTORS INFLUENCING CAPITAL STRUCTURE:

1. Financial leverage (or) Trading on equity

It is the use of long term fixed interest bearing debt and Preference shares along with equity share capital. The use of long-term debt increases and magnifies the EPS if the firm yields a return higher than the cost of debt. This is positive leverage. However, if the firm yields a lower return than the cost of debt, it is adverse leverage. EPS also increases with the use of preference share capital also, but due to the fact that interest is allowed to be deducted while computing the tax, the leverage impact of debt is more.

2. Growth & Stability of Sales

If the sales of a firm are expected to remain fairly stable, it can raise a higher level of debt, as the firm may not face any difficulty in meeting its fixed commitments of interest repayment of debt. Usually, greater the rate of growth of sales, greater can be the use of debt in the financing of a firm.

3. Cost of Capital

The capital structure should provide for minimum overall cost of capital depending upon the risk involved, out of the three sources of capital (equity, preference and debt capital), debt usually is a cheaper source because of (1) fixed rate of interest (2) legal obligation to pay interest (3) priority in payment at the time of winding up of the company and (4) tax advantage. Preference capital is also cheaper than equity because of lesser risk involved and fixed rate of dividend.

4. Cash flow ability to service debt

A firm which can generate higher and stable cash inflows can employ more debt in its capital structure as compared to one which has unstable and lesser ability to generate cash inflows.

5. Nature and size of firm

Public utility concerns may employ more of debt due to their regular earnings. Small companies due to their inability to raise long-term loans at reasonable rate of interest depend on own capital. A large company can arrange for long-term loans and also can issue equity or preference shares to be public.

6. Control

Issue of equity shares implies dilution of control of existing equity shareholders. Hence either debt or preference capital is issued.

7. Flexibility

Capital structure of the firm should be flexible and must be able to substitute one form of financing by another.

8. Requirement of Investors

The risk profile of the investors – institutional as well as private (risk averse, indifferent and adventurous investors) should be matched with the risk characteristics of the capital instruments i.e. issue of equity shares to adventurous investors, issue of preference shares to indifferent investors and issue of debt to risk averse investors.

9. Capital market conditions

If the share market is depressed the company should not issue equity shares. If there is boom period, it should issue equity shares.

10. Assets structure

If major portion of the total assets of a company comprises of fixed assets, the company can borrow long-term debts.

Balanced capital structure of a corporation:

Capital structure of a company refers to the make up of its capitalization. A company procures funds by issuing various types of securities, i.e. ordinary shares, preferences shares, bonds and debentures. Before issuing any of these securities, a company should decide about the kinds of securities to be issued. In what proportion will the various kinds of securities be issued, should also be considered. However, in broader sense, capital structure includes all the long term capital resources including loans, bonds, share issued, reserves, etc. and the components of the total capital. A company engaged in devising a financial plan will be faced with problem regarding the proportion of funds to be raised by issue of its shares and the amount to be raised though borrowings. There is an important difference between these two methods. Funds raised from shareholders require the payments of dividend only out of profits, if there is any, a company should maintain a fair balance between these two types of securities- (a) fixed cost bearing securities. (debentures and preference share), and (b) Variable cost bearing securities (ordinary shares). This security mix affects the financial stability of the company. If a company fails in its efforts in maintaining the security mix, its capital structure will be imbalanced which may affect its profitability.

Balanced capital structure

Capital structure or financial plan refers to the composition of long- term sources of funds such as debentures, long term debts, preference and ordinary share capital and retained earnings (reserves and surpluses) Companies that do not plan their capital structure may proper in the short run, but ultimately will face serious problems in raising funds to finance their activities in

the long-run. Therefore, it is important for a company to take ad decision regarding its capital structure. Whenever, financial manager considers the question of capital structure, it is always the question of optimum or balanced capital structure, i.e., to decide the proportion of long term finance to be raised through borrowings and through investments from owners. Optimum or balanced capital structure means an ideal combination of borrowed and owned capital that may attain the marginal, goal, i.e. maximization of market value per share or minimization of cost of capital. The market value will be maximized or the cost of capital will be minimized when the real cost of each source of funds is the same. It is formidable task of the financial manager to determine the combination of the various sources of long-term finance.

Various forms of dividend:

A dividend refers to that part of the earnings (profit) of a company, which is distributed to shareholders. Shareholders would like to receive a higher dividend as it increases their current wealth.

FORMS OF DIVIDEND:

1. Cash dividend

The dividend is paid to shareholders in cash. Cash dividend is the usual method of paying dividends. It results in outflow of cash. Hence the company should arrange adequate cash resources for payment of dividend.

2. Bond dividend

If the company does not have sufficient cash resources, it may issue bonds in lieu of dividend. The shareholders get bonds instead of dividends. The company generally pays interest on these bonds and repays the bonds on maturity. Bond dividend enables the company to postpone payment of dividend. But it is not popular.

3. Property dividend

It refers to the payment in the form of some assets other than cash. This type of dividend is also not popular.

4. Stock dividend

Stock dividend refers to the issue of bonus shares to shareholders. Bonus shares are issued free of cost to shareholders out of accumulated profits. Usually they are issued when a company has substantial reserves but needs to retain cash for expansion /diversification.

Factors determining for dividend policy:

1. Expectations of shareholders

Shareholders are the owners of the company. So the company should consider the dividend expectations of shareholders. They may be interested in dividend or capital gains. The preference for dividend or capital gains depends on the economic status or attitude of an individual. For example a retired person who wants a regular income may prefer to receive dividends.

2. New investments

Availability of investment opportunities (such as expansion and diversification) is an important factor, which influence the dividend decision. If the company has profitable investment opportunities it may retain a substantial part of the earnings and pay out a small dividend. It the company does not have good investment opportunities; it is better to distribute the earnings as dividends. In other words a high payout is desirable for such companies.

3. Taxation

Taxation policy also affects the dividend policy of a firm. In India dividends are tax free in the hands of the shareholders. Long term capital gain on listed shares sold on or after 1st October 2004 is also not taxable if securities transitions tax has been paid. But short-term capital gain is

taxable. The shareholders may prefer dividends or capital gains depending on the effect of tax on their incomes.

4. Liquidity

The liquidity position is important factors which influence the dividend decision. Sometimes a company, which has good earnings, may not have sufficient liquidity. In such case it is advisable to restrict the dividend to the available liquid resources.

5. Access to capital markets

A company which is confident of raising resources from the capital market (for expansion and diversification) may pay higher dividends. On the hand if the company is unable to raise resources due to its poor image or the depressed state of the capital markets, it has to content with a low payout.

6. Restrictions by lenders

The lenders particularly financial institutions impose restrictions on the payment of dividends to safeguard their own interests. For example, a lender may stipulate that only up to 30 percent of the profits may be paid as dividends. Because of these restrictions, a company may be forced to retain earnings and have a low payout.

7. Control

The objective of maintains control by the present mang3ement may also affect the dividend policy. Suppose a company's is quite liberal in paying dividends, it may have to raise funds for expansion or diversification by the issue of new shares, its control will be diluted. Hence the management may opt for a low payout and retain earnings to maintain control over the company.

8. Legal Restrictions

The provisions of the companies act are to be adhered in the formulation of dividends policy. According to these provisions, dividends can be paid only out of current profits or past profits, only after providing for depreciation. There are also stipulations regarding transfer of profits to reserve before declarations of dividends. Further dividends cannot be paid out of capital.

Legal and procedural aspects of dividend payments:

Information on payment of dividends

Every general meeting of shareholders sets record-date. Shareholders registered with Central Securities Clearing Corporation as owners of shares are eligible for the payment of dividends. The resolution, adopted at the general meeting of shareholders, sets the gross amount of the dividend per share. The new procedure of dividend taxation was introduced by amendments of Personal Income Tax Act, in force since January 1st, 2006.

- Shareholders – legal persons. Regarding the fact that dividends are a part of legal persons' income, they are the basis for corporate income tax.

The tax(15%) is deducted from the payment of dividends for both residents ad non- residents. The latter may be exempt from paying the income tax at this rate if a different tax rate is set by an agreement on prevention of double taxation between the Republic of Nation and the country of the recipient. Regardless of this general legal requirement, legal persons may receive a gross divided if they comply with the requirements of article 70, paragraph 2 of Corporate Income Tax.

Dividend payment procedure:

After the General Meeting of Shareholders, all shareholders receive written notifications of the dividend amount they are eligible for, and the date and method of dividend payment. Prior to that, the shareholders are notified about any missing of inaccurate data on which basis the dividends are to be paid (personal account number and tax number). To ensure on-time payment

of dividends, shareholders who receive such a notification and all those, whose data have changed after being submitted, must send the relevant data as soon as possible. The regulations allow for dividends to be paid to natural persons in cash provided that the net dividend does not exceed prescribed amount. If the net dividend exceeds the above amount, shareholders must submit information of their personal accounts.

Types of Dividend Policy:

Dividend policy of a firm, thus affects the long-term financing and wealth of share holders. The important aspect of dividend policy is to determine the amount of earnings to be distributed to shareholders and the amount to be retained in the firm. Retained earnings are the most significant internal sources of financing the growth of the firm. On the other hand, dividend is the right of the shareholders to participate in the profit.

Dividend Practices

1. Constant dividend per share
2. Constant percentage of net earnings
3. Small constant dividend per share plus extra dividend
4. Dividend as fixed percentage of market value

Significance of stable dividend

1. Confidence among shareholders'
2. Investors desire for current income
3. Institutional investors requirements
4. Stability in market price of shares
5. Raising additional finance
6. Market for debentures and preference shares
7. Reducing the chances of loss of control

Stable Dividend Policy:

Stabile dividends have a positive impact on the market price of shares. If dividends are stable it reduces the chance of speculation in the market and investors desiring a fixed rate of return will naturally be attracted towards such securities. Stability of dividend means either a constant amount per shares or a constant percentage of net earnings.

(1) Strict or Conservative dividend Policy which envisages the retention of profits on the cost of dividend pay-out. It helps in strengthening the financial position of the company; (2) Lenient Dividend Policy which views the payment of dividend at the maximum rate possible taking in view the current earning of the company. Under such policy company retains the minimum possible earnings; (3) Stable Dividend Policy suggests a mid-way of the above two views. Under this policy, stable or almost stable rate of dividend is maintained. Company maintains reserves in the years of prosperity and uses them in paying dividend in lean year. If company follows stable dividend policy, the market price of this shares shall be higher. There are reasons why investors prefer stable dividend policy. Main reasons are:-

1. Confidence among Shareholders. A regular and stable dividend payment may serve to resolve uncertainty in the minds of shareholders. The company resorts not to cut the dividend rate even if its profits are lower. It maintains the rate of dividends by appropriating the funds from its reserves. Stable dividend presents a bright future of the company and thus gains the confidence of the shareholders an the goodwill of the company increases in the eyes of the general investors.

2. Income Conscious Investors. The second factor favoring stable dividend policy is that some investors are income conscious and favor a stable rate of dividend. They too, never favor an unstable rte of dividend. A Stable dividend policy may also satisfy such investors.

3. Stability in Market Price of Shares. Other things beings equal, the market price very with the rate of dividend the company declares on its equity shares. The value of shares of a company having a stable dividend policy fluctuates not widely even if the earnings of the company turn down. Thus, this policy buffer the market price of the stock.

4. Encouragement to Institutional Investors. A stable dividend policy attracts investments from institutional investors such institutional investors generally prepare a list of securities, mainly incorporating the securities of the companies having stable dividend policy in which they invest their surpluses or their long term funds such as pensions or provident funds etc.

In this way, stability and regularity of dividends not only affects the market price of shares but also increases the general credit of the company that pays the company in the long run.

Dividends paid by the firms are viewed positively both by the investors and the firms. The firms which do not pay dividends are rated in oppositely by investors thus affecting the share price. The people who support relevance of dividends clearly state that regular dividends reduce uncertainty of the shareholders i.e. the earnings of the firm is discounted at a lower rate, k_e thereby increasing the market value. However, its exactly opposite in the case of increased uncertainty due to non-payment of dividends. Two important models supporting dividend relevance are given by Walter and Gordon.

Walter's model

James E. Walter's model shows the relevance of dividend policy and its bearing on the value of the share.

Assumptions of the Walter model

1. Retained earnings are the only source of financing investments in the firm, there is no external finance involved.
2. The cost of capital, k_e and the rate of return on investment, r are constant i.e. even if new investments decisions are taken, the risks of the business remains same.
3. The firm's life is endless i.e. there is no closing down.

Basically, the firm's decision to give or not give out dividends depends on whether it has enough opportunities to invest the retain earnings i.e. a strong relationship between investment and dividend decisions is considered

Dividends paid to the shareholders are re-invested by the shareholder further, to get higher returns. This is referred to as the opportunity cost of the firm or the cost of capital, k_e for the firm. Another situation where the firms do not pay out dividends, is when they invest the profits or retained earnings in profitable opportunities to earn returns on such investments. This rate of return r, for the firm must at least be equal to k_e. If this happens then the returns of the firm is equal to the earnings of the shareholders if the dividends were paid. Thus, its clear that if r, is more than the cost of capital k_e, then the returns from investments is more than returns shareholders receive from further investments.

Walter's model says that if $r<k_e$ then the firm should distribute the profits in the form of dividends to give the shareholders higher returns. However, if $r>k_e$ then the investment opportunities reap better returns for the firm and thus, the firm should invest the retained earnings. The relationship between r and k are extremely important to determine the dividend policy. It decides whether the firm should have zero payout or 100% payout.

In a nutshell :

- If $r>k_e$, the firm should have zero payout and make investments.
- If $r<k_e$, the firm should have 100% payouts and no investment of retained earnings.
- If $r=k_e$, the firm is indifferent between dividends and investments.

The market price of the share comprises of the sum total of :

- the present value if an infinite stream of dividends
- the present value of an infinite stream of returns on investments made from retained earnings.

Therefore, the market value of a share is the result of expected dividends and capital gains according to Walter.

Criticisms

Although the model provides a simple framework to explain the relationship between the market value of the share and the dividend policy, it has some unrealistic assumptions.

1. The assumption of no external financing apart from retained earnings, for the firm make further investments is not really followed in the real world.
2. The constant r and k_e are seldom found in real life, because as and when a firm invests more the business risks change.

STOCK SPLIT

A stock split is a method to increase the number of outstanding shares by proportionately reducing the face value of a share. A stock split affects only the par value and does not have any effect on the total amount outstanding in share capital. The reasons for splitting shares are:

To make shares attractive: The prime reason for affecting a stock split is to reduce the market price of a share to make it more attractive to investors. Shares of some companies enter into higher trading zone making it out of reach to small investors. Splitting the shares will place them in more popular trading range thus providing marketability and motivating small investors to buy them.

Indication of higher future profits: Share split is generally considered a method of management communication to investors that the company is expecting high profits in future.

Higher dividend to shareholders: When shares are split, the company does not resort to reducing the cash dividends. If the company follows a system of stable dividend per share, the investors would surely get higher dividends with stock split.

LEVERAGES

INTRODUCTION

Leverage has been defined as 'the action of a lever, and the mechanical advantage gained by it' - A lever is a rigid piece that transmits and modifies force or motion where forces are applied at two points and it turns around a third. The physical principle of the lever is intuitively appealing to most. It is the principle that permits the magnification of force when a lever is applied to a fulcrum. The term leverage refers to an increased means of accomplishing some purpose. With leverage, it is possible to lift objects, which is otherwise impossible. The term refers generally to circumstances which bring about an increase in income volatility. In business, leverage is the means of increasing profits. It may be favourable or unfavorable. The former reduces profit, while the latter increases it. The leverage of a firm is essentially related to a measure, which may be a return on investment or on earnings before taxes. It is an important tool of financial planning because it is related to profits.

Christy and Rodent define leverage as the tendency for profits to change at a faster rate than sales. Leverage is an advantage or disadvantage which is derived from earning a return on total

investment (total assets) and which is different from the return on owner's equity. It is a relationship between equity share capital and securities, and creates fixed interest and dividend charges. It is also known as gearing. The term capital gearing is used to describe the ratio between the ordinary share capital and the fixed interest bearing securities of a company. Capital gearing reveals the suitability or otherwise of a company's capitalization. Capital gears up the effect on earnings of any change at the trading profit level. However, it is a double-edged weapon, and emphasizes the effects of deterioration as well as of improvement.

Master Table for Leverage Calculations

Sales
Less: Variable Cost
Contribution
Less: Fixed Cost
Earnings before Interest and Taxes (OP) (EBIT)
Less: Interest
Earnings before Tax (EBT)
Less: Tax
Earnings after Tax (EAT)
Less: Preference shareholders' dividend
Earnings Available to Equity Shareholders

1. OPERATING LEVERAGE

The operating leverage takes place when a change in revenue produces a greater change in EBIT. It indicates the impact of changes in sales on operating income. A firm with a high operating leverage has a relatively greater effect on EBIT for small changes in sales. A small rise in sales may enhance profits considerably, while a small decline in sales may reduce and even wipe out the EBIT. Naturally, no firm likes to operate under conditions of a high operating leverage because that creates a high-risk situation. It is always safe for a firm to operate sufficiently above the break-even point to avoid dangerous fluctuations in sales and profits. The operating leverage is related to fixed costs. A firm with relatively high fixed costs uses much of its marginal contribution to cover fixed costs. It is interesting to note that beyond the break-even point, the marginal contribution is converted into EBIT. The operating leverage is the highest near the break-even point. After a firm reaches this point, even a small increase in sales results in a big increase in EBIT.

The extent of the operating leverage at any single sales volume is calculated as follows:

$$\text{Operating Leverage} = \frac{\text{Marginal Contribution}}{\text{EBIT}} \text{ or } \frac{C}{\text{EBIT}} \text{ or}$$

$$= \frac{\text{Revenue - Variable Costs}}{\text{Revenue - Variable Costs - Fixed Costs}}$$

The change in the rate of earnings is based on the operating leverage resulting from the fact that some costs do not move proportionally with changes in production. This leverage operates both positively and negatively, increasing profits at a rapid rate when sales are expanding and reducing them or causing losses when operations decline. If all the costs are variable, the rate of profit would show fewer changes at different operating levels. The operating leverage, then, is the process by which profits are raised or lowered in greater proportion than the changes in the volume of production because of the inflexibility of some costs. The higher the

fixed costs, the greater the leverage and the more frequent the changes in the rate of profit (or loss) with alternations in the volume of activity.

2. FINANCIAL LEVERAGE

It is generally accepted that investors seek to maximize their return on investments, subject to given risk constraints, and that they demand a higher return for the greater risk involved in an investment. The proportion of debt in the capital structure of a company is limited by two factors:

- Investors risk preference
- Business risk associated with the nature of a company's operations.

The determination of this limit, which is known as the corporate debt capacity, is an important aspect of the financial policy of a company to get the maximum benefit from debt financing. While the investors' risk preference is difficult to assess because it varies from individual to individual, business risk can be determined objectively.

D.F.L=EBIT/EBIT-I or EBIT/EBT

3. COMBINED LEVERAGE

Combined leverage compares changes in revenues with changes in EBT. It is so called because II combines the operating and fixed charges leverages, as can be seen below:

Combined Leverage — Operating Leverage x Fixed Charges Leverage

$$= \frac{\text{Marginal Contribution}}{\text{EBIT}} \times \frac{\text{EBIT}}{\text{EBT}} \text{ or } \frac{\text{C}}{\text{EBT}}$$

$$= \frac{\text{Revenue - Variable Costs}}{\text{Revenue - Variable Costs - Fixed Costs}} \times \frac{\text{Revenue - Variable Costs - Fixed Costs}}{\text{Revenue - Variable Costs - Fixed Cost - Interest Charges}}$$

$$= \frac{\text{Revenue - Variable Costs}}{\text{Revenue - Variable Costs - Fixed Cost - Interest Charges}}$$

$$\text{In exhibit 3, the combined leverage} = \frac{120000}{70000} = 1.71 = 1.71 \text{ times.}$$

A combined leverage may thus be described as a ratio of marginal contribution to EBT, or as operating leverage multiplied by fixed charges leverage. If operating leverage is 2.1/1 and fixed charges leverage 2.7/1, the combined leverage is

$$\frac{2.1 \times 2.7}{1 \times 1} = \frac{5.67}{1} \text{ or } 5.67 \text{ times.}$$

APPROACH OF WEIGHTED AVERAGE COST OF CAPITAL AND LIMITATIONS:

The **weighted average cost of capital (WACC)** is the rate that a company is expected to pay on average to all its security holders to finance its assets. The WACC is the minimum return that a company must earn on an existing asset base to satisfy its creditors, owners, and other providers of capital, or they will invest elsewhere. Companies raise money from a number of sources: common equity, preferred equity, straight debt, convertible debt, exchangeable debt, warrants, options, pension liabilities, executive stock options, governmental subsidies, and so on. Different securities, which represent different sources of finance, are expected to generate different returns. The WACC is calculated taking into account the relative weights of each component of the capital structure. The more complex the company's capital structure, the more

laborious it is to calculate the WACC. In general, the WACC can be calculated with the following formula:

$$\mathrm{WACC} = \frac{\sum_{i=1}^{N} r_i \cdot MV_i}{\sum_{i=1}^{N} MV_i}$$

where N is the number of sources of capital (securities, types of liabilities); r_i is the required rate of return for security i; MV_i is the market value of all outstanding securities i.

Tax effects can be incorporated into this formula. For example, the WACC for a company financed by one type of shares with the total market value of MV_e and cost of equity R_e and one type of bonds with the total market value of MV_d and cost of debt R_d, in a country with corporate tax rate t is calculated as:

$$\mathrm{WACC} = \frac{MV_e}{MV_d + MV_e} \cdot R_e + \frac{MV_d}{MV_d + MV_e} \cdot R_d \cdot (1 - t)$$

Limitations of the WACC:

1. Weighting System

a. Marginal Capital Costs
b. Capital Raised in Different Proportions than WACC

2. Flotation Costs are the costs associated with issuing securities such as underwriting, legal, listing, and printing fees.

a. Adjustment to Initial Outlay
b. Adjustment to Discount Rate

Modigliani Miller approach on cost of capital:

M M theory relating to the relationship between cost of capital and valuation is similar to NOI approach

Net Operating Income Approach (NOI)

According to NOT approach is diametrically opposite to the NI approach. The essence of this approach is that capital structure decision of a corporate does not affect its cost of capital and the valuation, and, hence, irrelevant.

The main argument of NOI is that an increase in the proportion of debt in the capital structure would lead to an increase in the financial risk of the equity holders. To compensate for the increased risk , they would require a high rate of return (Ke) on their investment. As a result , the advantage of the lower cost of debt would exactly be neutralized by the increase in the cost of equity. The cost of debt has two components:

i) Explicit, represents rate of interest and
ii) Implicit, represents the in the cost of equity capital

Modigliani – Miller Approach (MM)

MM theory agree with NOI and provide a behavioral justification for the irrelevance of capital structure. They maintain the cost of capital and the value of the firm do not change with a change in leverage.

MM hypothesis (Assumptions)

1. Perfect capital market:
    a. Securities are infinitely divisible
    b. Investors are free to buy / sell securities
    c. Investors can borrow without restrictions on the same terms and conditions as firms can
    d. Investors are rational and behave accordingly

2. Given the assumption of perfect information and rationality
3. Same expectations of investors (EBIT or NOT) Homogeneous risk class.
4. Dividend payout ration is 100%
5. There are no taxes. (This assumption is removed later)

Problems & Solutions:

1. A firm has sales of Rs.75,00,000 variable cost of Rs.42,00,000 and fixed cost of Rs.6,00,000. It has a debt of Rs.45,00,000 at 9% and equity of Rs. 55,00,000. Calculate operating, financial and combined leverage of them. Also calculate the new EBIT, if the sales drop to Rs. 50,00,000. **(May/June 2007)**

Solution:

Calculation of leverage

	Existing	**New**
Sales	75,00,000	50,00,000
Less: variable cost:	42,00,000	28,00,000
Contribution	33,00,000	22,00,000
Less: Fixed cost	6,00,000	6,00,000
Operating profit (EBIT)	27,00,000	16,00,000
Less: Interest;	4,50,000	4,05,000
EBT	22,50,000	11,95,000

Operating leverage

Contribution / EBIT	=	33,00,000 / 27,00,000	:	22,00,000 / 16,00,000
	=	1.2:1	:1.375: 1	

Financial leverage

EBIT / EBT	=	27,00,000 / 22,50,000	:	16,00,000 / 11,95,000
	=	1.2 : 1.33		

Combined Leverage

Contribution / EBT	=	33,00,000 / 22,50,000	:	22,00,000 / 11,95,000
	=	1.47	:	1.84

2. Firms X and Y are identical except that firm 'X' is not leveraged while firm 'Y' is leveraged. The following data relate to them: (Nov/Dec 2007)

	Firm 'X'	Firm 'Y

Assets	5,00,000	5,00,000
Debt Capital	0	2,50,000 (9%Interest)
Equity share capital (50,000 shares of Rs. 10 each)	5,00,000	2,50,000 (25,000 shares of Rs.10 each)
Rate of return on assets	20%	20%

Calculate EPS for both Firms, assuming a tax-rate of 50%. Will it be advantageous to Firm 'y' to raise the level of debt capital to 75%?

Solution:

Calculation of EPS

Firm –X	**(Equity)**	**Firm – Y**	**(Equity +Debt)**
Earnings	1,00,000	Earnings	1,00,000
Less: Interest	____	Less: Interest @9%	22,500
EBT	1,00,000	EBT	77,500
Less: tax @50%	50,000	Less: tax @50%	38,750
EAT	50,000	EAT	38,750

EPS = Earnings/ No of shares — EPS = 38,750/25,000 = 1.55

EPS=50,000/50,000 = 1.00

If the debt is increased to 75%

Earnings	1,00,000
Less: Interest @9%	33,750
EBT	66,250
Less: tax @50%	33,125
EAT	33,125

EPS = 33,125/12,500 = 2.65

If the company Y raise the level of debt to 75%, will increase the EPS to Rs.2.65, therefore, it is advantages.

3. Determine the market Value of equity shares of the company from the following information as per Walter's model. **(May/June 2008)**

Earnings of the company	Rs. 5, 00,000
Dividend paid	Rs. 3,00,000
Number of shares outstanding	Rs. 1,00,000
Price earnings ratio	8
Rate of return on investment	15%
Cost of capital	13.2%

Solution:

EPS = 5,00,000/1,00,000 =Rs.5

DPS= 3,00,000/1,00,000 =Rs.3

PE Ratio = Market Price per share / EPS

8 = Mkt Price /5

Market price = Rs.40
Dividend payout = DPS/EPS
5/3 = 1.666

Walters formula

P = (D+r(E-d))/(ke/ke) (or)
P= (D/ke) +(r(E-D)/ke/ke)
P= 0+((0.15/0.132)(5-0))/0.132 =Rs.43

4. A companies Capital structure consist of the Following: (May/June 2008)

Equity share capital of Rs. 100 each	Rs. 20 Lakhs
Retained Earnings	Rs. 10 Lakhs
9% Preference shares	Rs. 12 Lakhs
7% Debentures	Rs. 8 Lakhs
	Rs. 50 lakhs

The company earns 12% on its capital. The income tax rate is 50% The company requires a sum of Rs. 25 lakhs to finance its expansion programme for which following alternatives are available to it.

i) Issue of 20,000 equity shares at a premium of Rs. 25 per share
ii) Issue of 10% preferences shares
iii) Issue of 8% debentures

It is estimated that the P/E rations in the cases of equity, preference and debenture financing would be 21.4, 17 and 15.7 respectively. Which of the three financing alternatives would you recommend and why?

Solution:

Particulars	**Existing**	**Equity**	**Preference**	**Debt**
EBIT	6,00,000	9,00,000	9,00,000	9,00,000
Less: Interest	56,000	56,000	56,000	56,000+
				2,00,000
PBT	5,44,000	8,44,000	8,44,000	6,44,000
Less: Tax@50%	2,72,000	4,22,000	4,22,000	3,22,000
PAT	2,72,000	4,22,000	4,22,000	3,22,000
Less: Pref. Dividend	1,08,000	1,08,000	1,08,000+ 2,50,000	1,08,000
Earnings to ESH	1,64,000	3,14,000	64,000	2,44,000
No. of Equity shares	20,000	40,000	20,000	20,000
EPS = (E/No. of shares)	8.20	7.85	3.20	10.7
PE Ratio	-	21.4	17	15.7
Market Price	-	167.99	54.40	167.99

* EPS is highest in debenture option it will be selected.

5. Calculate the operating leverage for each of the four firms A,B,C and D from the following data.

Particulars	Firms			
	A	B	C	D
	Rs.	Rs.	Rs.	Rs.
Sale Price / unit	20	32	50	70
Variable cost/unit	6	16	20	50
Fixed operating cost	80000	40000	200000	Nil

Calculation of Operating Leverages :

Particulars	Firms			
	A	B	C	D
No. of Units sold	10000	10000	10000	10000
Sales	200000	320000	500000	700000
(-) Variable Cost	60000	160000	200000	500000
Contribution	120000	160000	300000	200000
(-) Fixed Cost	80000	40000	200000	NIL
EBIT	40000	120000	100000	200000

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

$$\text{Firm A} = \frac{120000}{40000} = 3 \text{ times}$$

$$\text{Firm B} = \frac{160000}{120000} = 1.33 \text{ times}$$

$$\text{Firm C} = \frac{300000}{100000} = 3 \text{ times}$$

$$\text{Firm D} = \frac{200000}{200000} = 1 \text{ time}$$

6. **ABC Ltd. Provides following details :**

Profit	3,00,000
Less : Interest on debentures	60,000
Earnings before taxes	2,40,000
Less : taxes @ 35%	84,000
Earnings after taxes	1,56,000
No. of equity shares @ Rs.10 each	40,000
Earnings per share	3.9
Market price of share (Rs)	39
P/E ratio	10

The company has undistributed reserves, Rs.6,00,000. It needs Rs.2,00,000 for expansion which will earn the same rates as funds already employed. The debt equity ratio higher than 35% will push the P/E Ratio down to 8 and raise the interest rate on additional amount borrowed to 14%. Calculate the price of equity share (1) If the additional funds are raised s debt; (2) If the amount is raised by equity shares at current market price.

Calculation of Price of Equity Shares :

Particulars	Additional Funds are raised as	
	DEBT	EQUITY SHARES
Profit	300000	300000

(-) Interest on Debentures (60000 + 28000)	88000	60000
Earnings before taxes	212000	240000
(-) Taxes @ 35%	74200	84000
Earnings after taxes	1378000	156000
No. of equity shares @ Rs.10 each	40000	(40000 + 5128)
Earnings Per Share	3.445	3.457
Market Price of Share	27.56	34.57
P/E Ration $\left(\frac{MP}{EPS} = P/E\right)$	8	10

7. The Evergreen company has the choice in raising an additional sum of Rs.50 Lakhs either by the sale of 10% debentures or by issue of additional equity shares Rs.50 per share. The capital structure of the company consists of 10 lakhs ordinary shares and not debt. At what level of EBIT after the new capital is acquired, would EPS be the same whether new funds are raised either by issuing ordinary shares or by issuing debentures? Also determine the level of EBIT at which uncommitted EPS (UEPS) would be the same, if sinking fund obligation amount to Rs.5 Lakhs per year. Assume a 50% tax rate. Discuss the relevance of this calculation and also verify your results. (May/June 2009)

Solution:

i) **Determination of Indifference Point** :

Debt Alternative = Equity Alternative

$$\frac{(X-I)(1-t)}{N_1} = \frac{(X)(1-t)}{N_2}$$

$$\frac{(X-Rs.500000)(1-0.50)}{1000000} = \frac{X(1-0.50)}{1100000}$$

$$1100000\,[0.50X - 250000] = 1000000\,[X - 0.50X]$$

$$5.5X - 2750000 = 10X - 5X$$

$$5.5X - 2750000 = 5X$$

$$0.5X = 2750000$$

$$X = 5500000$$

Verification Table:

Particulars	**10% Debt**	**Equity**
EBIT	Rs.5500000	Rs.5500000
(-) Interest	500000	NIL
Earnings after interest	5000000	5500000
(-)Tax @ 50%	2500000	2750000
Earnings after tax	2500000	2750000
No. of Equity Shares	10000000	1100000
EPS	2.5	2.5

$$\frac{(X-I)(1-t) - S}{} \qquad \frac{(X)(1-t)}{}$$

$$\frac{}{N_1} = \frac{}{N_2}$$

$$\frac{(X\text{-Rs.}500000)\ (1\text{-}0.50) - 500000}{1000000} = \frac{X\ (1\text{-}0.50)}{1100000}$$

$$\frac{0.50\ X - 250000) - 500000}{1000000} \quad \frac{0.50X}{1100000}$$

$11\ (0.50X - 750000) = 10(0.50X)$

$5.5X - 8250000 = 5X$

$0.5X = 8250000$

X = Rs.16500000

Particulars	**10% Debt**	**Equity**
EBIT	16500000	16500000
(-) Interest	500000	NIL
Earnings after interest	16000000	16500000
(-)Tax @ 50%	8000000	8250000
Earnings after tax	8000000	8250000
(-) Sinking Fund	500000	-
Earnings for equity holders	7500000	8250000
Number of equity shares	1000000	1100000
EPS	7.5	7.5

Conclusion : The relevance of indifference level of EBIT is that it enables the management to take better financial decisions. It is a point beyond which the leverage (use of debt) becomes favourable in that the use of debt could be employed to enhance to EPS. Therefore, if the estimated EBIT is more than the indifference level, debt alternative to raise finance should be used, otherwise the equity alternative would be preferred.

The uncommitted EPS (UEPS) approach is useful to the conservative decision makers, who look to debt not only in terms of interest payment but also in terms of its repayment. Therefore, they want to get an idea of earnings which, could meet both the payments. However, this approach is of short-terms significance only as after the redemption of debentures, the sinking fund balance is transferred to general reserves and thus forms a part of the equity share holders funds.

8. A firm has sales of Rs. 10,00,000, variable cost of 70%, total costs Rs.9,00,000 and debt of Rs.5,00,000 at 10% rate of interest. Tax rate is 40%. What are the operating and financial leverage and earning after tax (EBIT), how much of a rise in sales would be needed on a percentage basis? (To be discussed in the class) **(May/June 2011)**

9. A company's present capital structure contains 15,00,00 equity shares and 5,00,000 preferences shares. The firm's current EBIT is Rs.7.2 million. Preference shares carry a dividend of Rs. 122 per share. The earning per share is Rs. 2. The firm is planning to raise Rs. 10 million of external financing. Two financing alternatives are being considered:

(i) Issuing 10,00,000 equity shares for Rs.10 each Issuing debentures for Rs.10 million carrying 15% interest.

Compute the EPS-EBIT indifference point. Which is the best alternative? Solution: (To be discussed in the class) **(Nov/Dec 2011)**

10. A company needs Rs.5,00,000 for construction of a new plant. The following three financial plants are feasible:
(i) The company may issue Rs. 50,000 ordinary shares at Rs. 10 per share.
(ii) The company may issue 25,000 ordinary shares at Rs. 10 per share and 2500 debentures of Rs. 100 denomination bearing a 8% rate of interest.
(iii) The company may issue 25,000 ordinary share at Rs. 10 per share and Rs. 2,500 preference share at Rs. 100 per hare bearing a 8% rate of dividend. If the company's earnings before interest and taxes are Rs. 10,000, Rs. 20,000, Rs. 40,000, Rs. 60,000 and Rs. 1,00,000, What are the earnings per share under each of the three financial plans? Which alternative would you recommend and Why? Determine the indifference points by formulating and solving graphically. Assume a corporate tax rate 50%. **(May/June 2013)**

Solution:

Particulars	**Equity Firm**				
EBIT	10,000	20,000	40,000	60,000	1,00,000
Less: Interest	-	-	-	-	-
PBT	10,000	20,000	40,000	60,000	1,00,000
Less: Tax@50%	5,000	10,000	20,000	30,000	50,000
EAT	5,000	10,000	20,000	30,000	50,000
Less : Pref Div	-	-	-	-	-
Earnings to equity shareholders	5,000	10,000	20,000	30,000	50,000
No. of Equity Shareholders	50,000	50,000	50,000	50,000	50,000
EPS (Rs.)	0.10	0.20	0.40	0.60	1.00

Particulars	**Equity + Debt Firm**				
EBIT	10,000	20,000	40,000	60,000	1,00,000
Less: Interest	20,000	20,000	20,000	20,000	20,000
PBT	-10,000	0	20,000	40,000	80,000
Less: Tax@50%	-	-	10,000	20,000	40,000
EAT	-	-	10,000	20,000	40,000
Less : Pref Div	-	-	-	-	-
Earnings to equity shareholders	-10,000	-	10,000	20,000	40,000
No. of Equity Shareholders	25,000	25,000	25,000	25,000	25,000
EPS (Rs.)	-0.40	-	0.40	0.80	1.60

Particulars	**Equity + Preference**				
EBIT	10,000	20,000	40,000	60,000	1,00,000
Less: Interest	-	-	-	-	-
PBT	10,000	20,000	40,000	60,000	1,00,000
Less: Tax@50%	5,000	10,000	20,000	30,000	50,000

EAT	5,000	10,000	20,000	30,000	50,000
Less : Pref Div	20,000	20,000	20,000	20,000	20,000
Earnings to equity shareholders	-15,000	-10,000	0	10,000	30,000
No. of Equity Shareholders	*25,000	25,000	25,000	25,000	25,000
EPS (Rs.)	-0.60	-0.40	0.00	0.40	1.20

UNIT - IV

WORKING CAPITAL MANAGEMENT:

Principles of working capital: Concepts, Needs, Determinants, issues and estimation of working capital - Accounts Receivables Management and factoring - Inventory management - Cash management - Working capital finance: Trade credit, Bank finance and Commercial paper.

WORKING CAPITAL:

Working capital refers to the capital required for day-to-day operations of a business enterprise. The need for Working Capital is omnipresent for all types and sizes of businesses, and as such cannot be overstressed.

CONCEPTS OF WORKING CAPITAL

There are two concepts of Working Capital – Gross Working capital and Net Working capital.

1. Gross Working Capital

Gross Working capital refers to the firm's investment in current assets (Cash, Short Term Securities, Debtors, Bills Receivable and Inventory). Current assets are those assets which can be converted into cash within a period of one year. This concept focuses on – how to optimize investment in current assets and how should they be financed? In this instance, both excessive and inadequate investment in current assets should be avoided.

2. Net Working Capital

Net Working capital refers to the difference between current assets and current liabilities. It may be positive or negative. This concept is a qualitative concept. It indicates the liquidity position of the firm and suggests the extent to which working capital needs may be financed by permanent sources of capital. Current assets should be sufficiently in excess of current liabilities to constitute a margin for maturing obligations within the ordinary operating cycle of a business. This concept also covers the question of judicious mix of long-term and short-term funds for financing current assets.

The two concepts of Working Capital are not exclusive; rather, they have equal significance from management's view point.

TYPES OF WORKING CAPITAL

Working capital can be divided into two categories on the basis of time. They are – Permanent Working Capital and Temporary or Variable Working capital

Permanent Working Capital refers to that minimum amount of investment in current assets which is required at all times to carry on minimum level of business activities. It represents the current assets required on a continuing basis over the entire year, and hence should be financed out of long term funds. Tandon Committee has referred to this type of Working capital as 'Core Current Assets'.

Temporary Working capital represents the additional current assets required at different times during the operating year.

FACTORS AFFECTING WORKING CAPITAL:

1. Nature of business:

In the case of public utility concern like railways, electricity etc most of the transactions are on cash basis. Further they do not require large inventories. Hence working capital requirements are low. On the hand, manufacturing and trading concerns require more working capital since they have to invest heavily in inventories and debtors. Example cotton or sugar mil

2. Size of business

Generally large business concerns are required to maintain huge inventories are required. Hence bigger the size, the large will be the working capital requirements.

3. Time consumed in manufacture

To run a long production process more inventories is required. Hence the longer the period of manufacture, the higher will the requirements of working capital and vice-versa.

4. Seasonal fluctuations

A number of industries manufacture and sell goods only during certain seasons. For example the sugar industry produces practically all sugar between December and April. Their working capital requirements will be higher during this session. It is reduced as the sales are made and cash is realized.

5. Fluctuations in supply

If the supply of raw materials is irregular companies, are forced to maintain huge stocks to avoid stoppage of production. In such case, working capital requirement will be high.

6. Speed of turnover

A concern say hotel which affects sales quickly needs comparatively low working capital. This is because of the quick conversion of stock into cash. But if the sales are slow, more working capital will be required**.**

7. Terms of sales

Liberal credit sales will result in locking up of funds in sundry debtors. Hence a company, which allows liberal credit, will need more working capital than companies, which observe strict credit norms.

8. Terms of purchase

Working capital requirements are also affected by the credit facilities enjoyed by the company. A company enjoying liberal credit facilities from its suppliers will need lower amount working capital. (For example book shops). But a company that has to purchase only for cash will need more working capital.

9. Labour intensive Vs. Capital intensive industries

In labour intensive industries, large working capital is required because of heavy wage bill and more time taken for production. But the capitals intensive industries require lesser amount of working capital because of have investment in fixed assets and shorter time taken for production.

10. Growth and expansion of business

A growing concern needs more working capital to finance its increasing activities and expansion. But working capital requirements are low in the case static concerns.

11. Price level changes

Changes in price level also affect the working capital requirements. Generally the rising prices will require the firm to maintain large amount of working capital. This is because more funds

will be required to maintain the same amount of working capital to maintain the same level of activity.

ESTIMATING WORKING CAPITAL REQUIREMENTS:

In order to estimate the extent of working capital requirement of a firm, several factors are to be considered. There are several methods / techniques for estimating the working capital requirements of a firm. They include – i) Estimation of components of working capital method, ii) Percent of sales method and iii) Operating cycle method

1. Estimation of components of working capital method

As the concept of net working capital refers to the difference between current assets and current liabilities, estimation of both may give the potential working capital requirement of the firm.

2. Percent of sales method

According to this method, based on the past data, the relationship between sales and working capital are found out and are expressed as a ratio. The application and calculation of this ratio on estimated future sales will give the extent of working capital needs of the firm.

3. Operating cycle method

Operating cycle is the time duration required to convert sales, after the conversion of resources into inventories and cash. The operating cycle of a manufacturing co involves 3 phases – i) acquisition of resources such as raw material, labor, power and fuel etc, ii) manufacture of the product that includes conversion of raw material into work in process and into finished goods, and iii) sales of the product either for cash or credit. Credit sales create book debts for collection (debtors).

The length of the operating cycle of a manufacturing co is the sum of – i) inventory conversion period (ICP) and ii) Book debts conversion period (BDCP). Together, they are sometimes called as gross operating cycle (GOC).

GOC = ICP + DCP

The Inventory conversion period is the total time needed for producing and selling the product and includes – (a) raw material conversion time (RMCP), (b) work in process conversion period (WIPCP) and (c) Finished good conversion period (FGCP)

ICP = RMCP + WIPCP + FGCP

The payables deferral period (PDP) is the length of time the firm is able to defer payments on various resource purchases. The difference between the gross operating cycle and payables deferrals period is the net operating cycle (NOC).

NOC = GOC- Payables deferral period

SOURCES OF WORKING CAPITAL

Sources of working capital are many. There are both external and internal sources. The external sources are both short-term and long-term. Trade credit, commercial banks, finance companies, indigenous bankers, public deposits, advances from customers, accrual accounts, loans and advances from directors and group companies etc. are external short-term sources. Companies can also issue debentures and invite public deposits for working capital which re external long term sources. Equity funds may also be used for working capital. A brief discussion of each source is attempted below.

Trade credit is a short term credit facility extended by suppliers of raw materials and other suppliers. It is a common source. It is an important source. Either open account credit or acceptance credit may be adopted. In the former as per business custom credit is extended to the buyer, the buyer is not goring any debt instrument as such. The invoice is the basic document. In the credit system a bill of exchange is drawn on the buyer who accepts and returns the same. The

bill of exchange evidences the debt. Trade credit is an informal and readily available credit facility. It is unsecured. It is flexible too; that is advance retirement or extension of credit period can be negotiated. Trade credit might be costlier as the supplier may inflate the price to account for the loss of interest for delayed payment.

Commercial banks are the next important source of working capital finance commercial banking system in the country is broad based and fairly developed. Straight loans, cash credits, hypothecation loans, pledge loans, overdrafts and bill purchase and discounting are the principal forms of working capital finance provided by commercial banks. Straight loans are given with or without security. A onetime lump-sum payment is made, while repayments may be periodical or one time. Cash credit is an arrangement by which the customers (business concerns) are given borrowing facility up to certain limit, the limit being subjected to examination and revision year after year. Interest is charged on actual borrowings, though a commitment charge for utilization may be charged. Hypothecation advance is granted on the hypothecation of stock or other asset. It is a secured loan. The borrower can deal with the goods. Pledge loans are made against physical deposit of security in the bank's custody. Here the borrower cannot deal with the goods until the loan is settled. Overdraft facility is given to current account holding customers tn overdraw the account upto certain limit. It is a very common form of extending working capital assistance. Bill financing by purchasing or discounting bills of exchange is another common form of financing. Here, the seller of goods on credit draws a bill on the buyer and the latter accepts the same. The bill is discounted per cash will the banker. This is a popular form.

Finance companies abound in the country. About 50000 companies exist at present. They provide services almost similar to banks, though not they are banks. They provide need based loans and sometimes arrange loans from others for customers. Interest rate is higher. But timely assistance may be obtained.

Indigenous bankers also abound and provide financial assistance. to small business and trades. They change exorbitant rates of interest by very much understanding.

Public deposits are unsecured deposits raised by businesses for periods exceeding a year but not more than 3 years by manufacturing concerns and not more than S years by non-banking finance companies. The RB! is regulating deposit taking by these companies in order to protect the depositors. Quantity restriction is placed at 25% of paid up capital + free services for deposits solicited from public is prescribed for non-banking manufacturing concerns. The rate of interest ceiling is also fixed. This form of working capital financing is resorted to by well established companies.

Advances from customers are normally demanded by producers of costly goods at the time of accepting orders for supply of goods. Contractors might also demand advance from customers. Where sellers' market prevail advances from customers may be insisted. In certain cases to ensure performance of contract in advance may be insisted.

Accrual accounts are simply outstanding suppliers of overhead service requirements and the like taxes due, dividend provision, etc.

Loans from directors, loans from group companies etc. constitute another source of working capital. Cash rich companies lend to liquidity crunch companies of the group.

Commercial papers are usance promissory notes negotiable by endorsement and delivery. Since 1990 CPs came to be introduced. There are restrictive conditions as to issue of commercial paper& CPs are privately placed after RBI's approval with any firm, incorporated or not, any bank or financial institution. Big and sound companies generally float CPs.

Debentures and equity fund can be issued to finance working capital so that the permanent working capital can be matching financed through long term funds.

Significance of working capital:

The problem of managing working capital has got a separate entity as against different decision making issues concerning current assets individually. Working capital has to be regarded as one of the conditioning factors in the long run operation of a firm which is inclined to treat it as no issues of shot term analysis and decision making. The skills for working capital management are somewhat unique, though the goals are the same as in managing current assets individually, viz to make on efficient use of funds for minimizing the risk of loss to attain profit objectives.

Working capital may be regarded as the life blood of a business. It is a capital which is required to look after the day to day operation of the business. Its effective provision can do much more to ensure the success of a business. There are two concept of working capital gross concept and net concept.

Significance of working capital:

Modern business enterprises produce goods in anticipation of demand. Goods produced are not sold immediately. Cash for sales is also not realized immediately. From the time of purchases of raw materials to the time of realizations of cash for sales made, an operating cycle is involved. The following stages are usually found in the operating cycle of a manufacturing firm :

1) Conversion of cash in to raw material
2) Conversion of raw material into work in progress
3) Conversion of work in progress into finished goods
4) Conversion of finished goods into debtors through sales
5) Conversion of debtors into cash

There are time gap between purchase or raw materials and production, production and sales and sales and realization of cash thus the need for working capital arises due to the time gap between purchases of raw materials and realization of cash from sales. Working capital is need for the following purposes.

1) To purchases raw materials spares and component parts
2) To incur day to day expenses
3) To meet selling cost such as packing advertising
4) To provide credit facilities to customers
5) To maintain inventories of raw materials work in progress and finished stock

Advantages of adequate working capital :

Working capital is the life blood and never center of a business. No business can be run successfully without adequate of working capital. The advantages of working capital are :

1) **Continuous production :** Adequate working capital ensures regular supply of raw materials and continuous production

2) **Solvency and good will :** Adequate working capital enables promote to creditors this helps in creating and maintaining good will.

3) **Easy Loans :** A concern having sufficient working capital enjoys liquidity and good credit standing. Hence, it can secure loans from banks and other on easy and favourable terms.

4) **Cash discount :** Adequate working capital enable a concern to avail cash discounts on the purchases, leading to a reduction in costs.

5) **Regular payment of expenses :** A company, which has ample working capital, can make regular payment of salaries, wages and other day to day commitments. Such prompt payments raise

the morale of employees and increase their efficiency. As a result, costs are minimized and profit increases.

6) **Exploitation of market conditions :** A concern with adequate working capital can exploit favourable market conditions. It can buy its requirements of raw materials in bulk when the market price is lower. Similarly, it can hold stock of finished goods to realize better prices.

7) **Ability to face :** Adequate working capital enables a concern to face business crises such as depression, because during such period there is much pressure on working capital.

8) **High return on investment :** Adequate of working capital facilities continuous production and effective utilization of fixed assets. Because of this, the concern is able to generate more profits and ensure higher returns on investment.

Disadvantages of redundant working capital:

- Redundant or excessive working capital means the funds which earn no profit for the business. Hence, the business cannot earn a proper rate of return on its investments.
- Due to low rate or return on investments, the value of shares may also fall.
- Redundant working capital may lead to unnecessary purchasing and accumulation of inventories. As a result, chances of theft, waste and losses will increase.
- Excessive working capital is an indication of excessive debtors and defective credit policy. Consequently, there may be delay in collection and higher incidence of bad debts.
- Excessive working capital makes management co placement. It leads to overall inefficiency in the organization.

17. With an example discuss the concept of working capital cycle. (Nov / Dec 2010)

WC cycle is the length period required to convert sales, after acquisition of the resources such as materials, power etc, into cash.

Working capital (abbreviated **WC**) is a financial metric which represents operating liquidity available to a business, organization or other entity, including governmental entity. Along with fixed assets such as plant and equipment, working capital is considered a part of operating capital. Net working capital is calculated as current assets minus current liabilities. It is a derivation of working capital, that is commonly used in valuation techniques such as DCFs (Discounted cash flows). If current assets are less than current liabilities, an entity has a **working capital deficiency**, also called a **working capital deficit**.

A company can be endowed with assets and profitability but short of liquidity if its assets cannot readily be converted into cash. Positive working capital is required to ensure that a firm is able to continue its operations and that it has sufficient funds to satisfy both maturing short-term debt and upcoming operational expenses. The management of working capital involves managing inventories, accounts receivable and payable, and cash.

Current assets and current liabilities include **three accounts** which are of special importance. These accounts represent the areas of the business where managers have the most direct impact:

- accounts receivable (current asset)
- inventory (current assets), and
- accounts payable (current liability)

The current portion of debt (payable within 12 months) is critical, because it represents a short-term claim to current assets and is often secured by long term assets. Common types of short-term debt are bank loans and lines of credit.

An increase in working capital indicates that the business has either increased current assets (that is has increased its receivables, or other current assets) or has decreased current liabilities, **for example** has paid off some short-term creditors.

Implications on M&A: The common commercial definition of working capital for the purpose of a working capital adjustment in an M&A transaction (i.e. for a working capital adjustment mechanism in a sale and purchase agreement) is equal to:

Current Assets – Current Liabilities excluding deferred tax assets/liabilities, excess cash, surplus assets and/or deposit balances. Cash balance items often attract a one-for-one purchase price adjustment

Working capital management

Decisions relating to working capital and short term financing are referred to as working capital management. These involve managing the relationship between a firm's short-term assets and its short-term liabilities. The goal of working capital management is to ensure that the firm is able to continue its operations and that it has sufficient cash flow to satisfy both maturing short-term debt and upcoming operational expenses.

Decision criteria

By definition, working capital management entails short term decisions - generally, relating to the next one year period - which are "reversible". These decisions are therefore not taken on the same basis as Capital Investment Decisions (NPV or related, as above) rather they will be based on cash flows and / or profitability.

- One measure of cash flow is provided by the cash conversion cycle - the net number of days from the outlay of cash for raw material to receiving payment from the customer. As a

management tool, this metric makes explicit the inter-relatedness of decisions relating to inventories, accounts receivable and payable, and cash. Because this number effectively corresponds to the time that the firm's cash is tied up in operations and unavailable for other activities, management generally aims at a low net count.

- In this context, the most useful measure of profitability is Return on capital (ROC). The result is shown as a percentage, determined by dividing relevant income for the 12 months by capital employed; Return on equity (ROE) shows this result for the firm's shareholders. Firm value is enhanced when, and if, the return on capital, which results from working capital management, exceeds the cost of capital, which results from capital investment decisions as above. ROC measures are therefore useful as a management tool, in that they link short-term policy with long-term decision making. See Economic value added (EVA).
- Credit policy of the firm: Another factor affecting working capital management is credit policy of the firm. It includes buying of raw material and selling of finished goods either in cash or on credit. This affects the cash conversion cycle.

Management of working capital

Guided by the above criteria, management will use a combination of policies and techniques for the management of working capital. These policies aim at managing the current assets (generally cash and cash equivalents, inventories and debtors) and the short term financing, such that cash flows and returns are acceptable.

- **Cash management**. Identify the cash balance which allows for the business to meet day to day expenses, but reduces cash holding costs.
- **Inventory management**. Identify the level of inventory which allows for uninterrupted production but reduces the investment in raw materials - and minimizes reordering costs - and hence increases cash flow. Besides this, the lead times in production should be lowered to reduce Work in Progress (WIP) and similarly, the Finished Goods should be kept on as low level as possible to avoid over production - see Supply chain management; Just In Time (JIT); Economic order quantity (EOQ); Economic quantity
- **Debtors management**. Identify the appropriate credit policy, i.e. credit terms which will attract customers, such that any impact on cash flows and the cash conversion cycle will be offset by increased revenue and hence Return on Capital (or vice versa); see Discounts and allowances.
- **Short term financing**. Identify the appropriate source of financing, given the cash conversion cycle: the inventory is ideally financed by credit granted by the supplier; however, it may be necessary to utilize a bank loan (or overdraft), or to "convert debtors to cash" through "factoring".
    - **19. Discuss the various sources of working capital in detail. (Nov/Dec 2010)**
    - Sources of working capital are many. There are both external and internal sources. The external sources are both short-term and long-term. Trade credit, commercial banks, finance companies, indigenous bankers, public deposits, advances from customers, accrual accounts, loans and advances from directors and group companies etc. are external short-term sources. Companies can also issue debentures and invite public deposits for working capital which re external long term sources. Equity funds may also be used for working capital. A brief discussion of each source is attempted below.
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- **Debentures and equity fund** can be issued to finance working capital so that the permanent working capital can be Mattingly financed through long term funds.

Various techniques of control of receivables:

The credit policy followed by a firm should be optimum, i.e. neither too liberal not too stringent. Since the basic objectives of committing funds to account receivable is to promote sales and profits so as to generate a large flow of operating revenues, each and every firm must evaluate its credit policy form time to time. For analyzing and controlling the investment in receivables by a firm, the following techniques may be adopted:

1. Computation of average age of receivable.
2. Computation of Percentage of bad debts to receivables
3. Preparation of Receivable Investment Budget
4. Aging schedule of receivables

An account receivable is the money owed to a company by a consumer for products and services purchased on credit. This is usually treated as a current asset of accounts receivable after the customer is sent a invoice. Accounts receivable are known by various names, such as accounts receivable aging, accounts payable, days receivable, accounts receivable turnover and invoice factoring.

Accounts receivable management specialists can help you in a variety ways:

- It can cut and maintain your average collection delay or DSO.
- It can lessen your direct and indirect expenses.
- It ca considerably reduce your bad debt
- It can tell you various ways to take advantage of your cash-flow
- It can help you capitalize on your internal resources
- It can maximize your interventions on sales, service and market share.

The accounts receivable aging schedule is a listing of the customers making up your total accounts receivable balance. Most businesses prepare an accounts receivable aging schedule at the end of each month. Analyzing your accounts receivable aging schedule may help you identify potential cash flow problems.

The typical accounts receivable aging schedule consists of 6 columns:

1. Column 1 lists the name of each customer with an accounts receivable balance.
2. Column 2 lists the total amount due from the customers listed in column 1.
3. Column 3 is the "current column". Listed in this column are the amounts due from customers for sales made during the current month
4. Column 4 shows the unpaid amount due from customers for sales made in the previous month. These are the customers with accounts 1 to 30 days past due
5. Column 5 lists the amounts due form customers for sales made two months prior. These are customers with accounts 31 to 60 days past due.
6. Column 6 lists the amount due from customers with accounts over 60 days past due

FACTORING

Nature of Factoring:

Factoring is a unique financial innovation. It is both a financial as well as a management support to a client. It is a method of converting a non-productive, inactive asset (i.e. hook debts) into a productive asset (viz., cash) by selling book debts (receivables) to a company that specializes in their collection and administration. For a number of companies, cash may become a scarce resource if it takes a long time to receive payment for goods and services supplied by them. Such a current asset in the balance sheet is, in fact, illiquid and serves no business purpose; it is much better to sell that asset for cash which can be immediately employed in the business. A "factor' makes the conversion of receivables into cash possible.

The term factor has its origin in the Latin word 'facere', meaning to make or do, or to get things done. Originally, factors acted as selling agents. They facilitated the flow of merchandise from the manufacturers to customers. The functions of a factor included finding out customers for the manufacturer's products, stock his goods, sell them and finally collect sales proceeds and remit them to the manufacturer. Thus, the function of factors in olden days included stocking, marketing and distribution as well as administration and financing of credit. The modem factor has specialized in credit collection and financial services, leaving the marketing and distribution functions to the manufacturer.

One can define factoring as 'a business involving a continuing legal relationship between a financial institution (the "factor") and a business concern (the "client") selling goods or providing services to bade customers (the "customers") whereby the factor purchases the client's book debts (account receivable) and in relation thereto controls the credit, extended to customers and administers the sales Ledger.' Factoring may also be defined as 'a contact between the suppliers of goods/services and the factor under which (a) the supplier and its customers (debtors) other than those for the sale of goods bought primarily for their personal, family or household use; (ii) the factor is to perform at least two of the following functions—(i) finance for the supplier, including loans and advance payments; (ii) maintenance of accounts (ledgering relating to the receivables); (iii) collection of accounts (ledgering relating to the receivables) and (iv) protection) against default in payment by debtors; (c) notice of assignment of the receivables is to be given to debtors.'2 The agreement between the supplier and the factor specifies the factoring procedure. Usually, the firm sends the customer order to the factor for evaluating the customer's creditworthiness and approval. Once the factor is satisfied about the customer's creditworthiness and agrees to buy receivables, the firm dispatches goods to the customer. The customer will be informed that his account has been sold to the factor, and he is instructed to make payment directly to the factor. To perform his functions of credit evaluation and collection for a large number of clients, a (actor may math tam a credit department with specialized staff. Once the factor has purchased a firm's receivables and if he agrees to own them, he will have to provide protection against any bad-debt losses to the firm.

Factoring Services:

While purchase of book debts is fundamental to the functioning of factoring, the factor provides the following three basic services to clients:

- Sales ledger administration and credit management.
- Credit collection and protection against default and bad-debt losses.
- Financial accommodation against the assigned book debts.

Credit administration. A factor provides full credit administration services to his clients. He helps and advises them from the stage of deciding credit extension to customers to the final stage

of book debt collection. The factor maintains an account for all customers of all items owing to them, so that collections could be made on due date or before. He helps clients to decide whether or not and how much credit to extend to customers. He provides clients with information about market trends, competition and customers and help them to determine the creditworthiness of customers. He makes a systematic analysis of the information regarding credit for its proper monitoring and management. He prepares a number of reports regarding credit and collection, and supplies them to clients for their perusal and action.

Credit collection and protection. When individual book debts become due from the customer, the factor undertakes all collection activity that is necessary. He also provides full or partial protection against bad debts. Because of his dealings with the variety of customers and defaults with different paying habits, he is ma better position to develop appropriate strategy to guard against possible defaults.

Financial assistance. Often factors provide financial assistance to the client by extending advance cash against book debts. Customer of "clients" become debtors of a factor and have to pay to him directly in order to settle their obligations. Factoring thus involves an outright purchase of debts, allowing full credit protection against any bad debts and providing financial accommodation against the firm's book debts. In the U.S.A., the maximum advance a factor provides is equal to the amount of factored receivables less the sum of (I) the factoring commission, (ii) interest on advance, and (iii) reserve that the factor requires to cover bad-debts losses. The amount of reserve depends on the quality of factored receivables and usually ranges between 5 to 20 per cent in the U.S.A.

In view of the services provided by a factor, factoring involves the purchase of a client's book debts with the purpose of facilitating credit administration, collection and protection. It is also a means of short-term financing. It provides protection against the default in -paying for book debts. For these services, the factor, however, charges a fee from the client Thus, factoring has a cost.

Other services. In developed countries like the U.S.A factors provide many other services. They include: (i) providing information on prospective buyers; (ii) providing financial counseling; (iii) assisting the client in managing its liquidity and preventing sickness; (iv) financing acquisition of inventories; (v) providing facilities for opening letters of credit by the client etc.

Factoring and Short-term Financing:

Although factoring provides short-term financial accommodation to the client, it differs from other types of short-term credit in the following manner

- Factoring involves sale' of book debts. Thus the client obtains advance cash against the expected debt collection and does not incur a debt.
- Factoring provides flexibility as regards credit facility to the client. He can obtain cash either immediately or on due date or from time to time, as and when he needs cash such flexibility is not available from formal sources of credit.
- Factoring is a unique mechanism which not only provides credit to the client but also undertakes the total management of client's book debts.

Factoring and Bills Discounting

Factoring should be distinguished from bill discounting. Bill discounting or invoice discounting consists of the client thawing bills of exchange for goods and services on buyers, and then discounted it with bank for a charge. Thus, like factoring, bill discounting is a method of financing. However, it falls short of factoring in many respects. Factoring is all of bills

discounting plus much more. Bills discounting has the following limitations in comparison of factoring:

- Bills discounting is a sort of borrowing while factoring is the efficient and specialized management of book debts along with enhancing the client's liquidity.
- The client has to undertake the collection of book debts. Bill discounting is always 'with recourse, and as such the client is not protected from bad debts.
- Bills discounting is not a convenient method for companies having large number of buyers with small amounts since it is quite inconvenient to draw a large number of bills.

Types of Factoring:

The factoring facilities available worldwide can be broadly classified into four main groups

1. Full service non-recourse (old line)
2. Full service recourse factoring
3. Bulk/agency factoring
4. Non-notification factoring

Full service non-recourse. Under this method, book debts are purchased by the factor, assuming 1QO per cent credit risk. The full amount of invoices have to be paid to clients in the event of debt becoming had. He also advances cash up to 80—90 per cent of the book debts immediately to the client. Customers are required to make payment directly to the factor. The factor maintains the sales ledger and accounts and prepares age-wise reports of outstanding book debts.

Non-recourse factoring is most suited to the following situations where

- amounts involved per customer are relatively substantial and financial failure can jeopardize client's business severely;
- there are a large number of customers of whom the client cannot have personal knowledge; and
- the client prefers to obtain 100 per cent cover under factoring rather than take insurance policy which provides only 70—80 per cent cover.

Non-recourse factoring is very popular in the U.S.A., where it is also known as 'old-line' factoring. Old-line factors are true factors and they differ from those who merely finance receivables.

Full service recourse factoring. In this method of factoring, the client is not protected against the risk of bad debts. He has no indemnity against unsettled or uncollected debts. If the factor has advanced funds against book debts on which a customer subsequently defaults, the client will have to refund the money.

Most countries practice recourse factoring, since it is not easy to obtain credit information, and the cost of bad debt protection is very high. This type of factoring is often used as a method of short-term financing, rather than pure credit management and protection service. It is less risky from the factor's point of view, and thus, it is less expensive to the client than non-recourse factoring. This type of factoring is also preferred when large spread of customers with relatively low amount per customer is involved, or the client is selling to high risk customers.

Advance factoring and maturity factoring. The non-recourse and recourse factoring can be further classified into:

- Advance factoring
- Maturity factoring

As discussed above, under the advance factoring, the factor advances cash against book debts due to the client immediately. Maturity factoring implies that payment will be made to the

client on maturity. In the case of non-recourse maturity factoring, payment is on maturity or when the book debts are collected, or on the insolvency of the customers. In the case of recourse maturity factoring the factor pays to the client when the books debts have been collected. The client with sound financial condition and liquidity may prefer maturity factoring.

Bulk/agency factoring. This type of factoring is basically used as a method of financing book debts. Under it, the client continues to administer credit and operate sales ledger. The factor finances the book debts against bulk either on recourse or without recourse. This sort of factoring became popular with the development of mini-computers market where marketing and credit management was not a problem but the firms needed temporary financial accommodation. Those companies which have good systems of credit administration, but need finances, prefer this form of factoring.

Non-notification factoring. In this type of factoring customers are not informed about the factoring agreement. It involves the factor keeping the accounts ledger in the name of a sales company to which the client sells his book debts. It is through this company that the factor deals with the client's customers. The factor performs all his usual functions without a disclosure to customers that are owns the book debts. This type of factoring is available in the U.K. to financially strong companies.

Salinger provides a comprehensive summary of services available under various types of factoring.

Costs and Benefits of Factoring

There are two types of costs involved:

- The factoring commission or service fee
- The interest on advance, granted by the factor to the firm.

Factoring commission is paid for credit evaluation and collection and other services and to cover bad-debt losses. It is usually expressed as a percentage of full net face value of receivables factored, and in advanced countries like the U.S.A. ranges between 1 to 3 per cent.2 In India, a charge of around 2.5 to 3 per cent is envisaged though the full economics is yet to be worked out by the newly founded factoring organisations. In fact, the factoring commission will depend on the, total volume of receivables, the size of individual receivables, and the quality of receivables. The commission is expected to be higher for 'without recourse' factoring since the factor assumes the entire credit risk.

INVENTORY MANAGEMENT

INTRODUCTION

The importance and imperative need for effectively managing and controlling all the items of inventory in a company can be judged from the fact that generally these comprise the largest component of the total assets of a company, second only to the items of plant and machinery. In terms of percentage of the total assets of a manufacturing company, all the three components of inventory, taken together, generally account for around 25 to 30 per cent of the total assets of the company. Thus, the importance of effectively managing and controlling the inventory of a company can hardly be over-emphasized.

Components of Inventories:

The term 'inventory' comprises three components. They are:

1. Raw materials (also consumable stores and spares),
2. Work-in-process (also known as stock-in-process, process), and
3. Finished goods.

Let us now discuss all these three items, one by one.

1. Raw Materials are those basic inputs which are used to manufacture the finished products.
2. Work-in-process, however, is the intermediary stage that comes after the stage of raw materials, but just before the stage of finished goods.
3. The Finished Goods, in turn, comprise the end-products, that is, the goods at their final stage of production, ready for sale in the market.

Supposing, a company is in the business of production of breads. In this case, the wheat flour, baking powder, etc., would comprise the raw materials. And, when the flour is put in the relative moulds which, in turn, are placed in the furnace, this stage is known as the work-in-process stage. And, when the bread is fully baked and is ready for sale, of course, after being wrapped in the packing paper, it comprises the finished goods of the company.

It may be noted that in the case of manufacturing companies, inventory comprises raw materials, work-in-process and finished goods, while in the case of trading concerns or trade merchants or retail traders, the inventory comprises only the finished goods. Thus, while all the three components, as aforesaid, comprise the items of inventory for the manufacturing concerns, only the finished goods, like the breads alone, comprise the inventory for a retail trader, selling breads.

Here, it may be pertinent to mention that the task of inventory management and control is the joint responsibility of the purchase department, materials department, production department and marketing department. Further, while the policy pertaining to the raw materials is to be formulated by the purchase department, in coordination with the materials and production departments, the policy in regard to the inventory of finished goods is to be formulated by the production department in coordination with the marketing department. The policy in regard to the work-in-process, however, is finalized by the production department alone.

And, as we have already seen earlier, keeping in view the vital importance of inventory management and control, in financial terms, the role of finance manager can be said to be the central coordinating role, among all the aforesaid four different departments, with a view to ensuring that the inventory management and control are being exercised effectively at the various stages and departments, on the desired lines. Here, the main responsibility of the finance manager comprises apprising the non-finance executives so as to, at least, understand the basis of the mechanism and its overall implication in regard to the control of various items of inventory, as these have direct effect on the financial gains of the company. That is why it is said that the management of inventory, and for that matter, the management of working capital as a whole, is not the responsibility of the finance manager alone, but also of the purchase department, materials department, production department, and marketing department. That is why I keep saying that the imperative need of the day is that we Indians should become excellent team workers as well, as we are known for being excellent solo workers and individual performers.

Why do we need inventory?

A question that may generally arise in our mind is, as to why at all do we need to keep stocks of inventory. But, before we attempt to answer this question, let us first understand that, generally speaking, the entire stocks of inventory can be divided into two main categories. They are:

(a) (i) 'Process' Inventories, and (ii) 'Movement' Inventories
(b) 'Organization' Inventories

1. Process Inventories

These inventories comprise the various items of raw materials, lying at the various stages of production, till these reach the final stage, to become the finished goods. Supposing, a company is manufacturing iron nails, and its basic raw material is iron rods. In the drawing machine, these rods may be drawn Total time required for completing all the involved processes (stretched) and, thus, these may become thinner and thinner in three to four processes, when these may come to the required diameter. Then, these thinner n rods will be cut into pieces of the required length of the nails. And then, while one end may be made pointed, the other end may be flattened to become the head of the nail. And, after all these required processes are completed in full, the stocks of finished goods are ready for transportation (movement) to the godowns or to the company's sales outlets.

Thus, as the production process involves several stages of production, the aggregate quantum and value of the raw materials; lying at the different stages of production, all taken together, comprise the stocks of process inventory.

And, thus, if the entire process (from the raw material stage till the stage immediately preceding the finished goods stage) takes say, ten days, and the average production of the item is 1000 units per day, the average quantity of such process inventories would be equal to:

Average stocks-in-process, multiplied by the time (days required to complete all the processes, i.e. 1000 x 10 days = 10,000 units.

2. Movement Inventories

Movement inventories are usually referred to the inventories of finished goods, to be transferred from the factory to the company's godowns, warehouses, or sales depots. Thus, if the average daily sales at the company's sales depot are 250 units and the transit time (for transporting the finished goods from the factory to the sales depots) is 10 days, the average movement inventories, as per the aforesaid formula, would be:

250 units x 10 days = 2500 units, or

250 units x Rs. 5/- x 10 days = Rs. 12,500/-

3. Organization Inventories

Organization inventories, on the other hand, comprise the items of raw materials and finished goods stored and stocked in the company's godowns, to be supplied to the factory or to the sales depots, as and when they would requisition for the required number, weight, volume, etc., of the specific items of raw materials and finished goods, respectively.

Here, it may be mentioned that the moment the stocks of raw materials and finished goods are issued from the company's godown(s), these items are excluded from the organization inventories and these, in turn, are included in the Working Capital process inventories (though these raw materials may actually be put into the production process a little later), or in the movement inventories (even if the stocks of the finished goods may be lying in the company's show-rooms, unsold).

Now, a natural question, that may arise, could be that if the inventory carrying cost is so huge and material to affect the profitability of the company, favourably or unfavourably, why should the companies, at all, have organization inventories, too, in addition to the process inventories and movement inventories. And, the answer, too, is very simple and logical. That is, to make the decision making process of planning (of purchases of raw materials and level of stocking of various items of finished goods) and scheduling of successive operations of production, even more free and flexible. This also facilitates bifurcation of the functions of purchase of raw materials and production plan into two separate departments, to be managed by the respective experts in each department.

Thus, while the production department may just give its production schedule to the purchase department, it would be the sole responsibility of the purchase department to decide about the quantum of such purchases and the stockiest to purchase them from. That is, if the stocks sometimes are available at a cheaper price during the harvesting seasons of the respective agricultural products, etc., the purchase department may even purchase the materials in much larger quantity than required by the production department (just for a fortnight or a month). Decision could as well be taken by the purchase department whether to go in for such purchases to avail of the bulk discount, or to avail of the cash discount, etc., whenever offered. Similarly, the purchase department may make purchases for a week only locally, to meet the immediate demands of production, if, by that time, bulk purchases may be made available at a much cheaper rate. Similarly, in an inflationary condition, the purchase people may exercise their prudence and expertise to make the purchases of a larger quantity than required, if such purchases are going to be sufficiently cheaper today, taking into account the quantum of inflation, etc. That is, it would augur well if the purchase people could as well know the fundamentals of cost-benefit analysis, to be made in this regard, as also as to what factors should be taken into consideration (like time-value of money, rate of inflation and the total inventory carrying costs, etc.).

This much about the rationale behind keeping the organization inventory of stocks of raw materials, and delinking the purchase functions and the production functions.

Now, let us discuss about the rationale behind keeping organization inventories of finished goods. It is a well known fact that, in order to have some edge over the competitors, companies have to keep some items in ready stock so as to be able to supply these to the customers from the shelf, at least to meet their immediate requirements, and the balance to be supplied in a week's time or so. This is important because keeping huge numbers of items in ready stock is fraught with grave risks of obsolescence, expiry of shelf-life, etc. Further, by virtue of having some organization inventory of finished foods, the companies are able to delink the production schedule from marketing activities.

Thus, we can very well appreciate that by delinking the purchase activities n production activities, as also production activities from marketing activities, companies may be able to optimize their profitability, by enabling the experts different departments, to plan things in such a way that the profitability of the 'any could be optimized and each departmental experts can concentrate on their respective work, of course, keeping the overall interests and requirements if the other departments, too, in the fore front, inasmuch as all the departments inter-dependent with each other.

At this stage, it may be quite pertinent to examine the rationale behind keeping the in-process inventory, too, (though these do not constitute a part of organization inventory, as such).

Let us, at the very outset, clarify that though the in-process inventory refers to work-in-process inventory only, it is different from the process or movement inventory, discussed earlier, even though a part of the work-in-process inventory may represent process or movement inventory, too.

Now, as regards the rationale behind keeping the in-process inventory, it may be mentioned here that it provides some flexibility and latitude in the scheduling of production, so as to ensure efficient production schedule and higher capacity utilization of plant and machinery. Further, in case there is no stock of in-process inventory, some bottlenecks may be caused sometime somewhere in the production process, which may ultimately result in delay in

production and non-utilization of the installed capacity at the optimum possible level. These factors, naturally, will culminate in adversely affecting the financial gains of the company.

objectives of inventory management? Explain.

Inventory Management:

Inventories are the stocks of the product of a company, and components thereof that makeup the product. The different forms in which inventories exist are- raw materials, work in process (or semi finished goods) and finished goods. Raw materials are those inputs that are converted into finished product. Work in progress inventories are semi-finished products. That requires more work before they are ready for sale. Finished goods inventories are those which are completely manufactured products and are ready for sale. Raw materials and semi finished goods inventories facilitate production while finished good inventories are required for smooth marketing operations. Thus inventories serve as a line between the production and the consumption of goods.

Inventories constitute, in every business concern, the most significant part of working capital or current assets. Inventories in Indian industries constitute more than 60% of the current assets. Inventories are significant elements in cost process. It is, therefore essential to control the inventories. Inventories control is usually used in two ways-unit or physical control and value control. Purchase and production department officials use this work in terms of unit control because they are concerned only with the physical control of the inventories. Where as in accounting department official use it in terms of value control because

Objectives of Inventory Management:

1. Ensuring continuous supply of materials
2. Efficient utilization of production facilities
3. Controlling production and purchase levels
4. Maintaining Buffer stock against Fluctuations in Demand
5. Minimizing the wastage
6. Efficient services to the customers
7. Maintaining optimum level of inventory
8. Efficient use of capital
9. Minimizing carrying costs
10. Economics of purchase
11. Minimizing risk of loss

Cash Management:

Float is the difference between bank cash and book cash represents the net effect of checks in the process of collection

Float management involves controlling the collection and disbursement of cash, the objective in cash collection is to reduce the lag between time customer pays and the time checks clear. The objective of cash disbursement is to slow down payments, increase time when checks are written, and received; in other words collect early, pay late.

Types of Float

1. Mail Float- when checks are trapped in the postal system
2. In-House Processing Float-time it takes for the receiver to process the check for deposit
3. Availability float-time is takes for the check to clear in the bank
4. Accelerating collection

1. **Lockbox**

Special post office box set up to intercept accounts receivable payments

2. **Concentration banking**

Checks are deposited into local bank, by sales office, surplus funds are transferred from the deposit bank, to the concentration bank, bank clearing time is reduced because most customer's check are drawn on local bank rather than the concentration bank.

3. **Wire transfers**

Electronic transfer over computer

Delaying Disbursement

Some are stretching the rules

1. Write check on distant bank
2. Hold payment for several days after postmarked in office
3. Call supplier to verify statement accuracy for large amounts
4. Mail from distant post office
5. Mail from post office that requires a great deal of handling
6. Playing "games" with Disbursement Float, Zero Balance Accounts, Drafts- these are all other ways to delay the disbursement of funds, cash managers must be careful because if they are drawing on uncollected funds many ethical and legal questions will be raised…

Money market is the market for short term financial assets.

Sweep accounts- this is when the bank will take all excess Amount at the end of the business day and will invest it for a firm.

Firms may have temporary cash surpluses for the following reasons

1. To help finance seasonal for cyclical activity.
2. To help finance planned expenditures
3. To provide for unanticipated contingencies.

PART- B (5*16 = 80 MARKS)

Problems &Solutions

1**.** Assuming a year of 50 weeks of 5 days each, calculate the working capital requirements, using the following data, sales 1,50,000 units at Rs.10/piece on credit. Customers are allowed 60 days credit. Production cost include, Rs.5/piece for raw material, Rs. 2/piece for labour and Rs.2.5/piece for other expenses. Production cycle time 20 days. Credit allowed by suppliers 50 days. Cash requirement is one quarter of the remaining current assets. Stock levels raw material, 40 days of supply and finished goods 30 days. Ignore work-in progress. (May/June 2007)

Solution:

Sales	=	1,50,000 * 10	15,00,000	
Less: Cost of Labour		2*1,50,000 =	3,00,000	
Raw materials		5*1,50,000 =	7,50,000	
Other expenses		2.5*1,50,000 =	3,75,000	
			14,25,000	
Profit				**75,000**
Calculations				
Current Assets			57,600	
Cash requirement		¼*57,600 =	14,400	

Total Current Assets	72,000
Less: Current Liabilities	15,000
Working Capital is	57,000

2. A company has sales of Rs.10,00,000. Average collection period is 50 days, bad debt losses 6% of sales and collection expenses Rs. 10,000. The cost of funds is 15% p.a. the company has two alternative collection programs. (May/June 2007)

	I	II
Average collection period reduced to	40 days	30 days
Bad debt losses reduced to	4% of sales	3% of sales
Collection expenses	Rs.20,000	Rs. 30,000

Evaluate which program is viable

Solution:

Existing:

Total credit sales	Rs.10,00,000
Less: bad debt @6% on sales	Rs.60,000
	Rs. 9,40,000
Less: Collection Expenses	Rs. 10,000
	Rs.9,30,000
Less: Amount Of funds is 10,00,000 *15/100*50/365	Rs.20,547
	Rs.9,09,453

$$\text{Average Collection period} = \frac{\text{No of day in a year}}{\text{DTR}}$$

50 = 365/DTR = 365/50 = 7.3 times

DTR = Net Credit Sales / Average accounts receivable

i.e = 7.3 = 9,09,453 / AAR = 1,24,582.60

I- Average collection period reduced to 40 days

Sales	Rs.10,00,000
Less: Bad debts @4%	Rs.40,000
	Rs.9,60,000
10,000*15%*40/365	Rs.16,438
	Rs. 9,23,562

Average Collection period = 365/DTR

40 = 365/DTR = 9.12

Debtor's turnover ratio

Average accounts receivable

9.12 = 9,23,562 / AAR = 1,01,267.76

II- **Average Collection period reduced to 40 days**

Sales =	Rs.10,00,000
Less: Bad debts @3%	Rs.30,000
	Rs. 9,70,000
Less: Cost of Funds	
10,00,000 *15%*30/365	Rs. 12,328
	Rs. 9,27,671

Average Collection period= 365/DTR

30 = 365/DTR = 12.16

Debtor's turnover ratio

Average accounts receivable

12.16 = 9,27,61/AAR = 76,289

Conclusion

Out of the three closing Debtors:

i.e. 1) 1,24,582.60 2) 1,01,267.76 3) 76,289

The true one is least closing debtors, therefore the III rd programme is viable (i.e. alternative II)

3. A proforma cost sheet of a company provides the following particulars:

Elements of cost	Amount per unit
Raw material	80
Direct Labour	30
Overheads	60
Total Cost	170
Profits	30
Selling price	200

The following further particulars are available:

Raw materials are in stock on average one month. Materials are in process, on average ½ month. Finished goods are in stock on average one month. Credit allowed by suppliers is one month. Credit allowed to debtors is two months. Lag in payment of wages is 1 ½ weeks. Lag is payment of overhead expenses is one month. One-fourth of the output is sold against cash. Cash on hand and at bank is expected to be Rs. 25,000.

You are required to prepare a statement showing the working capital needed to finance a level of activity of 1,04,000 units of production. You may assume that production is carried on evenly throughout the year, wages and overheads accrue similarly and a time period of 4 weeks is equivalent to a month. (Nov/Dec 2007)

Solution:

Statement of working capital requirement

Current Assets			
Raw materials:	1,04,000 *80*4/52	=	6,40,000
WIP			
Raw material	1,04,000*80*2/52		3,20,000

Labour	1,04,000*30*2/52	1,20,000
Overhead	1,04,000*60*2/52	2,40,000
Finished stock		
Raw material	1,04,000*80*4/52	6,40,000
Labour	1,04,000*30*4/52	2,40,000
Overhead	1,04,000*60*4/52	4,80,000
Debtors		
Raw material	1,04,000*80*8/52*3/4	9,60,000
Labour	1,04,000*30*8/52*3/4	3,60,000
Overhead	1,04,000*60*8/52*3/4	7,20,000
Cash in hand		25,000
		47,45,000
Less: Current Liabilities		
Sundry creditors:		
Raw material	1,04,000*80*4/52	6,40,000
Wages	1,04,000*30*1.5/52	90,000
Lag in payment of OHS	1,04,000*60*4/52=4,80,000	12,10,000
Net working capital requirement		35,35,000

4**.** Purchase manager places order each time for a lot of 500 numbers of a particular item. From the available data, the following results are obtained. (May/June 2008)

Inventory carrying cost	-	40%
Ordering Cost per order	-	Rs.600
Cost per unit	-	Rs. 50
Annual Demand	-	1,000

Find out the loss to the organization due to his ordering policy.

Solution:

Ordering cost	=	1000/500	= 2 *6000	= 1,200
Carrying cost	=	500/2		
		= 250 @40% of Rs. 50		=5,000
				6,200

EOQ	=	√2CO/C		
	=	√2*1000*600/20	=	250 units
Ordering cost	=	4*600	=	2,400
Carrying cost	=	250/2 *20	=	2,500
				4,900

Loss to the company is 6,200 – 4,900= 1,300

5. Calculate the amount of working capital requirement for jolly & Co Limited from the following information:

	(Rs. per Unit)
Raw Materials	160
Direct Labor	60
Overheads	120
Total Cost	340
Profit	60
Selling Price	400

Raw materials are held in stock on average for one month. Materials are in process on an average for half month. Finished goods are in stock on a average for one month. Credit allowed by suppliers is one month and credit allowed to debtors is two months. Time lag in payment of wages is 1.1/2 weeks. Time lag in payment of overhead expenses is one month. One fourth of the finished goods are sold against cash. Cash in hand and at bank is expected to be Rs. 50,000 and expected level of production amounted to 1,04,000 units. You may assume that production is carried on evenly throughout the year, wages and overheads accrue similarly and time period of four weeks is equivalent to a month. (May/June 2008)

Solution:

Statement of working capital requirement

Current Assets			
Raw materials:	1,04,000 *160*4/52	=	12,80,000
WIP			
Raw material	1,04,000*160*2/52	=	6,40,000
Labour	1,04,000*60*2/52	=	2,40,000
Overhead	1,04,000*120*2/52	=	4,80,000
Finished stock			
Raw material	1,04,000*160*4/5	=	12,80,000
Labour	1,04,000*60*4/52	=	4,80,000
Overhead	1,04,000*120*4/52	=	9,60,000
Debtors			
Raw material	1,04,000*160*8/52*3/4	=	19,20,000
Labour	1,04,000*60*8/52*3/4	=	7,20,000
Overhead	1,04,000*120*8/52*3/4	=	14,40,000
Cash in hand			50,000
			94,90,000
Less: Current Liabilities			
Sundry creditors:			
Raw materials	1,04,000*160*4/52	=	12,80,000
Wages	1,04,000*60*1.5/52	=	1,80,000
Lag in payment of Ohs	1,04,000*120*4/52	=9,60,000	24,20,000
Net working capital			70,70,000

6. A proforma cost sheet of a company provides the following particulars :

Particulars	Amount / Unit
Elements of Cost	Rs.
Raw Materials	80
Direct Labour	30
Overheads	60
Total Cost	170
Profit	30
Selling Price	200

The following particulars available :

Raw materials in stock, on average, one month; work in progress (completion stage 50 percent); on average, half a month; finished goods in stock, on average, one month. Credit allowed by suppliers is one month; credit allowed to debtors is two months; average tie lag in payment of wages is 1.5 weeks and one month in overhead expenses; one fourth of the output is sold against cash; cash in hand and at bank is desired to be maintained at Rs.365000. Prepare a statement showing the working capital needed to finance a level of activity of 104000 units of production. You may assume that production is carried on evenly throughout the year and wages and overheads accrue similarly. For calculation purposes; 4 weeks may be taken as equivalent to a month. (Nov/Dec 2008)

Solution:

Particulars	**Amount Rs.**	**Amount Rs.**
Current Assets		640000
1. Stock of Materials (4 weeks)		
2. WIP (2 weeks)		
Materials	320000	
Labour	120000	
Overheads	240000	680000
3. Stock of finished goods (4 weeks)		
Materials	640000	
Labour	240000	
Overheads	480000	1360000
4. Debtors (8 weeks)		
Materials	960000	
Labour	360000	2040000
Overheads	720000	25000
5. Cash in hand and at bank		
Total Current Assets		4745000
Less : Current Liabilities		
1. Creditors	640000	
2. Outstanding wages	90000	
3. Outstanding Overheads	480000	1210000
Working Capital Required		3535000

7. Krishnan and Co. requires aluminum for its factory. The probability distributes on the daily usage rate and the lead time for procurement are given below. (The distributions are independent) **(May/June 2009)**

Daily usage rate (in tones)	Probability	Lead time (in days)	Probability
2	0.2	25	0.2
3	0.6	35	0.5
4	0.2	45	0.3

The stock out cost of estimated at Rs.8,000 per tonne and the carrying cost is Rs.2,000 per tonne per year. Calculate (i) optimum level of safety stock and (ii) probability of stock out .

Calculation of Normal Usage

Normal usage = Average Daily usage x Average Lead Time

Average Lead Time = 25 x 0.2 + 35 x 0.5 + 45 x 0.3

= 36

Normal Usage = 36 x 3

= 108 tonnes

Calculation of Optimum Level of Stock :

Normal Usage = 108 tonnes

Daily usage rate	Tonnes
2	108 / 2 = 54
3	108 / 3 = 36
4	108 / 4 = 27

Tonners	Stock out cost @ Rs.8000 pt	Carrying cost Rs.2000 per tonne	Total Cost	Probability	Cost
54	432000	108000	540000	0.2	108000
36	288000	72000	360000	0.6	216000
27	216000	54000	270000	0.2	54000

Optimum Level of Safety Stock = 27 tonnes

ii) Probability of stock out, when the safety stock is 27 tonnes :

= 0.06 + 0.10 = 0.16

8. Vivek and Co. is a large retailer of consumer durable, 25% of its sales are for cash; the balance is on one month's credit, though at least 20% (of the total sales), end up being collected in the second month following sales. Work out the cash collections expected during April, May and June, using the following data. **(May/June 2009)**

	Rs. in lakhs
Total sales achieved in	
January	100
February	120
March	160
Total sales estimated in :	
April	200
May	200
June	200

Calculation Cash & Credit Sales & Its Realization.

Month	Total sales	Cash sales	Credit Sales	I	Last

				Realization	Realization
January	100	25	75	55	20
February	120	30	90	72	18
March	160	40	120	96	24
April	200	50	150	120	30
May	200	50	150	120	30
June	200	50	150	120	30

Statement of cash collections Expected :

(Rs. In lakhs)

Particulars	April	May	June
Cash sales	50	50	50
Credit Sales	96	120	120
Credit Sale (Bal)	18	24	30
Total	**164**	**194**	**200**

9. NMK brothers desires to purchase a business and has consulted you and one point on which you are asked to advise them is the average amount of working capital which will be required in the first year. You are given the following estimates and are instructed to add 10 percent to you computed figures to allow contingencies. **(May/June 2009)**

Particulars Amount for the year

Average amount locked up in stocks

Stock of finished goods 5000

Stock of stores and materials 8000

Average Credit given

In land Sales – 6 Weeks 3,12,000

Export Sales – 1.5 Weeks 78,000

Lag in Payment of wages and others

Wages 1.5 weeks 2,60,000

Stores, materials – 1.05 months 48,000

Rent, loyalties – 6 months 10,000

Clerical staff – 0.5 month 62,400

Manager – 0.5 month 4,800

Miscelalneous Expenses – 1.5 months 48,000

Payments in advance

Sundry advances (paid in quarterly in advance) 8,000

Undrawn profits on the average throughout the year 11,000

Setup your calculations for the average amount of working capital required.

Solution:

Particulars	**Amount (in Rs.)**
Current Assets :	
Stock of Finished Goods	5000
Stock of Stores and Materials	8000
Debtors – Inland Sales (312000 x 6/52)	36000
Export Sales (78000 x 1.5/52)	2250
Advance Payment of Sunday	
Expenses (8000 / 4)	2000
Total Current Assets (1)	**53250**

Current Liabilities :	
Wages (260000 x 1.5 / 52) 7500	6000
Stores, Materials (48000 x 1.5 / 52)	5000
Rent, Loyalties (1000 x 6/12)	2600
Clerical Staff (64200 x 0.5/12)	200
Manager (4800 x 0.5 / 12)	6000
Misl.Expenses (48000 x 1.5 / 12)	
Total Current Liabilities (2)	27300
Network Working Capital (1-2)	25950
Add : 10% Contingency allowance	2595
	28545
Converted to nearest hundred	Rs.28500
Advarge Amount of Working	
Capital Required is	Rs.28500

10. The proforma cost sheet of a company provides the following data:

Cost per unit	Rs
Raw materials	52.0
Direct labour	19.5
Overheads	39.0
Total cost per unit	110.0
Profit	19.5
Selling price	130.0

Following additional data is available:

Average raw materials in stock: One month; Average materials in process: half a month ;credit allowed by the suppliers: one month ;credit allowed to the suppliers :one month; credit allowed to the debtors: two months; time lag in payment of wages: one and half weeks; over heads :one month; one forth of the sales are on cash basis: cash balance is expected to be Rs120,000. Prepare a statement showing the working capital needed to finance a level activity of 7000 units of output.

SOLUTION: To be discussed in class

11. ABC Co. wants to relax its credit policy on sales from the current level of 1 month to 2 months. Due to this, sales would increase to Rs.72,00,000 from the present level of Rs 60,00,000 p.a. but the % of bad debt losses is likely to go up by 2% of sales which is now @ 3% of sales. The company's variable cost is 75% of sales and fixed expenses are Rs.12,00,000 p.a. The firm's required rate of return is 10% Advice the company on the implications of revising the credit policy. (To be discussed in the class) (May/June 2011)

21. Explain in detail the cash management models proposed by Baumol and Miller Orr with their merits and demerits. (Nov/Dec 2011), (May/June 2012)

Baumol model of cash management helps in determining a firm's optimum cash balance under certainty. It is extensively used and highly useful for the purpose of cash management. As per the model, cash and inventory management problems are one and the same.

William J. Baumol developed a model (The transactions Demand for Cash: An Inventory Theoretic Approach) which is usually used in Inventory management & cash management. **Baumol model of cash management** trades off between opportunity cost or carrying cost or holding cost & the transaction cost. As such firm attempts to minimize the sum of the holding cash & the cost of converting marketable securities to cash.

Relevance

At present many companies make an effort to reduce the costs incurred by owning cash. They also strive to spend less money on changing marketable securities to cash. The **Baumol model of cash management** is useful in this regard.

Use of Baumol Model

The **Baumol model** enables companies to find out their desirable level of cash balance under certainty. The **Baumol model of cash management** theory relies on the trade off between the liquidity provided by holding money (the ability to carry out transactions) and the interest foregone by holding one's assets in the form of non-interest bearing money. The key variables of the demand for money are then the nominal interest rate, the level of real income which corresponds to the amount of desired transactions and to a fixed cost of transferring one's wealth between liquid money and interest bearing assets.

Assumptions There are certain assumptions or ideas that are critical with respect to the Baumol model of cash management:

- The particular company should be able to change the securities that they own into cash, keeping the cost of transaction the same. Under normal circumstances, all such deals have variable costs and fixed costs.
- The company is capable of predicting its cash necessities. They should be able to do this with a level of certainty. The company should also get a fixed amount of money. They should be getting this money at regular intervals.
- The company is aware of the opportunity cost required for holding cash. It should stay the same for a considerable length of time.
- The company should be making its cash payments at a consistent rate over a certain period of time. In other words, the rate of cash outflow should be regular.

Equation Representations in Baumol Model of Cash Management:

- Holding Cost = k(C/2)
- Transaction Cost = c(T/C)
- Total Cost = k(C/2) + c(T/C)

Where T is the total fund requirement, C is the cash balance, k is the opportunity cost & C is the cost per transaction.

Limitations of the Baumol model:

1.It does not allow cash flows to fluctuate.

2. Overdraft is not considered.

3. There are uncertainties in the pattern of future cash flows.

Miller and Orr Model of Cash Management

The **Miller and Orr model of cash management** is one of the various cash management models in operation. It is an important cash management model as well. It helps the present day companies to manage their cash while taking into consideration the fluctuations in daily cash flow.

Description of the Miller and Orr Model of Cash Management

As per the Miller and Orr model of cash management the companies let their cash balance move within two limits - the upper limit and the lower limit. The companies buy or sell the marketable securities only if the cash balance is equal to any one of these.

When the cash balances of a company touches the upper limit it purchases a certain number of salable securities that helps them to come back to the desired level. If the cash balance of the

company reaches the lower level then the company trades its salable securities and gathers enough cash to fix the problem.

It is normally assumed in such cases that the average value of the distribution of net cash flows is zero. It is also understood that the distribution of net cash flows has a standard deviation. The Miller and Orr model of cash management also assumes that distribution of cash flows is normal.

Application of Miller and Orr Model of Cash Management

The Miller and Orr model of cash management is widely used by most business entities. However, in order for it applied properly the financial managers need to make sure that the following procedures are followed:

- Finding out the approximate prices at which the salable securities could be sold or bought
- Deciding the minimum possible levels of desired cash balance
- Checking the rate of interest
- Calculating the SD (Standard Deviation) of regular cash flows

22. " The average age of receivable is an important yard stick of testing the efficiency of receivable management of a firm" – Discuss. (May/June 2012)

Managing Accounts Receivable

- Generally firms like as little money as possible tied up in receivables
  - Reduces costs (firm has to borrow to support the receivable level)
  - Minimizes bad debt exposure

But, having good relationships with customers is important

- Increases sales

- Firm needs to strike a balance on these issues

Trade-offs in Receivable Management	
Liberal Management	**Strict Management**
More sales and gross margin, but ▪ More bad debts ▪ Higher collection costs ▪ More discount expenses ▪ Higher receivables ▪ Longer collections ▪ More interest expense	Less sales and gross margin, but ▪ Less bad debts ▪ Lower collection costs ▪ Less discount expenses ▪ Lower receivables ▪ Shorter collections ▪ Less interest expense

Managing Accounts Receivable

- Policy Decisions Influencing Accounts Receivable

a. Credit Policy

- Criteria used to screen credit applications
- Controls quality of accounts to which credit is extended

b. Terms of Sale

- Terms and conditions under which credit extended must be repaid

c. Collections Policy

- Methods employed to collect payment on past due accounts

a. Credit Policy

- Must examine creditworthiness of potential credit customers
  - Credit report
  - Customer's financial statements

- Bank references
- Customer's reputation among other vendors

- **Conflicts** often arise between sales and credit departments
  - Sales department's job to generate sales
  - Credit department may refuse credit to high risk accounts

b. Terms of Sale

- Credit sales are made according to specified terms of sale
  - Example: 2/10, net 30 means customer receives 2% discount if payment is made within 10 days, otherwise entire amount is due by 30 days
  - Customers pay quickly to save money
  - Firm's terms of sale generally follow **industry practice**

c. Collections Policy

- Firm's collection policy—manner and aggressiveness with which firm pursues payment from delinquent customers
  - Being overly aggressive can damage customer relations
- Function of **collections department**— to follow up on overdue receivables (called **dunning**)
  - Mail polite letter
  - Follow up with additional dunning letters
  - Phone calls
  - Collection agency
  - Lawsuit

23. From the following information prepare a statement in columnar form showing the working capital requirements: Budgeted sales (Rs. 10 per unit) Rs. 2, 60,000.

Analysis of one rupee of sales:

Raw materials	0.30
Direct labour	0.40
Overheads	0.20
TOTAL COST	0.90
Profit	0.10
Sales	1.00

It is estimated that

(i) Raw materials are carried in stock for three weeks and finished goods for two weeks

(ii) Factory processing will take three weeks

(iii) Suppliers will give full five weeks credit

(iv) Customers will require eight weeks credit

It may be assumed that production and overheads accrue evenly throughout the year. (May/June 2012) Solution : To be discussed in class

23. What are the different methods of forecasting working capital requirement of a business? Explain. (May/June 2012)

In order to estimate the extent of working capital requirement of a firm, several factors are to be considered. There are several methods / techniques for estimating the working capital requirements of a firm. They include – i) Estimation of components of working capital method, ii) Percent of sales method and iii) Operating cycle method.

4. Estimation of components of working capital method

As the concept of net working capital refers to the difference between current assets and current liabilities, estimation of both may give the potential working capital requirement of the firm.

5. Percent of sales method

According to this method, based on the past data, the relationship between sales and working capital are found out and are expressed as a ratio. The application and calculation of this ratio on estimated future sales will give the extent of working capital needs of the firm.

6. Operating cycle method

Operating cycle is the time duration required to convert sales, after the conversion of resources into inventories and cash. The operating cycle of a manufacturing co involves 3 phases – i) acquisition of resources such as raw material, labor, power and fuel etc, ii) manufacture of the product that includes conversion of raw material into work in process and into finished goods, and iii) sales of the product either for cash or credit. Credit sales create book debts for collection (debtors).

The length of the operating cycle of a manufacturing co is the sum of – i) inventory conversion period (ICP) and ii) Book debts conversion period (BDCP). Together, they are sometimes called as gross operating cycle (GOC). GOC = ICP + DCP. The Inventory conversion period is the total time needed for producing and selling the product and includes – (a) raw material conversion time (RMCP), (b) work in process conversion period (WIPCP) and (c) Finished good conversion period (FGCP) ICP = RMCP + WIPCP + FGCP. The payables deferral period (PDP) is the length of time the firm is able to defer payments on various resource purchases. The difference between the gross operating cycle and payables deferrals period is the net operating cycle (NOC). NOC = GOC- Payables deferral period

24. Write note on commercial paper and bank finance. (May/June 2012), (May/June2014),

Commercial paper is a short-term obligation (either secured or unsecured) of a large credit-worthy firm (or foreign government).

- Short-term, in this case, means less than 270 days.
- Unsecured means that no collateral backs the security. About half of all commercial paper in the U.S. is asset-backed and half is unsecured.
- Obligation means a debt that must be repaid.
- Large, credit worthy firms are the only companies that have a strong enough reputation to persuade buyers to invest in an unsecured security.

Features of commercial paper:

1. They are negotiable by endorsement and delivery and hence they are flexible as well as liquid instruments. Commercial paper can be issued with varying maturities as required by the issuing company.
2. They are unsecured instruments as they are not backed by any assets of the company which is issuing the commercial paper.
3. They can be sold either directly by the issuing company to the investors or else issuer can sell it to the dealer who in turn will sell it into the market.
4. It helps the highly rated company in the sense they can get cheaper funds from commercial paper rather than borrowing from the banks.

There are three types of commercial paper:

1. **Finance paper** - The largest issuers of commercial paper are banks and finance companies.
    - Banks often borrow money through the sale of short-term commercial paper and then lend the money at a higher interest rate over a longer term.

- Finance companies often use the proceeds to help customers finance the purchase of products from the parent corporation. Examples of active issuers of commercial paper are General Electric Capital, General Motors Acceptance Corporation (GMAC), and Ford Motor Credit. The finance companies sell commercial paper and lend the money to customers who, in turn, buy new products like turbines and automobiles from the parent company.

2. **Industrial paper -** Industrial companies use commercial paper to finance working capital (accounts receivable and inventory) on both a permanent or seasonal basis, to fund operating expenses, and occasionally to finance, on a temporary basis, construction projects.
3. **Asset-backed paper** - In the past, commercial paper has typically been unsecured (i.e, has no collateral). This is rapidly changing and investors are increasing insisting that some of the company's assets be pledged as collateral, in case the company is unable to pay upon maturity of the commercial paper.

Cost

For high-quality issuers, the yield on commercial paper is generally cheaper than the interest rate on comparable bank loans. In fact, it is among the cheapest of all financial instruments. The rate on commercial paper is generally slightly above the rate that the U.S. government pays on Treasury bills.

Sold at a Discount

Although there are exceptions, commercial paper typically is sold at a discount to its face value, i.e., the investor buys the paper at less than face value and receives the face value upon maturity. (It is occasionally sold as an interest-bearing note.)

Bank Finance:

The bank directly lending money to the company for new or existing projects.

25. Prepare an estimate of working capital requirement from the following information of a trading concern:

(i) projected annual sales – 1,50,000 units
(ii) Selling price Rs. 10 per unit
(iii) Percentage of net profit as sales 30
(iv)Average credit period allowed to customers – 10 weeks
(v) Average credit period allowed to supplies – 6 weeks
(vi) Average stock holding in terms of sales requirement – 10 weeks
(vii) Allow 15% for contingencies.

Solution:

Projected Sales 1, 50,000*10 = 15, 00,000
Less: NP on sales 30% = 4, 50,000
Cost of sales = 10, 50,000

Statement of working capital requirements

Current Assets		Rs
Debtors	1050000*10/52	2,01,923
Stock	1050000*10/52	2,01,923
Total Current Assets		403846
Current Liabilities		
Creditors	1050000*6/52	121154
Total current liabilities		121154

Working capital (CA-CL)		282692
Add: 15% Contingencies		42,404
Working capital required		325096

26. What are the Factors Determining Size of Investment in Receivables? (May/June2014)

Receivables represent the amounts owed to the company as a result of sales of goods and services in normal course of business. These are the claims of the firm against customers and form a part of current assets. Receivables are also termed as account receivables, customer receivables, trade receivables or book debts.

Size of credit sales

The volume of credit sale is the first factor that influences receivables. Firm adhering to cash sales would have low receivables when compared to firms allowing sales on credit. Higher the credit allowed more will be the receivables and vice a versa

Credit Policies

Firm with conservative credit policies will have low receivables when compared with firms following liberal credit policies. The vigour with which the concern collects the receivables also affects the size of its receivables. Prompt collections even with liberal credit policies will help in keeping receivables under control. Outstanding for long period may result in bad debts.

Terms of trade

The period for which the credit is allowed will decide the extent of receivables. Longer the period of credit more would be the receivables. Again, cash purchases followed up with credit sale is the main reason for increasing receivables.

Expansion plans

Concerns that want to expand has to enter new markets. To attract customers it becomes necessary for the enterprise to provide incentives in terms of credit. Once the concern gets the permanent customers it may start reducing the period for which credit was allowed.

Credit collection efforts

A concern should always have strong and well equipped credit collection machinery. Periodical reminders should be sent to customers in order to reduce the size of outstanding. Delayed collection will increase receivables and will impose serious financial troubles for the company.

27. What are the Factors Affecting The Size Of Investment In Inventories Or Determinants Of Inventories?

The size of investment in inventories is affected by a number of factors. Some of them are as follows:

1. Level Of Safety Stock

If a firm maintains high level of safety stock because of relatively larger degree of uncertainty associated to production and sales, the size of investment in inventories is also higher.

2. Carrying Costs

If the costs of holding inventories in stock is relatively low, the firm keeps larger stocks of inventories.

3. Economy in Purchase

If the firm is likely to receive certain benefits in the form of cash discount for purchase made currently, the size of investment in inventories is also likely to be larger because of larger quantity purchase.

4. Possibility Of Price Rise

If the price of materials is likely to rise in near future, the firm makes larger quantity purchase at present.

5. Cost And Availability Of Funds

If the cost of funds to be invested in inventories is relatively cheaper and they are conveniently available at present, the firm makes large purchase of inventories.

6. Possibility Of Rise In Demand

If the firm has anticipated the increased demand of its products in future, it maintains larger stocks of inventories at present.

7. Length Of Production Cycle

If the length of production cycle is relatively longer, the firm has to maintain investment in work-in-progress inventories for longer duration of time as a result of which the size of investment in inventories increases.

8. Availability Of Material

If certain kind of materials are only available in a particular season only, the firm has to increase the investment in inventories to keep larger stocks in the season.

9. Nature And Size Of Business

If the firm deals with the business of perishable products, the size of investment in inventories become lower. For a firm with relatively larger size and wide market coverage, the investment in inventories is larger.

UNIT – V - LONG TERM SOURCES OF FINANCE

Capital market and money market:

The Capital market is a market for financial investments that are direct or indirect claims to capital. It is wider than the Securities Market and embraces all forms of lending and borrowing, whether or not evidenced by the creation of a negotiable financial instrument. The capital market comprises the complex of institutions and mechanisms through which intermediate team funds and long term funds are pooled and made available to business, government and individuals. The capital market and in particular the stock exchange is referred to as the barometer of the economy.

Financial markets can broadly be divided into money and capital market.

Money Market: Money market is a market for debt securities that pay off in the short term usually less than one year, for example the market for 90-days treasury bills. This market encompasses the trading and issuance of short term non equity debt instruments including treasury bills, commercial papers, bankers acceptance, certificates of deposits, etc.

Capital Market: Capital market is a market for long-term debt and equity shares. In this market, the capital funds comprising of both equity and debt are issued and traded. This also includes private placement sources of debt and equity as well as organized markets like stock exchanges. Capital market includes financial instruments with more than one year maturity

Significance of Capital Markets

A well functioning stock market may help the development process in an economy through the following channels:

1. Growth of savings,
2. Efficient allocation of investment resources,
3. Better utilization of the existing resources.

In market economy like India, financial market institutions provide the avenue by which long-term savings are mobilized and channelled into investments. Confidence of the investors in the market is imperative for the growth and development of the market. For any stock market, the market Indices is the barometer of its performance and reflects the prevailing sentiments of the entire economy. Stock index is created to provide investors with the information regarding the average share price in the stock market. The ups and downs in the index represent the movement of the equity market. These indices need to represent the return obtained by typical portfolios in the country.

Capital Market Instruments – some of the capital market instruments are:

- Equity
- Preference shares
- Debenture/ Bonds
- ADRs/ GDRs
- Derivatives

Difference between primary market and secondary market:

SI.NO	Primary Market	Secondary Market
1	It deals only with new or fresh issue of security	Deals in existing security
2.	No fixed geographical location needed	Need a fixed place to house the secondary market activities, viz., trading.
3.	Creating long-term instrument for borrowings.	Providing liquidity through marketability to those instruments

FUNCTIONS OF STOCK EXCHANGE:

1. Raising capital for businesses

The Stock Exchange provides companies with the facility to raise capital for expansion through selling shares to the investing public.

2. Investment of savings, in purchase of securities

Provides a market for the trading of securities to individuals and organizations seeking to invest their saving or excess funds through the purchase of securities

3. Facilitating company growth

Companies view acquisitions as an opportunity to expand product lines, increase distribution channels, increase its market share, or acquire other necessary business assets. Business combination agreement through the stock market is one of the simplest and most common ways for a company to grow by acquisition.

4. Redistribution of wealth

Stocks exchanges do not exist to redistribute wealth. However, both casual and professional stock investors, through dividends and stock price increases that may result in capital gains, will share in the wealth of profitable businesses.

5. Management records of company

By having a wide and varied scope of owners, companies generally tend to improve on their management standards and efficiency in order to satisfy the demands of the shareholders and the more tight rules for public corporations imposed by public stock exchanges and the government. Therefore, it is said that public companies tend to have better management records than privately-held companies.

6. Creating investment opportunity of small investor

As opposed to other businesses that require huge capital expenditure, investing in shares is open to both the large and small stock investors because a person buys the number of shares they can afford. Therefore the Stock Exchange provides the opportunity for small investors to own shares of the same companies as large investors.

7. Govt. capital- rising for development project

Governments at various levels may decide to borrow money in order to finance base projects such as sewerage and water treatment works or housing estates by selling another category of securities known as bonds. These bonds can be raised through the Stock Exchange whereby members of the public buy them, thus loaning money to the government. The issuance of such bonds can avoid the need to directly tax the citizens in order to finance development

8. Barometer of the economy

At the stock exchange, share prices rise and fall depending, largely, on market forces. Share prices tend to rise or remain stable when companies and the economy in general show signs of stability and growth. An economic recession, depression, or financial crisis could eventually lead to a stock market crash. Therefore the movement of share prices and in general of the stock indexes can be an indicator of the general trend in the economy.

9-provide physical location for trade of securities

Stock exchange provides a physical location for buying and selling securities to the investors that have been listed for trading on that exchange

10-Establish rules & regulations of trading of shares

Stock exchange establishes rules for fair trading practices and regulates the trading activities of its members according to those rules

11-Fair

The exchange assures that no investor will have an excessive advantage over other market participants

12-Effective Market

This means that orders are executed and transactions are settled in the fastest possible way in stock exchange

13-Transparency

Investor makes informed and intelligent decision about the particular stock based on information. Listed companies must disclose information in timely, complete and accurate manner to the Exchange and the public on regular basis. Required information include stock price, corporate conditions and developments dividend, mergers and joint ventures, and management changes etc

14-Price

At any point in time, the price of previously issued stock is determined by the sebi and flow of supply and demand. It fixes the prices of the securities according to the fundamental law of the offer and the demand

15-Listing requirements

There are specific requirements for allowing a public company to list its securities on the Stock Exchange these are set out in the legislation.

16-To provide liquidity to the investors.

The investor can recover the money invested when needed. For it, he has to go to the stock exchange market to sell the securities previously acquired. This function of the stock market is done on the secondary market. It offers liquidity to the security investments, through a place in which to sell or buy securities

17-Gives the right to shareholders to vote in the general meetings

It permits for the investor to have a political power in the companies in which he invests its savings due that the acquisition of ordinary shares gives him the right (among other things) to vote in the general shareholders meetings of the company in question

18-Offer in company free publicity

It offers to the company's free publicity, which in other way would suppose considerable expenses. The institution is objecting of attention of the media (television, radio, etc.) in case any important change in its owners (the share holders).

VARIOUS SOURCES OF FINANCES:

A company needs finance to meet its various types of requirements. Some funds are required for a fairly long time for the purpose of acquiring fixed assets and some others are required for day to day working.

The long-term sources are:

- Equity shares,
- Preference shares,
- Debentures,
- Bonds,
- Leasing,
- Long term bank loans.

The short-term sources are:

- Short term working capital loans,
- Trade credit,
- Credit papers,
- Customers credit,
- Factoring.

Differentiate shares and debentures.

Shares	Debentures
1. Shares is a part of the capital. Shareholders are owners.	1. Debentures are loan raised by the company. Debentures holders are only lenders
2. Shareholders are paid dividend on the shares.	2. Debentures holders are paid interest on debentures.
3. The rate of dividend is not fixed. It changes depending on the divisible profits.	3. Debentures interest is part at a fixed rate.
4.Payment of dividend is not obligatory	4. Payment of interest is legal obligation. It is payable even if there are no profits.
5. Dividend on shares is not tax deductable.	5. Interest on debentures is tax deductible.

6. Shareholders have voting rights.	6. Debentures holders do not have voting rights.
7. Shares are not redeemable during the lifetime of the company.	7. Debentures are redeemed at the end of the specified period.
8. Share capital is payable after meeting all outside liabilities.	8. Debentures are payable before any payment is made to the shareholders.

Hire purchase	**Leasing**
The agreement is entrusted for the transfer of owner ship after a fixed period	It is only in financial lease, the owner ship will get transferred while in operating lease, it is not so.
Depreciation is claimed by the purchaser/ hirer	Depreciation is claimed by the lesser in the lease agreement.
Hire purchase agreement is more common with the consumer durable goods	Lease agreement is entered more among business concerns.
Sales tax is paid by the buyer on the value of goods.	Sales tax depends on the actual value at the time of sale.

VENTURE CAPITAL FINANCING

Venture capital financing is a type of financing by venture capital: the type of private equity capital is provided as seed funding to early-stage, high-potential, growth companies and more often after the seed funding round as growth funding round in the interest of generating a return through an eventual realization event such as an IPO or trade sale of the company.

To start a new startup company or to bring a new product to the market, the venture may need to attract financial funding. There are several categories of financing possibilities. If it is a small venture, then perhaps the venture can rely on family funding, loans from friends, personal bank loans or crowd funding.

Stages involved in venture capital financing: The financing of high-tech., project in the form of venture capital financing is done in several stages. They may ‘be in the form of:

Early-stage financing

Later stage financing

Early-stage financing:

This stage of financing is done to the new project or to the new technocrat who wishes to commercialize his research talents. As the technocrat is well versed only with knowhow and not with capital, going for debt at this stage increases the risk of entrepreneur and affect the health of the business unit. In, other means of financing, the obligation to repay the loans along with interest starts immediately with lending. Hence, it is not advisable for young entrepreneurs to go in for such loans. They have depend mainly on equity stoke so that the risk of repayment does not arise equity financing permits the young entrepreneurs to commercialize and earns profits out of the investment. The main instruments used for such financial assistance would be in the form of equity contribution, unsecured loans and optionally convertible securities. Once the financing is done, venture capitalists assist the firm in general administrative activities and allow the technocrat to concentrate on production and marketing. This stage of venture capital financing consists of seed capital, start-ups and second round financing.

(a) Seed capital:

Seed capital financing includes the implementation of research project, starting from all initial conceptual stage. This stage requires more time to complete the process. Because the entrepreneur made an effort to the maximum to meet the market potentiality. Therefore external equity in preferred. The key factors that influence equity financing at this stage are:

- The technology used in the project, possible threats of new technology in the near future.
- Different aspects of the product life cycle.
- The total investment required commercializing the product and time required to get suitable returns etc.

(b) Start-up stage financing:

At this stage innovator requires finance to commercialize the product. This stage is not simple to execute, it requires more time in getting different elements ie., (patent rights, trade marks, design and copy rights) which are very essential to bring the product in the market. All these components are very essentially needed to launch the product effectively. Hence, time and finance is needed. On the other hand, the research must also be done to evaluate the probable opportunities to exploit the market. Therefore, venture capital investor evaluates the projects carefully and negotiate the terms and conditions with the entrepreneur with regard to sharing the management.

(c) Second round of financing:

This type of financing is required when the project incurs loss or inability to yield sufficient profits. The reasons could be due to internal or external factors. At this stage, if the venture capitalists are fully aware of the genuine reasons for the loss, he should decide on second round financing, or he may seek the support of new investor. This is a complex process as the original investor may express his inability to further finance the project or entrepreneur must have lost the confidence with the original investor or he may wishes to broad base the investment pattern. Lot of bargaining has been done to coordinate the financing with original investor and with the technocrat or promoter.

(2) Later Stage Financing

Later stage financing is considered to be the easy means of assistance. The reason being, the product launched has not only reached the boom period but also indicator further expansion and growth. Hence it is a easy means of financing with low risk profile. The real problem associated at this stage is entrepreneur not be willing to give majority of his stake to the venture capitalists but may accept for more number of executive directors in the board. This means of is also known as expansion finance, replacement capital, management buyout and turn around capital.

(a) Expansion finance: Later stage financing is executed to expand the market, production or to establish warehouses etc., Export trade activities may also be considered for financing the project.

(b) Replacement capital): Under this stage, the promoter may prefer to buy the entire equity stake of the project by approaching some other financiers. He may also wish to increase his holding by buying more number of equity shares. Replacement capital) is normally preferred at the time of public issues. If the company is unlisted, getting capital gains on the fresh issues needs more time, tilt then replacement capital can be obtained in the form of convertible preference shares from the second financier.

(c) Management Buyout (MBO): This may be offered in two ways namely. ‘Management buyout’ or ‘Management buys int. In management buyout, venture capitalists help the

management of a company to buy or take over the ownership of the business. This would help the management to reshuffle or reengineer the entire project.

In management buy in strategies, outsides prefer to buy the existing business. This means of financing is less risky; it is not considered as venture capital and has wide criticism.

(d) Rescue Capital: Rescue capital is also known as turnaround capital offered with a view to help the technocrat or the business unit to come out of difficulties. This means of financing is risky in nature and the investor may ask for major changes in the management. In India, venture capital financing for MBO and turnout are rarely seen, as the majority of the investor prefers to invest only in later stages.

Different types of venture capital companies:

The different types of venture capital companies operating are:

- Cipher Securities - Offers startup funding, venture capital & strategic investment services
- Dawn Consulting - Venture capital fund raising consulting
- Draper International - Offers financial, managerial and informational resources
- Gujarat Venture Finance - Venture finance & managerial support services
- India co - Virtual and physical incubator support and services
- Indian Direct Equity Advisors - Private equity, venture capital funding and management services
- Jump Startup - Listing of Indian venture capital firms

VENTURE CAPITAL PROCESS:

1. Establishment of contact between the entrepreneur and the venture capitalist: The Prospective entrepreneurs, with his know how prepares a project report establishing there in the possibility of marketing a commercial product. This can be done with the help of auditor, professional or a merchant banker. The business consists of five important feasibility reports namely, Technical, Financial, Managerial, Marketing and Socio-economic feasibility. The formal application in duplicate will be submitted to venture capital investor.

2. Preliminary Evaluation: After the preliminary evaluation of the report is completed, venture capital investor normally discusses the investment plan for the project with the banker. During this stage close net work is expected from the management team, to implement the project.

3. Detailed Approval: In addition to the close discussion with the management team, a detailed appraisal of project is undertaken. Techno-economic feasibility will be examined by involving the executives of the Venture capital Investor and the management professional. If required they may even consult the experts In the similar field to take a decision.

4. Sensitivity Analysis: The Forecasted results of sales and profits are tested and analyzed. The risks and threats will be evaluated by using sensitivity analysis. Sensitivity analysis helps the evaluators to predict the probable risks and returns associated with the project. This formally clears the project for investment.

5. Investment in the project: The terms and conditions of venture capital assistance will be finalized according to the requirement of the project. The amount of funds required, profile of the business, the life time technology and the possible competition in the business will be looked into. A formal agreement is entered between the technocrat and investor stating therein the role of and share of management in the new project.

6. Monitoring the Project and post investment support: The venture capitalist role begins with financing the project. It is a general practice of the Investor to appoint an executive director to have closer look in to the project. The executive director assists the project in developing

strategies, decision-making and planning. The process of interaction with the technocrat increases the healthy environment in carrying the day-to-day business affairs.

4. What is Venture Capital and Explain its features in detail? (May/ June 2007)

Venture – Venture is often use for referring to a risky start-up or enterprise company.

Define Venture Capital

Venture Capital is the money and resources made available to startup firms and small business with exceptional growth potential. Most venture capital money comes from an organized group of wealthy investors.

Features of Venture Capital

The main features of venture capital can be summarized as follows:

i. High Degrees of Risk

Venture capital represents financial investment in a highly risky project with the objective of earning a high rate of return.

ii. Equity Participation

Venture capital financing. is, invariably, an actual or potential equity participation wherein the objective of venture capitalist is to make capital gain by selling the shares once the firm becomes profitable.

iii. Long Term Investment

Venture capital financing is a long term investment. It generally takes a long period to en cash the investment in securities made by the venture capitalists.

iv. Participation in Management

In addition to providing capital, venture capital funds take an active interest in the management of the assisted firms. Thus, the approach of venture capital firms is different from that of a traditional lender or banker. It is also different from that of a ordinary stock market investor who merely trades in the shares of a company without participating in their management. It has been rightly said, "venture capital combines the qualities of banker, stock market investor and entrepreneur in one".

v. Achieve Social Objectives

It is different from the development capital provided by several central and state level government bodies in that the profit objective is the motive behind the financing. But venture capital projects generate employment, and balanced regional growth indirectly due to setting up of successful new business.

vi. Investment is liquid

A venture capital is not subject to repayment on demand as with an overdraft or following a loan repayment schedule. The investment is realized only when the company is sold or achieves a stock market listing. It is lost when the company goes into liquidation

Stock market in India:

Problems in Indian stock market

Apart from global trends impacting India's capital market, which has opened itself since 1991 to the flow of foreign institutional funds in an increasingly integrating world economy, a circular issued by the Central Board of Direct Taxes with possible implications on taxation of market players, domestic or foreign, caused the stock plunge, say market observers.

The market crisis coincided with the second anniversary of the UPA Government, whose ascent to power was similarly accompanied by nervous selling and a price slump, only to be reversed within days. Since then, the Bombay Stock Exchange's Sensex has crossed new milestones of successive thousands with increasing frequency.

The Reserve Bank of India(RBI) too came to the rescue of the market, allaying fears of a liquidity crunch. "In the light of the developments in the stock exchanges, the RBI has been in touch with major settlement banks and both major stock exchanges to ensure that the payment obligations on the exchanges are met smoothly. Banks can get in touch with the Reserve Bank for any liquidity assistance." Another significant impact of the fall is the impact on corporate raising of funds. Market expects some pressure on valuations of Initial Public offerings (IPOs) to adjust to the market fall, even though there is considerable interest in many good growth stories. A longer drawn-out fall would have appeared as a bear phase and softened investor interest in what remains a very exciting growth market.

6. Distinguish between share holders and debenture holders. (Nov/Dec 2007)

Shares	**Debentures**
1. Shares are a part of the capital. Shareholders are owners.	1. Debentures are loan raised by the company. Debentures holders are only lenders
2. Shareholders are paid dividend on the shares.	2. Debentures holders are paid interest on debentures.
3. The rate of dividend is not fixed. It changes depending on the divisible profits.	3. Debentures interest is part at a fixed rate.
4.Payment of dividend is not obligatory	4. Payment of interest is legal obligation. It is payable even if there are no profits.
5. Dividend on shares is not tax deductable.	5. Interest on debentures is tax deductible.
6. Shareholders have voting rights.	6. Debentures holders do not have voting rights.
7. Shares are not redeemable during the lifetime of the company.	7. Debentures are redeemed at the end of the specified period.
8. Share capital is payable after meeting all outside liabilities.	8. Debentures are payable before any payment is made to the shareholders.

11. Present the features of venture capital financing. Indicate the present status in the country. (Nov/Dec 2008)

India, Asia's fourth largest economy, is a new market in which everyone is learning. With steady growth of between 5% to 7% in the past several years, a pace that will likely continue. India offers tremendous opportunities for financial service even as it transfers slowly from a planned economy to a free market one. It has already witnessed the emergence of several innovative financial instruments and services. Venture capital is the latest entrant in this field.

Venture capital is the capital provided by firms of professionals who invest alongside management in young, rapidly growing or changing companies that have the potential for high growth. Venture capital is a form of equity financing especially designed for funding high risk and high reward project. There is common perception that venture capital is a means of financing high technology project. However, venture capital is investment of long term finance made in :

1. Ventures promoted by technically or professionally qualified but unproven entrepreneurs,
2. Ventures seeking to harness commercially unproven technology,
3. High risk venture.

Meaning

The term 'venture capital' represents financial investment in highly risky projects with the objective of earnings a high rate of return. While the concept of venture capital is very old the recent liberalization policy of the government appears to have ---- a fillip to the venture capital movements

in India. In the real sense, venture capital financing is one of the most recent entrants in the Indian capital market. There is a significant scope for the venture capital companies in our country because of increasing emergence of technocrat entrepreneurs who lack capital to be risked. These venture capital companies provide the necessary risk capital to the entrepreneurs so as to meet the promoter's contribution as required by the financial institution. In addition to providing capital, these VCF's (venture capital firms) take an active interest in guiding the assisted firms.

A young, high tech company that is in the early stage of financing and is not yet ready to make a public offer of securities may seek venture capital. Such a high risk capital is provided by venture capital funds in the form of long term equity finance with the hope of earning a high rate of return primarily in the form of capital gain. In fact, the venture capitalist acts as a partner with the entrepreneurs.

Thus, a venture capitalist (VC) may provide the seed capital for unproven ideas, products, and technology oriented or start up firms. The venture capitalist may also invest in a firm that is unable to rise finance through the conventional means.

Features of Venture Capital:

- Venture Capital represents financial investments in a highly risky project with the objective of earning a high rate of return.
- Venture capital financing is an actual or potential equity participation where in the objective of venture capitalist is to make capital gain by selling the shares once the firm becomes profitable.
- Venture Capital financing is a long term investment. It generally takes a long period to enhance the investment in securities made by the venture capitalist.
- Venture capital fund take an active interest in the management of the assisted firms.
- Venture capital projects generate employment, and balanced regional growth indirectly due to setting up of successful new business.
- Venture capital is not subject to repayment on demand as with an overdraft or following a loan repayment schedule

Types of venture capital:

A new venture may need several infusions of cash from venture capitalist as the business progresses

- The first round, referred to as seed capital is obtained prior to company launch
- The second round, referred to as start-up capital is for luring staff, renting office space, purchasing servers and other IT infrastructure, purchasing inventories, equipping the production system, and other activities involved in starting the business.
- As sales levels increase, additional rounds could be needed to modify the site, re-equip the production system, expand plant capacity, or purchase new facilities. These additional rounds are sometimes called second stage financing or development capital.
- Mezzanine financing is the final round of financing before going public. Once a company's stock is publicity traded on stock exchange, capital is raised by issuing and selling shares.

PRESENT STATUS IN THE COUNTRY

The Indian venture capital industry, at present is at cross roads. Following are the major issues faced by this industry.

1. Limitations on structuring of venture capital funds. (VCFs)

VCFs in India are structured in the form of a company or trust fund and are required to follow a three-tier mechanism – investors, trustee company and AMC. A proper tax-efficient vehicle in the forms of limited liability partnership act', which is popular in USA, is not made applicable for structuring investors liability towards the fund is limited to the extent of his contribution in the funds also formalities in structuring of fund are simpler.

2. Problems in rising of funds

In USA primary sources of funds are insurance companies, pension funds, corporate bodies etc. while in Indian domestic institutions, multilateral agencies, state government undertakings are the main sources of funds for VCFs. Allowing pension funds, insurance companies to invest in the VCFs would enlarge the possibility of setting up of domestic VCF. Further, it mutual funds are allowed to invest up to 5 percent of their corpus in VCFs by SEBI, it may lead to increased availability of fund for VCFs.

3. Lack of incentive to Investors

Presently, high net worth individuals and corporate is not provided with any investments in VCFs. The problem of raising funds from these sources further gets aggravated with the differential tax treatment applicable to VCFs and mutual funds. In absence of any incentive, it is extremely difficult for domestic VCFs to raise money from this investor group that has a good potential.

4. Absence of "angel investors"

In silicon Valley, which is a nurturing ground for venture fund financed IT companies, the angel investors provide initial / seed stage financing till the company becomes eligible for venture funding. Thereafter, Venture capitalist through financial support and value-added inputs enables the company to achieve better growth rate and facilitate its listing on stock exchange. Private equity investors typically invest expansion / later stages of growth of the company with large investments. In contrast to this phenomenon, Indian industry is marked by an absence of angel investors.

5. Limitations on investment instruments

As per the section 10(23FA) of the Income Tax Act, income from investments only in equity instruments of venture capital undertakings is eligible for tax exemption, whereas SEBI regulations allow investments in the form of equity shares or equity related securities issued by company whose shares are not listed on stock exchange.

Harmonization of SEBI regulations and income tax rules of CBDT would provide much required flexibility to VCFs in structuring the investment instruments and also availing of the tax breaks. Thus investments by VCFs by instruments other than equity can also be qualified for Tax exemption.

6. Domestic VCFs vis-à-vis offshore funds

The domestic VCFs operations in the country are governed by the regulations as prescribed by SEBI and investment restrictions as placed by CBDT for availing of the tax benefits. They pay maximum marginal tax 35% in respect of non exempt income such as interest through Debentures etc., while off- shore Funds which are structured in tax havens such as Mauritius are able to overcome the investment restriction of SEBI and also get exemption from Income Tax under Tax avoidance treaties. This denies a level playing field for the domestic investors for carrying out the similar activity in the country.

7. Limitations on industry segments

In sharp contrast to other countries where telecom, services and software bag the largest share of venture capital investment, in India other conventional sectors dominate venture finance. Opening up of restrictions, in recent time, on investing in the services sectors such as telecommunication and resting services, project constancy, design and testing services, tourism etc. would increase the domain and growth possibilities of venture capital.

8. Anomaly between SEBI regulations and CBDT Rules

CBDT tax rules recognize investment in financially weak companies only in case of unlisted companies as venture investment, whereas SEBI Regulations recognize investment in financially weak companies offers an attractive opportunity to VCFs, the same may be allowed by CBDT for

availing of tax exemptions on capital gains at a later stage. Also SEBI regulations do not restrict size of an investment in a company. However, as per Income Tax rules, maximum investment in a company. However, as per Income Tax Rules, maximum investment in a company. However, as per Income Tax rules, maximum investment in a company is restricted to less than 20 per cent of the raised corpus of VCF an paid up share capital in case of Venture Capital Company. Further, investment in Company is also restricted upto 40 percent of equity of Investee Company. VCFs may place the investment restriction for VCFs by way of maximum equity stake in the company, which could be up to 49 percent of equity of the Investee Company.

9. Limitations on exit mechanism

The VCF's that have invested in various ventures have not been able to exit from their investments due to limited exit routes and also due to unsatisfactory performance of OTCEI. The threshold limit placed by various stock exchanges acts as deterrent for listing of companies with smaller equity base. SEBI can consider lowering of there should limit for public issue / listing for companies backed by VCFs. Buy-back of equity shares by the company has been permitted for unlisted companies, which would provide exit route to investment of venture capitalists.

10. Limitation on application of sweet equity and ESOP

In the US, an entrepreneur can declare that he has nothing much to contribute except for "intellectual" capital and still he finds venture capitalists backing his idea with their money. And when they come together, there is a way to structure the investment deal in such a manner that the entrepreneur still can ensure a controlling stake in the venture. In the US, the concept of par value of shares does not exist that allows the different par value shares. Absence of such mechanism puts limitations in structuring the deals.

13. Explain the features of hire purchase with suitable examples. (May/June 2009)

Hire Purchase

Hire purchase is a mode of financing the price of the goods to be sold on a future date. In a hire purchase transaction, the goods are let on hire, the purchase price is to be paid in installments and hirer is allowed an option to purchase the goods by paying all the installments. Hire purchase is a method of selling goods. In a hire purchase transaction the goods are let out on hire by a finance company (Creditor) to the hire purchase customer (hirer). The buyer is required to pay an agreed amount in periodical installments during a given period. The ownership of the property remains with creditor and passes on to hirer on the payment of the last installment.

A hire purchase agreement is defined in the Hire Purchase Act, 1972 as peculiar kind of transaction in which the goods are let on hire with an option to the hirer to purchase them, with the following stipulations :

a. Payments to be made in installments over a specified period
b. The possession is delivered to the hirer at the time of entering into the contract
c. The property in goods passes to the hirer on payment of the last installment
d. Each installment is treated as hire charges so that if default is made in payment of any installment, the seller becomes entitled to take away the goods, and
e. The hirer / purchase is free to return the goods without being required to pay any further installments falling due after the return.

Features of Hire Purchase Agreement

Under hire purchase system, the buyer takes possession of goods immediately and agrees to pay the total hire purchase price in installments. Each installment is treated as hire charges. The ownership of the goods passes from the seller to the buyer on the payment of the last installment. In case the buyer makes any default in the payment of any installment the seller has right to reposses the goods from the

buyer and forfeit the amount already received treating it as hire charges. The hirer has the right to terminate the agreement any time before the property passes. That is, he has the option to return the goods in which case he need not pay installments falling due thereafter. However, he cannot recover the sums already paid as such sums legally represent hire charges on the good in question.

14. Define a lease. How does it differ from a hire purchase? What are the cash flows consequences of a least? Illustrate. (May/June 2009),

Lease financing is one of the methods of long term financing. Lease contract stipulates the lease period rental payments, periodic intervals of payments, repairs and maintenance, purchase options, taxes, insurance, risk of obsolescence, penalty for delay or non payment of rental etc. It is an agreement under which the use and control of asset is permitted without passing on the title of the asset. In case the agreement provides, the lessor has to do maintenance and bear the cost of maintenance and upkeep of the equipment in some case the lessee has to bear the cost of maintenance in any case it has to be stipulated clearly in the leasing contract about the maintenance if the lease is not renewed the lessor takes the possession of the asset after the expiry of existing lease period.

Leasing is an arrangement that provides a firm with the use and control over assets without buying and owing the same. It is a form of renting assets. Lease is a contract between the owner of the asset (lessor) and the use of the asset called the lessee whereby the lessor gives the right to use the asset to the lessee over an agreed period of time for a consideration called the lease rental the lease contract is regulated by the terms and conditions of the agreement, the lessee pays the lease rent periodically to the lessor as regular fixed payments over a period of time. The rental may be payable at the beginning or end of a month quarter, half year the lease rent can also be agreed both in terms of amount and timing as per the profits and cash flow position of the lessee. At the expiry of the lease period the asset reverts back to the lessor who is the legal owner of the asset. However the long term lease contracts the lessee is generally given an option to buy or renew the lease. In the words of Miller M.H. and CW.Uptron “leasing separates Ownership and use as two economic activities and facilities asset use without ownership”.

The Hire purchase system is a system under which money is paid of goods by means of periodical installments with the view of ultimate purchase. Under this system the hire purchaser acquires the possession of goods immediately on singing the Hire purchase agreement and payments of down payment. The goods will become the property of the buyer only when all the installments have been paid. As the title would ultimately pass on to the buyer, depreciation and interest on finance are allowed as a deduction for Income Tax purpose.

Lease involves the use of an asset without assuming ownership. The owner of the asset is called lessor and ownership is retained by the lessor under leasing arrangement. Lessee has to pay rental to the lessor. Lessee rent is allowed as a deduction for income tax purpose in the hands of lessee. As par the latest instructions of CBDT depreciation on the equipment is allowed as a deduction in the hands of lessor.

DIFFERENCES BETWEEN HIRE PURCHASE AND LEASE FINANCING

HIRE PURCHASE	LEASE
Under this system, Hire purchase acquires the possession of goods immediately on signing the hire purchase agreement and payments of down payment (say 20%)	Lease involves the use of an asset witho assuming ownership,. No down payments in lea financing.
The hire purchase price consists of cash	Lessee ahs to pay rental to the lessor for the use

price and the interest payable to the hire vendor.	an asset
Depreciation and interest are debit to P&L A/c of Hirer	Lessee can claim the rental as business expenditu (Lessor will claim the amount of depreciation)
The user has the option to acquire Legal title to the asset as per the terms of the contract	Lesser is the owner. Lessee may have the option buy the same at the end of lease period.
The goods will become the property of the hirer when all installments have been paid	Lessee cannot become the owner even after payment of lease rentals of all the years during Lease Period.
Maintenance cost is born by the Hirer	Maintenance cost In case of operating lease it is borne by lessor. In case of finance lease it is borne by lessee.
Capitalization is done in the books of Hirer	Capitalization is done in the books of lessor (i.e. Leasing Company)
The risk of obsolescence is borne by Hirer	Risk of obsolescence : In operating lease, it is done by Lessor. In case of finance lease, it is borne by lessee.
The Asset is shown in the balance of Hirer and balance installments payments as a liability	The asset is shown as a foot note in the balance sheet
Tax benefits : hirer can claim depreciation and interest	Tax benefits : Lease can claim lease rentals only and maintenance cost in case of lease finance

DIFFERENT CLASSIFICATION OF SHARES TRDED IN STOCK EXCHANGES

The term shares and stock are generally used interchangeable. But stocks differ from a share in many ways. A stock is the aggregate of fully paid up shares, consolidate and divided for the purposes of convenient holding into different parts. Therefore, only fully paid up shares are converted into stock and no direct issue of stock by a company is lawful. The stock can also be reconverted into fully paid up shares. The holders of the stock also have similar privileges and right as that of the share holders. However, the important point of distinction between the shares and stock can be summarized as follows : A share has definite face value, where as a stock has no definite face value

1) A stock is always fully paid up, whereas a share may be either fully paid up or partly paid up
2) Stock can be transferred into small transactions, while shares can be transferred only in round numbers
3) All shares are of equal denominations. Stock may be of unequal amounts
4) Shares can be directly issued to the public, whereas stock cannot be issued to the public directly.

Kinds of shares : In the ordinary commercial practices, limited companies issue various classes of share, viz, preference shares, equity shares, deferred shares, etc. But according to the Indian companies act, the share capital of a company limited by shares shall be of two kinds only namely, (1) Equity shares, (2) Preference shares

1) Equity Shares : According to Sec 85(2), "equity shares are those shares which are not preference shares". Equity shares are also called ordinary shares

If a company ahs issued both preference shares and equity shares the equity share holder will get dividend after the dividend on preference shares has been paid. The dividend is not certain. The financial risks is more with equity share capital so equity shares are also called risk capital

PREFERENCE SHARES

According to Sec 85 of act, Preference shares are those on which there is preference right 1) To claim dividend during the life time of the company and

2) To claim repayment of capital on the winding up.

The percentage of dividend is fixed. The holders of preferences shares get the fixed dividend before any dividend is paid to other classes of share holders. At the time of winding up of the company, preferences share holders can get back their capital before any other classes of share holder can get back their money.

There are different classes of preferences shares. They are as follows

1) Cumulative preference shares
2) Non-cumulative preference shares
3) Participating preference shares
4) Non-participating preference shares
5) Convertible preference shares
6) Non-convertible preference shares
7) Redeemable preference shares
8) Guaranteed preference shares

17. Discuss the various sources of long term finance of Indian companies. (May/June 2010)

Sources of Long Term Financing:

The various sources are as follows –

a. Shares: These are issued to the general public. The holders of shares are the owners of the business. These may be of two types:

Equity shares and

- Preference shares.

b. Debentures: These are also issued to the general public. The holders of debentures are the creditors of the company.

c. Public Deposits: General public also likes to deposit their savings with a popular and well established company which can pay interest periodically and pay-back the deposit when due.

d. Retained Earnings: The company may not distribute the whole of its profits among its shareholders. It may retain a part of the profits and utilize it as capital.

e. Term Loans from Banks: Many industrial development banks, cooperative banks and commercial banks grant medium term loans for a period of 3-5 years.

f. Loan from Financial Institutions: There are many specialized financial institutions established by the Central and State governments which give long term loans at reasonable rate of interest

23. Discuss the steps and parties involved in an IPO process in India. (Nov/Dec 2011)

An initial public offering (IPO) or stock market launch, is the first sale of stock by a private company to the public. It can be used by either small or large companies to raise expansion capital and become publicly traded enterprises. Many companies that undertake an IPO also request the assistance of an investment banking firm acting in the capacity of an underwriter to help them correctly assess the value of their shares, that is, the share price (IPO Initial Public Offerings, 2011). In 1602, the Dutch East India Company was the first company in the world to issue stocks and bonds in an initial public offering (Chambers, 2006)

Reasons for listing

When a company lists its securities on a public exchange, the money paid by investors for the newly issued shares goes directly to the company (in contrast to a later trade of shares on the exchange, where the money passes between investors). An IPO, therefore, allows a company to tap a wide pool of investors to provide itself with capital for future growth, repayment of debt or working capital. A company selling common shares is never required to repay the capital to investors.

Once a company is listed, it is able to issue additional common shares via a secondary offering, thereby again providing itself with capital for expansion without incurring any debt. This ability to quickly raise large amounts of capital from the market is a key reason many companies seek to go public.

There are several benefits to being a public company, namely:

- Bolstering and diversifying equity base
- Enabling cheaper access to capital
- Exposure, prestige and public image
- Attracting and retaining better management and employees through liquid equity participation
- Facilitating acquisitions
- Creating multiple financing opportunities: equity, convertible debt, cheaper bank loans, etc.
- Increased liquidity for equity holder

Disadvantages of an IPO

There are several disadvantages to completing an initial public offering, namely:

- Significant legal, accounting and marketing costs
- Ongoing requirement to disclose financial and business information
- Meaningful time, effort and attention required of senior management
- Risk that required funding will not be raised
- Public dissemination of information which may be useful to competitors, suppliers and customers

IPO Process

Initial public offer or IPO is a way for a company to raise capital through public and get listed in the stock market to become a publicly traded company for first time. For a company, the cost of borrowing money through IPO is less in comparison to other popular options available in the market. Through IPO, company diversifies its equity base to large number of investors. When securities of a company is listed in stock exchanges, it also gets benefited in term of brand building as its being discussed on almost day to day basis among millions of investors and experts.

Companies follow a complex process to raise money through IPO in India. The process begins with hiring investment bank(s) as the Lead Manager to sell the equity shares. The Lead Managers prepares a Draft Red Herring Prospectus (DRHP) and submit it to SEBI, the regulator for the securities market in India, for approval (this process is called IPO Filing). Company also hires an authorized Credit Rating Agency to grade the fundamentals of the company going public (as IPO Grading is mandatory) and gets am in-principal approval from Stock Exchanges (BSE, NSE) for listing of its equity shares. After receiving SEBI clearance on the public issue and approval from stock exchanges, company begins distribution of IPO Application Forms through its designated Syndicate Managers. The initial public issue is open for a certain number of days

and the bids are updated with the stock exchanges as they are received. Once the IPO is closed for public subscription, in case of the Book Building IPO, the company with help from the Lead Managers and the IPO Registrar, decides the Issue Price of IPO Share (based on the demand). Then the Registrar does the fair distribution of shares and publishes a report in the form of Basis of Allotment document. The allocated shares are now deposited in to the demat accounts of the investors and get listed in designated stock exchanges on the specified IPO Listing Date.

An India Stock Market investor can follow the complete IPO Cycle on this website. IPO tools available on this website allows investors to analyze Forthcoming IPO's, find IPO Research, discuss stocks with likeminded investors, analyze IPO Historic Data and follow the IPO Market though IPO Notes which are delivered regularly via Email Newsletters, SMS Alerts and Face book Updates.

24. Explain in detail about Venture Capital as a source of long term finance. (Nov / Dec 2011)

Stages involved in venture capital financing:

The financing of high-tech., project in the form of venture capital financing is done in several stages. They may 'be in the form of:

- Early-stage financing
- Later stage financing

Early-stage financing

This stage of financing is done to the new project or to the new technocrat who wishes to commercialize his research talents. As the technocrat is well versed only with knowhow and not with capital, going for debt at this stage increases the risk of entrepreneur and affect the health of the business unit. In, other means of financing, the obligation to repay the loans along with interest starts immediately with lending. Hence, it is not advisable for young entrepreneurs to go in for such loans. They have depend mainly on equity stoke so that the risk of repayment does not arise equity financing permits the young entrepreneurs to commercialize and earns profits out of the investment. The main instruments used for such financial assistance would be in the form of equity contribution, unsecured loans and optionally convertible securities. Once the financing is done, venture capitalists assist the firm in general administrative activities and allow the technocrat to concentrate on production and marketing. This stage of venture capital financing consists of seed capital, start-ups and second round financing.

(a) Seed capital:

Seed capital financing includes the implementation of research project, starting from all initial conceptual stage. This stage requires more time to complete the process. Because the entrepreneur made an effort to the maximum to meet the market potentiality. Therefore external equity in preferred. The key factors that influence equity financing at this stage are:

- The technology used in the project, possible threats of new technology in the near future.
- Different aspects of the product life cycle.
- The total investment required commercializing the product and time required to get suitable returns etc.

(b) Start-up stage financing:

At this stage innovator requires finance to commercialize the product. This stage is not simple to execute, it requires more time in getting different elements ie., (patent rights, trade marks, design and copy rights) which are very essential to bring the product in the market. All these components are very essentially needed to launch the product effectively. Hence, time and

finance is needed. On the other hand, the research must also be done to evaluate the probable opportunities to exploit the market. Therefore, venture capital investor evaluates the projects carefully and negotiate the terms and conditions with the entrepreneur with regard to sharing the management.

(c) Second round of financing:

This type of financing is required when the project incurs loss or inability to yield sufficient profits. The reasons could be due to internal or external factors. At this stage, if the venture capitalists are fully aware of the genuine reasons for the loss, he should decide on second round financing, or he may seek the support of new investor. This is a complex process as the original investor may express his inability to further finance the project or entrepreneur must have lost the confidence with the original investor or he may wishes to broad base the investment pattern. Lot of bargaining has been done to coordinate the financing with original investor and with the technocrat or promoter.

(2) Later Stage Financing

Later stage financing is considered to be the easy means of assistance. The reason being, the product launched has not only reached the boom period but also indicator further expansion and growth. Hence it is a easy means of financing with low risk profile. The real problem associated at this stage is entrepreneur not be willing to give majority of his stake to the venture capitalists but may accept for more number of executive directors in the board. This means of is also known as expansion finance, replacement capital, management buyout and turn around capital.

(a) Expansion finance: Later stage financing is executed to expand the market, production or to establish warehouses etc., Export trade activities may also be considered for financing the project.

(b) Replacement capital): Under this stage, the promoter may prefer to buy the entire equity stake of the project by approaching some other financiers. He may also wish to increase his holding by buying more number of equity shares. Replacement capital) is normally preferred at the time of public issues. If the company is unlisted, getting capital gains on the fresh issues needs more time, tilt then replacement capital can be obtained in the form of convertible preference shares from the second financier.

(c) Management Buyout (MBO): This may be offered in two ways namely. 'Management buyout' or 'Management buys int. In management buyout, venture capitalists help the management of a company to buy or take over the ownership of the business. This would help the management to reshuffle or reengineer the entire project.

In management buy in strategies, outsides prefer to buy the existing business. This means of financing is less risky; it is not considered as venture capital and has wide criticism.

(d) Rescue Capital: Rescue capital is also known as turnaround capital offered with a view to help the technocrat or the business unit to come out of difficulties. This means of financing is risky in nature and the investor may ask for major changes in the management. In India, venture capital financing for MBO and turnout are rarely seen, as the majority of the investor prefers to invest only in later stages.

25. Describe briefly the recent trends in stock exchange. (May/June 2012)

Recent trends in stock market

1) Listing of securities in foreign markets allowed.
2) Online trading system is established.
3) Trading system is changed from outcry system to onscreen based system.
4) Derivative trading started.

5) Dematerialization of shares allowed. Depositories Limited started.
6) Foreign institutional investment in securities permitted.
7) Companies are allowed to buy back their shares.
8) Emergence of Credit Rating Agencies.
9) Indian companies are allowed to raise capital from abroad.
10) Foreign companies are allowed to raise capital from Indian market.

26. Elucidate the role of new issue market. (May/June 2012)

Meaning of new issue market

- It refers to the set-up which helps the industry to raise the funds by issuing different types of securities.
- These securities are issued directly to the investors (both individuals as well as institutional) through the mechanism called primary market or new issue market.
- The securities take birth in this market.

Functions of new issue market

1. Origination:

It refers to the work of investigation, analysis and processing of new project proposals. Origination starts before an issue is actually floated in the market. It includes a careful study of the technical, economic and financial viability to ensure the soundness of the project and provides advisory services.

2. Underwriting:

It is an agreement whereby the underwriter promises to subscribe to a specified number of shares or debentures in the event of public not subscribing to the issue. Thus it is a guarantee for the marketability of shares.

Underwriters may be institutional and non-institutional.

3. Distribution:

It is the function of sale of securities to ultimate investors. Brokers and agents who maintain regular and direct contract with the ultimate investors, perform this service.

Methods of floating new issues

The various methods which are used in the floating of securities in the new issue market are:

- Public issues
- Offer for sale
- Placement
- Right issues

a. Public issues or Initial public offering (IPO)

The issuing company directly offers to the general public/institutions a fixed number of securities at a stated price or price band through a document called prospectus. This is the most common method followed by companies to raise capital through issue of the securities.

b. Offer of sale

- It consists in outright sale of securities through the intermediary of issue houses or share brokers.
- It consists of two stages: the first stage is a direct sale by the issuing company to the issue house and brokers at an agreed price.
- In the second stage, the intermediaries resell the above securities to the ultimate investors. The issue houses purchase the securities at a negotiated price and resell at a higher price. The difference in the purchase and sale price is called turn or spread.

c. Private placement

- It involves sale of securities to a limited number of sophisticated investors such as financial institutions, mutual funds, venture capital funds, banks, and so on.
- It refers to sale of equity or equity related instruments of an unlisted company or sale of debentures of a listed or unlisted company.

d. Right Issue

When a listed company proposes to issue securities to its existing shareholders, whose names appear in the register of members on record date, in the proportion to their existing holding, through an offer document, such issues are called 'Right Issue'. This mode of raising capital is the best suited when the dilution of controlling interest is not intended.

27. Explain briefly the different types of lease financing in India. (May/June 2012)

Meaning 0f lease financing:

A lease transaction is a commercial arrangement whereby an equipment owner or Manufacturer conveys to the equipment user the right to use the equipment in return for a rental. In other words, lease is a contract between the owner of an asset (the lessor) and its user (the lessee) for the right to use the asset during a specified period in return for a mutually agreed periodic payment (the lease rentals). The important feature of a lease contract is separation of the ownership of the asset from its usage. Lease financing is based on the observation made by Donald B. Grant: "Why own a cow when the milk is so cheap? All you really need is milk and not the cow."

Lease agreements are basically of two types.

They are (a) Financial lease and (b) Operating lease.

The other variations in lease agreements are (c) Sale and lease back , (d) Leveraged leasing and (e) Direct leasing.

(a) Financial lease

Long-term, non-cancellable lease contracts are known as financial leases. The essential point of financial lease agreement is that it contains a condition whereby the lessor agrees to transfer the title for the asset at the end of the lease period at a nominal cost. At lease it must give an option to the lessee to purchase the asset he has used at the expiry of the lease. Under this lease the lessor recovers 90% of the fair value of the asset as lease rentals and the lease period is 75% of the economic life of the asset. The lease agreement is irrevocable. Practically all the risks incidental to the asset ownership and all the benefits arising there from are transferred to the lessee who bears the cost of maintenance, insurance and repairs. Only title deeds remain with the lessor. Financial lease is also known as 'capital lease'. In India, financial leases are very popular with high-cost and high technology equipment.

(b) Operating lease

An operating lease stands in contrast to the financial lease in almost all aspects. This lease agreement gives to the lessee only a limited right to use the asset. The lessor is responsible for the upkeep and maintenance of the asset. The lessee is not given any uplift to purchase the asset at the end of the lease period. Normally the lease is for a short period and even otherwise is revocable at a short notice. Mines, Computers hardware, trucks and automobiles are found suitable for operating lease because the rate of obsolescence is very high in this kind of assets.

(c) Sale and Lease back

it is a sub-part of finance lease. Under this, the owner of an asset sells the asset to a party (the buyer), who in turn leases back the same asset to the owner in consideration of lease rentals. However, under this arrangement, the assets are not physically exchanged but it all happens in records only. This is nothing but a paper transaction. Sale and lease back transaction is suitable

for those assets, which are not subjected depreciation but appreciation, say land. The advantage of this method is that the lessee can satisfy himself completely regarding the quality of the asset and after possession of the asset convert the sale into a lease arrangement.

(d) Leveraged leasing

Under leveraged leasing arrangement, a third party is involved beside lessor and lessee. The lessor borrows a part of the purchase cost (say 80%) of the asset from the third party i.e., lender and the asset so purchased is held as security against the loan. The lender is paid off from the lease rentals directly by the lessee and the surplus after meeting the claims of the lender goes to the lessor. The lessor, the owner of the asset is entitled to depreciation allowance associated with the asset.

(e) Direct leasing.

Under direct leasing, a firm acquires the right to use an asset from the manufacturer directly. The ownership of the asset leased out remains with the manufacturer itself. The major types of direct lessor include manufacturers, finance companies, independent lease companies, special purpose leasing companies etc

28. Distinguish between hire purchase and installment purchase system. (May/June 2012)

Hire Purchase – Meaning

Hire purchase system defers to the system wherein, the seller of goods delivers the goods to the buyer without transferring the ownership of goods. The payment for the goods will be made by the buyer in installments. If the buyer pays all the installments, the ownership of the goods will be transferred, on payment of the last installment. However, if the buyer does not pay for any installment, the goods will be reposed by the seller and the money paid on earlier installments will be treated as hire charges for using the goods. So, under this system, the transaction may result in purchasing of goods by the seller or in hiring the goods. Hence, the system is called Hire Purchase system.

Characteristics of Hire – Purchase system

a. It is a credit purchase

b. The price under hire – purchase is paid in installments

c. The goods are delivered in the possession of the purchaser at the time of commencement of the agreement

d. Hire vendor continues to be the owner of the goods till the payment of last installment

e. The hire – purchaser has a right to use the goods as a bailer.

f. The hire – purchaser has a right to terminate the agreement the agreement at any time in the capacity of hirer.

g. The hire – purchaser becomes the owner of the goods after the payment of installments as per the agreement.

h. If there is a default in the payment of any installment, the hire vendor will take away the goods from the possession of the purchaser without refunding him any amount.

Installment Purchase System

Meaning: Installment payment system (also called deferred installments) is a system where the buyer is given the ownership as well as the possession of the goods at the time of signing the contract. The buyer has the facility to pay the price in installments.

Definition: According to J. B. Batliboi, installment purchase system is a system under there is an agreement to purchase and pay by installments, the goods which become the property of the purchaser immediately when he receives the delivery of the same.

Features:

a. Under this system, there will be an outright sale of goods/assets.
b. The Possession as well as the ownership is passed to the buyer right at the time of signing the contract.
c. The buyer can make the payment in installments.
d. In case of default in payment, the seller cannot repossess the goods, but he can sue the buyer for the recovery of unpaid price.
e. The buyer cannot exercise the option of returning the goods and terminate the contract, unless the same becomes void or voidable under the contract act.

Difference between hire purchase system and installment purchase system		
S. No	**Hire purchase system**	**Installment purchase system**
1	It is a contract of hiring	It is a contract of sale
2	It is transferred by seller to buyer only after payment of all installments	It is transferred by seller to buyer, immediately on signing the contract
3	Here, the buyer is like a bailee	Here, the buyer is not in a position of a bailee
4	Risk is on the seller	Risk is on the buyer
5	On default of payment of any installment by the buyer, the seller can repossess the goods.	On default of payment of any installment by the buyer, the seller cannot repossess the goods, but can file a suit in the court of law against the buyer for the recovery of unpaid price.
6	The buyer can exercise the option of return of goods	The buyer cannot exercise the option of return of goods
7	The buyer cannot dispose the goods, until the payment of last installment. If disposed, the third party buyer does not get a better title.	The buyer has the right to dispose the goods, even if all installments are not yet paid.

29. Explain the various sources of long term finance. (May/June 2012)
The long-term sources are:
-Equity shares,-Preference shares,-Debentures,-Bonds,-Leasing,- Long term bank loans.
1. EQUITY SHARES: According to Sec 85(2), "equity shares are those shares which are not preference shares". Equity shares are also called ordinary shares.
If a company has issued both preference shares and equity shares the equity holder will get dividend after the dividend on preference shares has been paid. The dividend is not certain. The financial risks is more with equity share capital so equity shares are also called risk capital

Advantages of equity share:

1) Non recurring fixed payments, 2) No charges, 3) Long-term funds, 4) Capital Formation, 5) Credit formation, 6) Ownership, 7) Right issues

Disadvantages of equity shares:

1) Inability of refund, 2) Difficult in trading on equity, 3)Concentration of control, 4) Not always acceptable, 5) Dividend at the boards Mercy 6) Illiquid,7) Speculation

2. PREFERENCE SHARES

According to Sec 85 of the Act, preference shares are those on which there is preference right 1) To claim dividend during the life time of the company and 2) To claim repayment of capital on the winding up. The percentage of dividend is fixed. The holders of preferences shares get the fixed

dividend before any dividend before any dividend is paid to other classes of share holders. At the time of winding up of the company, preferences share holders can get back their capital before any other classes of share holder can get back their money.

Advantages of preferences shares:

-Suitable to cautions investors, -Retention of control,-Attractive types, -Convenience,-Increase in equity share holders income,-Conversion to satisfy legal requirement, -Economical, -Enabling reconstruction and reorganization, -Increasing the marketability, -Good alternative for debenture.

Disadvantages of preference shares:

1) Heavy dividend 2) Accumulation of dividend, 3) Costly 4) No voting rights, 5) Way to liquidation 6) Affecting the financial status, 7) Time of redemption, 8) Income Tax

3. DEBENTURE

A Debenture is a debt security issued by a company (called the Issuer), which offers to pay interest in lieu of the money borrowed for a certain period.

- These are long-term debt instruments **Issued by Private Sector Companies**.
- These are issued in denominations as low as Rs 1000 and have maturities ranging between one and ten years.
- Debentures enable investors to reap the **Dual Benefits of Adequate Security and Good Returns**.
- Unlike other Fixed Income Instruments such as Fixed Deposits, Bank Deposits they can be **transferred from one party to another by using transfer from**.
- Debentures were issued in physical form. Now corporate/PSUs have started issuing **debentures in De-mat form**.
- **Debentures can be listed on a stock exchange**, giving you an opportunity to sell them and exit earlier then the tenure of the debenture.

In Simple Words, A debenture is a debt instrument, just like a fixed deposit (FD), usually issued by a company. You invest a sum, and the company pays you a fixed rate of interest for the pre-defined period. After the period gets over, you get back your principal amount.

4. BONDS

Bonds are issued by public authorities, credit institutions, companies and supranational institutions in the primary markets. The most common process for issuing bonds is through underwriting. When a bond issue is underwritten, one or more securities firms or banks, forming a syndicate, buy the entire issue of bonds from the issuer and re-sell them to investors. The security firm takes the risk of being unable to sell on the issue to end investors. Primary issuance is arranged by book runners who arrange the bond issue, have direct contact with investors and act as advisers to the bond issuer in terms of timing and price of the bond issue. The book runners' willingness to underwrite must be discussed prior to any decision on the terms of the bond issue as there may be limited demand for the bonds.

In contrast, government bonds are usually issued in an auction. In some cases both members of the public and banks may bid for bonds. In other cases only market makers may bid for bonds. The overall rate of return on the bond depends on both the terms of the bond and the price paid. The terms of the bond, such as the coupon, are fixed in advance and the price is determined by the market.

5. LONG TERM LOANS

Loans of less than three years are typically considered short-term while loans greater than three years are fall into the long-term category. Long-term loans are normally for a period of 10 years although some may be approved for up to 20 years.

Long-term loans of greater than three years require a more detailed analysis by the lending institution. As with short-term loans the same criteria of a good credit history coupled with a successful business balance sheet and financial statement will make the approval process quicker and easier.

A long-term loan will be a secured loan, and sufficient collateral must exist and will definitely be the basis for approval. Long-term loans are appropriate for large acquisitions or purchases of equipment that has an extended life.

Interest on short and long-term loans varies widely. Typically the interest rate will be 1-3% above the prime lending rate and it is obvious that the shorter the period of the loan the less the interest expense will be.

Additionally the value of any collateral that might be involved in securing the loan could affect the interest rate that will be charged. Banks and lending institution develop their policies based on the risk involved in approving a loan. Loans for short terms generally have less risk associated with them than longer term loans.

6. LEASING

A lease transaction is a commercial arrangement whereby an equipment owner or Manufacturer conveys to the equipment user the right to use the equipment in return for a rental.

In other words, lease is a contract between the owner of an asset (the lessor) and its user (the lessee) for the right to use the asset during a specified period in return for a mutually agreed periodic payment (the lease rentals). The important feature of a lease contract is separation of the ownership of the asset from its usage.

Lease agreements are basically of two types. They are

(a) Financial lease and

(b) Operating lease.

The other variations in lease agreements are

(c) Sale and lease back (d) Leveraged leasing and (e) Direct leasing.

Problems & Solutions

1. A firm proposes to lease on asset of Rs. 20 lakhs. The annual, end-of-the year, lease rentals will be Rs. 5 lakh for 5 years. The firm is not in a position to pay tax for next 5 years. The depreciation rate (WDV) is 25% p.a. The lesser's marginal tax rate is 35%. Calculate the net present value of lease to the lessee and lessor. How can both benefit from the deal? Show your computations. Assume that the lessee's post –tax borrowing rate is 14%. (May/June 2013)

Solution

Step 1: Calculation of Depreciation (WDV method)

Years	Amount (Rs.)	Depreciation @ 25% (Rs.)
1	20,00,000	5,00,000
2	15,00,000	3,75,000
3	11,25,000	2,81,250
4	8,43,750	2,10,937
5	6,32,813	1,58,203

Years	Lease rent (Rs.)	Depreciation @ 25% WDV	Tax @35 %	Net cash flows	Discount factor @ 14%	Total PV
1	5,00,000	5,00,000	-	5,00,000	.877	4,38,500
2	5,00,000	3,75,000	43,750	81,250	.769	62,481
3	5,00,000	2,81,250	76,562	1,42,188	.675	95,976
4	5,00,000	2,10,937	1,01,172	1,87,891	.592	1,11,231
5	5,00,000	1,58,203	1,19,628	2,22,169	.519	1,15,305
					3.432	**8,23,493**

2. ABC Company Ltd., is faced with two options as under in respect of acquisition of an asset valued Rs. 1,00,000. Either to acquire the asset directly by taking a Bank of Rs. 100,000 of asset value for 5 years end installments at an interest of 15% (or)

To Lease in the asset at yearly rentals of Rs. 320 per Rs. 1000 of the asset value for 5 years payable at year end. (May/June 2008)

The following additional information's are available

1) The rate of depreciation of the asset is 15% WDV
2) The Company has an effective tax of 50%
3) The company employs a discounting rate of 16%

You are to indicate in your report which option is more preferable to the Company.

Solution:

Leasing operation

Lease rent = 32,000

After tax = 32,000(1-50%) = 16,000

Present value after 5 year = 16,000 @16% DF for 5 years, is 3.274

16,000*3.274 = 52,387

Borrow and buy

Year	Principal	Interest	Depreciation	Tax
1	20,000	15,000	15,000	15,000
2	20,000	12,000	12,750	13,375
3	20,000	9,000	10,838	9,919
4	20,000	6,000	9,212	7,830
5	20,000	3,000	52,200	27,600

Net Cash flows

Years	Cash flows	DF	Present value
1	20,000.00	0.862	17,240.00
2	19,625.00	0.743	14,581.38
3	19,081.00	0.64	12,211.84
4	18,394.00	0.552	10,153.49
5		0.476	-
	Net cash flows		4,186.70

In leasing option, cash flow is lowest, it will be selected.

QUESTION BANK
UNIT – I

PART A

1. Name the objective of Conventional and modern approaches in financial management. Distinguish them on two aspects. (May / June 2007), (May/June 2008),

There are two approaches of financial management:

Conventional approach – Profit maximization

Modern approach – Wealth maximization

2. A Rs.10,000 per value bond bearing a coupon rate of 12% will mature after 5 years. What is the value of bond, if the discount rate is 15%?(May / June 2007)

V = 1200(PVIFA 15% 5 Years) + 10,000(PVIF 15%, 5)

= 1,200(3.352) + 10,000(0.497) = Rs. 8,992.

3. What is meant by Time Value of Money? (Nov/Dec 2007), (Nov/Dec 2008), (May/June 2011), (May/June 2012), (May/June 2013), (Nov/Dec 2013),

The value of money changes over time. A rupee today is more valued than a rupee a year hence; because of inflationary tendencies money will have lost its purchasing power.

4. What is Rule of 72? (May/June 2008)

Rule 72, helps us to find, how many years principal get doubled in Years = 72/I (i= Interest rate)

5. What are the modern view(s) on financial management? (Nov/Dec 2008)

The scope of financial management is not limited to the procurement of funds. It includes efficient utilization as well.

6. State any four functions of a finance manager in an organization(May/June 2009)

Functions of a finance manager in an organization are :

* Procurement of Funds.
* Efficient utilization of Funds
* Increasing Profitability
* Maximizing Firm's Value

7. Return on market portfolio has a standard deviation of 20% and covariance between the returns on the market portfolio and that of security A is 800. (May/ June 2009)

Bate of Security A

$$= \frac{\text{Covariance between the returns}}{\sigma^2}$$

$$= \frac{800}{(20)2} \quad \frac{800}{400} = 2$$

8. What are the goal of financial management? (Nov/Dec 2009)

The goals of financial management are :

* Profit Maximization
* Wealth Maximization

9. Define Future Value of Money. (Nov/Dec 2009)

The amount to be invested today at a given interest rate over a specified period to equal the future value of money.

10. How is the term finance more comprehensive than money management? (May/June 2010)

Financial management is a managerial activity, which is concerned with the planning and controlling of the firms financial resources

11. How would you have a fresh look at the finance function in business? (May/June 2010)

a. Profit Maximization
b. Maximizing Earning Per Share
c. Shareholders Wealth Maximization

12. State and brief any two activities of the financial manager. (Nov/Dec 2010)

d. Raising Funds
e. Allocation of funds
f. Profit Planning
g. Understanding Capital Market

13. Applying CAPM , compute the expected market returns, using the following data : risk free returns 7.75% . Beta=2, expected returns of investors=16%.

SOLUTION: To be discussed in class (Nov/Dec 2010)

14. What is meant by Yield to Maturity? (May/June 2011)

The rate of return anticipated on a bond if it is held until the maturity date. YTM is considered a long-term bond yield expressed as an annual rate. The calculation of YTM takes into account the current market price, par value, coupon interest rate and time to maturity. It is also assumed that all coupons are reinvested at the same rate. Sometimes this is simply referred to as "yield" for short.

15. Define and explain financial assets? (Nov/Dec 2011)

Financial Assets include cash and bank accounts plus securities and investment accounts that can be readily converted into cash. Excluded are illiquid physical assets such as real estate, automobiles, art, jewelry, furniture, collectibles, etc., which are included in calculations of Net Worth.

16. What is effective rate of interest? (Nov/Dec 2011)

The effective interest rate is the true rate of interest earned. It could also be referred to as the market interest rate, the yield to maturity, the discount rate, the internal rate of return, the annual percentage rate (APR), and the targeted or required interest rate.

17. What are the basic financial decisions? (May/June 2012)

-Investment decision, -Financing decision, -Dividend decision,

18. What is financial management? (May/June 2012), (May/June 2014)

Financial management deals with the study of procuring funds and its effective and judicious utilization, in terms of the overall objectives of the firm, and expectations of the providers of funds.

19. What is a bond?(May/June 2012)

- Public authorities, credit institutions, companies and supranational institutions in the primary markets, issue bonds. The most common process for issuing bonds is through underwriting.
- When a bond issue is underwritten, one or more securities firms or banks, forming a syndicate, buy the entire issue of bonds from the issuer and re-sell them to investors.

20. What is the scope of Financial Management?(May/June 2013)

1. Procurement of Short term and long term funds from financial institutions.

2. Mobilization of funds through financial instruments such as equity shares, preference shares, debentures shares, bonds, notes and so fourth.

3. Compliance with legal and regulatory provisions relating to funds procurement, use and distribution as well as coordination of the finance function with accounting function.

21. Current normal P/E = 15/1, Current earnings per share Rs.1.20, Find out the current intrinsic value? (May/June 2013) Answer : 1.2*15 = 18.

PART- B (5*16 = 80 MARKS)

1. List and discuss the various functions of finance manager in an organization. **(May / June 2007), (may/June 2010), (MAY/JUNE 2012)**

2. A patent has been purchased for Rs.17,50,000 has a remaining life of 13 years ad Rs.2,50,000 salvage value. It is estimated that the patent will generate operating revenues Rs.3,50.000 per year through out its life. Operating cost will be Rs.80,000 per year from year 2 to 13. Using an interest rate of 12% p.a. find the present values of this investment. **(May/June 2007)**

3. What are the objectives of Financial Management? (Nov/Dec2007) **(May / June 2007), (Nov/Dec 2013)**

4. The required rate of return on a portfolio with beta of 1.2 is 18% and the risk-free is 6%. According to CAPM:

3. What is the expected rate of return on the market portfolio?
4. A stock, say delta, with beta of 1.5, sells for Rs.50, one year from now it is expected to yield a dividend income of Rs.6. What price do investors expect after one year? (May/June 2007)

5. What are the main features of Financial Management? Explain. **(Nov/Dec 2007)**

6.On 31st December 1980, the balance sheet of a limited company disclosed the following position: **(Nov/Dec 2007)**

Balance Sheet as on 31.12.1980

Equity Share Capital (40,000 equity shares of Rs.10 each fully paid)	4,00,000	Goodwill	40,000
		Fixed Assets	5,00,000
General reserve	90,000	Current assets	2,00,000
P/L account	20,000		
5% Debentures	1,00,000		
Current Liabilities	1,30,000		
	7,40,000		7,40,000

On 31st December 1970, the fixed assets were independently valued at Rs.5,50,000 and the good will at Rs. 50,000. The net profits for the last three years were as under

1968	Rs.51,600
1969	Rs.52,000
1970	Rs.51,650

Of which 20% was placed to reserve, this proportion being considered reasonable in the industry in which this company is engaged and where a fair return is estimated at the rate of 10%. Calculate the value of the company's share by a

c) The assets method and
d) The yield method

7. Attempt a short on the responsibility of financial management. **(Nov/Dec 2007)**

8. Explain the scope of financial management in any organization of your choice.(**Nov/Dec 2008),**

9. A share is quoted is Rs.60. An investor expects the company to pay a dividend of Rs.3 per share, one year from now. The expected price one year from now is Rs.78.50

Share price at present = Rs.60
Expected Dividend = Rs.3 per share
Expected share price one year from now = Rs.78.50

i. What is the expected dividend yield, the rate of price change and holding period yield?

PO = D1 / 1+ke+P1 / 1+ke
60 = 3 / 1+ke + 78.50 / 1+ke
61 = 81.50 / 1+ke
60 + 60 ke = 81.50
Ke = 35.83%

iii. If the beta of the share is 1.5,the risk free rate is 6 percent and the market risk premium is 10 percent, what is the required rate of return?

Risk Free Rate = Rf = 6%
Market Risk Premium = Rm = 10%
Beta of the share =?= 105
Required Rate of return =Ri= Rf + (Rm – Rf)?
= 6+(10-6) 1.5
= 6+6 = 12%

10. (i) What is security market line'? How does it differ from capital market line? **(May/June 2009)**

10. (ii) Explain in detail the importance of correlation between assets returns in a Portfolio. **(May/June 2009)**

11. Using the following details, calculate, i) expected rate of returns of portfolio in each using capital asset pricing model, ii) average return of portfolio. **(May/June 2009)**

Investment in	Initial Price	Dividends	Market Price at the end of the	Beta factor year
	Rs.	Rs.	Rs.	
A) Equity share of L&T Ltd.	250	20	500	0.8
H&T Ltd	350	20	600	0.7
P&G Ltd.	450	20	1350	0.5
B) 14% GOI Bonds risk free rate of return 14%	1000		1005	0.99

12. "The goal of profit maximization does not provide an operationally useful criterion" – Explain. (Nov/Dec 2009)

13. i). Generally individuals show a time preference for money. Give reasons for such a preference. (May/June 2009)

14. 'Financial management is the appendage of the finance function'-comment, (May/June 2010),

Explain the three major decisions in financial management. "Wealth maximization is the sole objective of financial management" – discuss. (Nov/Dec 2011), (May/June 2008)

15.What is annuity? Explain with an example explain how can future value of an annuity be determined? (Nov/Dec 2010)

16. MM ltd ' s share price is at present Rs.120. after 6 months; its price will be either Rs.150 with probability of 0.8 or Rs.110 with remaining probability. An European call option exists with an exercise price of Rs.130.as a call option writer, if you intend to create a perfectly hedged position, what will you do? What will be the value of your hedged position in each of the possibilities stated? **(Nov/Dec 2010)**

SOLUTION: To be discussed in class

17.(i). With reference to bond valuation explain with examples. **(Nov/Dec 2010)**

17.(ii) The bonds of ABC Ltd., currently sell at Rs.115.they have a 11% coupon rate and 100 per value .The interest is paid annually and the bonds have 18 years to maturity. Compute the yield to maturity. (Nov/Dec 2010)

SOLUTION: To be discussed in class

18. Rajesh purchased a bond with a face value of Rs.1,000, a 10% coupon rate and 4 years to maturity .The bond makes annual interest payments, the first to be received one year form today. Rajesh paid Rs.1,032.40 for the bond. Calculate 1. What is the bond's yield to maturity? 2. If the

bond can be called two years from now at a price of Rs. 1,100. What is its yield to call? **(To be discussed in the class) (May/June 2011)**

19. What is the relationship between effective rate of interest and nominal rate of interest? (May/June 2011)

19. What is a put option? Explain how the intrinsic and the time value of a put option are estimated? What is meant by time value of a call option? Describe the factors influencing the time value of an option. (May/June 2011)

20. Best Ltd has a Rs 1000 per value bond, carrying coupon rate of 12% and maturing after 7 years. The market value of this bond is Rs. 750. What is the Yield to Maturity of this bond? What will be the yield to Maturity of this bond? What will be the Yield to Maturity if the market price is Rs. 1050? **(Nov/Dec 2011)**

Solution: To be discusses in class

21. "Financial management is nothing but managerial decision making on asset mix, capital mix and profit allocation" – Explain. (May/June 2012)

22. (i)." Risk analysis is an essential features of investment decision making process" – Discuss. (May/June 2012)

22.(ii). What are the major risk factors and how will you control them? (May/June 2012),

23. What happens to the value of perpetuity when interest rates increase? What happens when interest rate decrease?(May/June 2013)

UNIT-II

PART A

1. What is 'pay-back period' method? List the two important limitations of this approach. (May / June 2007), (Nov/Dec 2013)

The term pay back refers to the period in which the project will generate the necessary cash to recover the initial investment. It is a traditional and simple method of evaluating the project.

$$\text{Pay back period} = \frac{\text{Original investment}}{\text{Average Annual cash inflows}}$$

Limitations of PB

1. It does not recognize the time value of money
2. It does not consider the profitability of economic life of the project.
3. It is based on the principle of 'rule of thumb'

2. List the phases of capital budgeting process. (May / June 2007)

Capital budgeting process has the following steps:

-Project generation, -Project evaluation, -Project selection, -Project execution

3. Why is Capital budgeting so important to Management? (Nov / Dec 2007), (Nov/Dec 2008)

- Capital budgeting is so important because of the following:
- Involve massive investment of resources
- Are not easily reversible
- Have long-term implications for the firm
- Involve uncertainty and risk for the firm

4. What are the merits of pay-back period method?(Nov / Dec 2007)

- The amount of time needed to recover the initial investment
- The number of years it takes including a fraction of the year to recover initial investment is called payback period
- To compute payback period, keep adding the cash flows till the sum equals initial investment
- Simplicity is the main benefit, but suffers from drawbacks

5. What are the components of Capital Budgeting?(May /June 2008)

i. Cash outflows ii. Cash inflows iii. Cost of capital

6. What is capital rationing? (May/June 2010), (Nov/Dec 2011), (May/June 2011), (May/June 2012), (Nov/Dec 2013)

Capital rationing is a situation where a constraint or budget is placed on the total size of capital expenditures during a particular period. Often firms draw up their capital budget under the assumption that the availability of financial resources is limited.

Capital rationing refers to a situation where a company cannot take all acceptable projects it has identified because of shortage of capital. Under this situation a decision maker is compelled to reject some of the viable projects because of shortage of funds

$K_r = (Ea(1-TR/2))/P$

Were K_r = Cost of retained earnings

Ea = Anticipated earnings

P = Current market price

TR= Tax rate

9. What is internal rate of return? (Nov/Dec 2008)

It is one the important discounted cash flow technique of evaluation of capital budgeting proposals is known as IRR technique. The IRR of a proposal is defined as the discount rate, which produces a zero NPV i.e., the IRR is the discount rate which will quite the present value of cash inflows with the present value of cash outflow.

10. Brief with a simple illustration, the profitability index method of capital budgeting. (May/June 2009)

$$\text{Profitability Index} = \frac{\text{Total Present Value of Cash inflows}}{\text{Total Present Value of Cash outflows}} \times 100$$

The higher the profitability index, the more desirable is the investment.

11. Suppose the dividend per share of firm is expected to be Re.1 per share next year and is expected to grow at 6% per year perpetually. Determine the cost of equity capital, assuming the market price per share is Rs.25. **(May/June 2009)**

$$\text{Cost of Equity Capital} = k_e = \frac{D_1}{P_0} + g$$

$$= \frac{1}{25} + 6\% = 10\%$$

12. What is 'NPV'? (Nov/Dec 2009)

NPV is Net Present Value. The NPV may be described as the summation of the present values of operating cash inflows minus the summation of present values of the cash outflows. The present value is computed using cost of capital as a discount rate. The project will be accepted in case the NPV is positive.

13.What is risk free rate? (Nov/Dec 2009)

Risk free rate is the rate at which the future cash inflows are discounted assuming there is no risk from the project. This implies that it takes into account only the time factor in discounting.

14. What are the components of a capital expenditure management programme? (May/June 2010)

-Identification of potential investment opportunities, -Assembling of investment proposals, -Decision Making, -Preparation of capital budget and appropriations, -Implementation, -Performance review

14. State and distinguish the two ways of defining benefit-cost ratio. (Nov/Dec 2010)

Cost–benefit analysis (CBA), sometimes called **benefit–cost analysis** (BCA), is a systematic process for calculating and comparing benefits and costs of a project, decision or government policy (hereafter, "project").

CBA has two purposes:

1. To determine if it is a sound investment/decision (justification/feasibility),
2. To provide a basis for comparing projects.

It involves comparing the total expected cost of each option against the total expected benefits, to see whether the benefits outweigh the costs, and by how much.[1]

CBA is related to, but distinct from cost-effectiveness analysis. In CBA, benefits and costs are expressed in money terms, and are adjusted for the time value of money, so that all flows of benefits and flows of project costs over time (which tend to occur at different points in time) are expressed on a common basis in terms of their "net present value." Closely related, but slightly different, formal techniques include cost-effectiveness analysis, cost–utility analysis, economic impact analysis, fiscal impact analysis and Social return on investment(SROI) analysis

15. How the cost of a specific source of finance is calculated? Brief with an example. (Nov/Dec 2010)

Cost of capital is the minimum rate of return that a company must earn on its investments in order to satisfy the various categories of investors who have made investments in the form of shares, debentures or bonds Assuming that a firm pays tax at 50%, after tax cost of capital of a ten-year, 8% Rs.1,000 par bond sold at Rs. 950 less 4% underwriting commission will be

Cost of debt/bond = {[C + (P-M)/N] (1-TR)} / [(M+P)/2]

Where: C- Coupon amount; **P –** Par value; **M –** Realized value; **N** – period **TR –** Tax rate

= {[80 + (1,000 – 912)/10] (1-0.5)} / [(912 + 1,000) / 2]

= 4.6%

16. What does the probability index signify?(May/June 2011)

It is a ratio of the present value of the net cash benefits to the present value of the net cash outlay. The higher the PI, the greater the return. Any project with a PI higher than ONE is acceptable since benefits exceed outlay. Projects with PI less than ONE are rejected.

17. Explain operating risk and financial risk? (Nov/Dec 2011)

5) **Operating Risk:** It refers to the risk of the inability of the firm to cover its operating costs. This cost is assumed to be unchanged i.e. the firm's acceptance of a given project does not affect its ability to meet operating costs.
6) **Financial Risk:** It refers to the risk of the inability of the firm to cover the required financial obligations (interests, lease payments or preference dividend) – is assumed to be unchanged.

18. List down the objectives of cost of capital. (May/June 2012)

- It provides a financial yardstick for making capital expenditure decisions
- The cost of capital of various sources helps in designing the capital structure
- It helps to evaluate the financial performance of a company.
- It serves a basis for several other financial decisions such as leasing, hire- purchase, working capital, dividend policy and issue of rights shares.

19. What are the objectives of capital budgeting? (May/June 2012)

(1) To ensure the selection of the possible profitable capital projects.

(2) To ensure the effective control of capital expenditure in order to achieve by forecasting the long-term financial requirements.

(3) To make estimation of capital expenditure during the budget period and to see that the benefits and costs may be measured in terms of cash flow.

(4) Determining the required quantum takes place as per authorization and sanctions.

(5) To facilitate co-ordination of inter-departmental project funds among the competing capital projects.

(6) To ensure maximization of profit by allocating the available investible.

20. What do you mean by weighted average cost of capital? (May/June 2012)

WACC is the weighted average of the costs of different sources of finance. It is also known as composite cost of capital or overall cost of capital.

21. How do you arrive at IRR? (May/June 2008)

The IRR is the discount rate at which the NPV for a project equals zero. This rate means that the present value of the cash inflows for the project would equal the present value of its outflows.

- The IRR is the break-even discount rate
- The IRR is found by trial and error.

$$\sum_{t=1}^{n} C_1/(I+r)^t - I_0 = 0$$

where r = IRR

IRR of an annuity:

$Q(n,r) = r_0 / C$

Where : (n, r) is the discount factor

I_0 is the initial outlay

C is the uniform annual receipt ($C_1 = C_2 = \ldots Cn$)

22. How do you arrive at cash flows? (May/June 2008)

Cash flows generally referred as the operating income generated by the company during a particular period. Even in accounting principles it is considered as the income and cash flow will be considered as cost. The difference between the two is referred as the profit. The profit so arrived or estimated will reflect real financial strength of the organization which would be considered as base for making capital expenditure decision.

23. In two projects selection, Project 1 is better as per IRR method: Project 2 is better as per NPV method. How do you choose the best Project? And how do you avoid the conflict?(May/June 2008)

NPV and IRR methods are closely related because:

i) Both are time-adjusted measures of profitability, and

ii) Their mathematical formulas are almost identical

So, which method leads to an optimal decision: IRR or NPV ?

a) NPV vs. IRR: Independent projects

Independent project: Selecting one project does not preclude the choosing of the other.

With conventional cash flows(-!+!+) no conflict in decision arises; in this case both NPV and IRR lead to the same accept / reject decisions.

If cash flows are discounted at k1, NPV is positive and IRR >k1 : accept project

If cash flows are discounted at k2, NPV is negative and IRR <k2 : reject the project

Mathematical proof: for a project to be acceptable, the NPV must be positive, i.e.

$$\sum_{t=1}^{n} C_t/(I+k)^t - I_0 > 0 \qquad \sum_{t=1} C_t/(I+k)^t - I_0 > 0$$

similarly for the same project to be acceptable:

$$\sum_{t=1}^{n} C_t/(I+R)^t = I_0$$

where R is the IRR

since the numerators Ct are identical and positive in both instances:

- Implicitly / intuitively R must be greater than k (R>k);
- If NPV = then R=k; the company is indifferent to such a project;
- Hence, IRR and NPV lead to the same decision in this case.

b) **NPV vs IRR : Dependent projects**.

NPV clashes with IRR where mutually exclusive projects exist. NPV and IRR may give conflicting decisions where projects differ in their scale of investment

*Taking an example we can explain the conflicting solution.

24. What is capital budgeting? (Nov/Dec 2013), (Nov/Dec 2014)

Capital Budgeting is the process by which the firm decides which long-term investments to make. Capital Budgeting projects, i.e., potential long-term investments, are expected to

generate cash flows over several years. The decision to accept or reject a Capital Budgeting project depends on an analysis of the cash flows generated by the project and its cost.

PART- B (5*16 = 80 MARKS)

1. Discuss three DCF capital budgeting techniques . Distinguish them on two aspects. **(May/June 2007),**

2. The shares of a chemical company are selling at Rs. 20 per share. The firm had paid dividend at Rs.2 per share last year the estimated growth of the company is approximately 5% per year. Determine the cost of equity capital of the company. Also determine the estimated market price of equity shares if the anticipated growth rate of the firm (1) rises to 8% (2) falls to 3%. (May/June 2007)

3. What is Capital budgeting? Discuss in detail the need and importance of it. Capital Budgeting. **(May/June 2007)**

4. An asset has an initial investment of Rs. 6,00,000 with an anticipated life of 4 years. The estimated net annual cash inflows will be Rs. 1,50,000 , Rs, 2,00,000, Rs. 3,00,000 and Rs, 2,00,000 during the year I, II, III and IV respectively. Calculate the internal rate of return. **(May/June 2007)**

5. From the following information, rank the projects according to their desirability under (i) Pay back period, (ii) Accounting rate of returns and (iii) Net present Value Index method assuming the cost of capital is 10%. **(Nov/Dec 2007)**

Projects	Initial Investment (Rs.)	Annual CIF (Rs.)	Life in years
A	60,000	12,000	15
B	88,000	22,500	22
C	2,150	1,500	3
D	20,500	4,500	10
E	4,25,000	2,25,000	20

You may use the following table for calculation:

Period in Years	3	10	15	20	22
P.V of an annuity of Re.1 pa payable for 'n' years at 10%	2.5918	6.3213	7.7688	8.6466	8.8919

6. The following is the Capital structure of M/S Kurukshetra Earning Works Ltd., (Nov/Dec 2007)

Source of Finance	Amount(Rs)	Projections
Equity share Capital (45,000 shares of Rs. 10 each fully paid)	4,50,000	45%
Retained Earnings	1,50,000	15%
Preference share capital	1,00,000	10%
Debentures	3,00,000	30%
	10,00,000	100%

The firm's after tax component costs of the various sources of funds are as follows:

Equity capital 14%

Preferences share capital 10%

Retained earnings	14%
Debt	4.5%

Calculate the weighted cost of capital

iii) By assigning the book-value as weight and

iv) Market values as weight. Assume the market price of equity shares is Rs. 20 per share.

7.Which Investment is a risky one from the following returns? (May/June 2008)

BHEL	12%	14%	16%	18%	20%
SBI	12%	15%	20%	16%	17%
RIL	15%	21%	23%	20%	16%

8. Discuss the various capital budgeting techniques. (Nov / Dec 2008), (May/June 2010)
Discuss the various methods of evaluating capital expenditure proposals with merits and demerits. (May/June 2011)

9. A company's debentures with face value of Rs.100 bear an 8 percent coupon rate. Debentures of this type currently yield 10 percent.

v) What is the market price of debentures of the company?

Given

Face Value of Debenture = Rs.100
Coupon Rate = 8%
Current Yield = 10%

Market price of debentures of the company

Market Price = INT / (1 + kg) + D / (1+ke)
= 8 / (1+10) + 100 / (1+10)
= 7.27 x 90.90
= Rs.98.17

vi) What would happen to the market price of the debentures if interest rises to 16 percent?

Market Price = INT / (1+ke) + D/(1+ke)
= 16 / (1+10) + 100 / (1+10)
= 14.55 + 90.90
= Rs.105.46

vii) What would be the market price of the debentures if it is assumed that debentures were having a maturity period of 4 years from now (bases on situation (i)? (Nov / Dec 2008)

Market Price = INT / (1+ke) + INT / $(1+ke)^2$ + INT / $(1+ke)^3$ + INT / (1+ke0 ?+D / (1+ke)?
= 8 / (1+10) + 8 / $(1+10)^2$ + 8 / $(1+10)^3$
= +8 / (1+10)? + 100 / (1+10)?
= 7.27 x 6.60 + 6.01 + 5.46 + 68.30
= Rs.93.65

viii) Would you pay Rs.90 to purchase debentures specified in situation (iii) above. Explain.

If market price is Rs.93.65, it is advisable to Pay Rs.90 to purchase debentures

10. A project has the following pattern of cash flows

Year	0	1	2	3	4	5

Cash flow (Rs) -40,00,000 15,00,000 8,00,000 7,50,000 -8,00,000 35,23,000

i).Calculate IRR of the project (ii) with i=8% calculate NPV of the project. (May/June 2009)

11. Enumerate is considering investing in a new products. The following annual information is available. (May/June 2009)

* Cash sales Rs.25 Lakhs
* Credit sales Rs.32 lakhs
* Manufacturing cost of sales, excludes depreciation and includes Rs.75,000 of allocated fixed cost Rs.16 lakhs
* Selling a administrative expenses (includes Rs.5,00,000 of allocated costs) Rs.7 Lakhs
* Loss of contribution on other products Rs.2 Lakhs

Credit sales are collected after a year with a bad debt loss of 2%. The capital equipment costs Rs.30 lakhs and is depreciated at 33 1/3% per annum, written down value method. Working capital investment of Rs.20 lakhs is required.

A long-term debt carrying 14% interest rate will increase by Rs.20 lakhs and a short term bank borrowing carrying 18% rate will increase by Rs.10 lakhs. The corporate tax rate is 50%

Compute the cash flows for four years.

12. ABC Limited is proposing to invest in a project requiring a capital outlay of Rs.50,000. Cost for annual income after depreciation but before tax is as follows :

Year 1 2 3 4 5

Rs.20,000 20,000 16,000 16,000 8,000

Depreciation may be taken at 20% on original cost and taxation at 50% of net income. You are required to evaluate the project according to each of the following method. (May/June 2009)

vi) Pay-back method.
vii) Rate of return on original investment method
viii) Rate of return on average investment method
ix) Discount cash flow method taking cost of capital at 10%
x) Excess present value index.

13. From the following structure of a company, calculate the overall cost of capital, using Book value weights, Market value weights

Equity shares (Rs.10/Share) 45,000 90,000

Retain earnings 15,000 ……..

Preference share capital 10,000 10,000

Debentures 30,000 30,000

The after tax cost of different sources of finance is as follows :

Equity : 14% Preference Share capital : 10%

Retained Earnings : 13% Debentures : 5%, (May/June 2009)

14. Someshwar industries limited is considering is considering the purchase of a new machine which would carry out some operations, at present being performed by hands, the two alternatives models under considerations are complex and shrilex.

	complex	shrilex
Estimated life in years	10	12
Cost of machines	Rs. 600000	Rs.1000000
Estimated savings in scrap p.a.	Rs. 40000	Rs .60000
Additional cost of supervision p.a.	Rs.48000	Rs. 64000

Additional cost of maintenance p.a.	Rs. 28000	Rs. 44000
Cost of indirect material p.a.	Rs.24000	Rs.32000
Estimated savings in wages i) Wages per workers p.a.		
ii) No. of workers p.a. not required	Rs.2400 Rs. 150	Rs.2500 Rs.200

Using method of payback period, suggest which should be purchased. Ignore tax? (May/June 2010)

Solution: To be discussed in class

15. The cash flow streams for two alternatives are shown below: (Nov/Dec 2010)

year	0	1	2	3	4	5	6	7	8	9	10
Cash flow A:	300000	40000	40000	40000	40000	40000	30000	30000	20000	20000	20000
Cash flow B:	210000	80000	60000	80000	60000	80000	60000	40000	40000	40000	40000

Calculate the:

i) Pay back period
ii) Internal rate of returns
iii) Net present value
iv) Profitability index for the two alternatives.

Solution: To be discussed in class

16. Following data is pertaining to AUOM Net operating income Rs.80 million Interest on debt Rs.20 million. Cost of equity 18%, Cost of debt 12% Calculate the average cost of capital. (Nov / Dec 2010)

Solution: To be discussed in class

17. A company is considering which of two mutually exclusive projects it should undertake. As both projects have the same initial outlay and length of life. The company anticipates cost of capital of 10% and the net after cash flows of the projects are as follows:

	Investment	1	2	3	4	5
Project A	2,00,000	35,000	80,000	90,000	75,000	20,000
Project B	2,00,000	2,18,000	10,000	10,000	4,000	3,000
Discount factor @ 10%		0.91	0.83	0.75	0.68	0.62

Calculate the NPV of each project and state, with reasons, which project you would recommend. (To be discussed in the class) (May/June 2011)

18. A company is considering two mutually exclusive projects A and B. Project A involves an outlay of Rs.100 million which will generate an expected cash inflow of Rs. 25 million per year for 6 years. Project B has an outlay of Ks 50 million which will produce an expected ash flow of

Rs. 13 million per year for 6 years. The company's cost of capital is 12% calculate the NPV and IRR of each project. Which method is better and why? (To be discussed in the class) (Nov/Dec 2011)

19. Gulch Ltd has the following book value capital structure:

Equity Capital (10 million shares @ Rs 10)	Rs. 100 Million
Preference Capital, 11% (100000 shares, Rs 100)	10 Million
Retained Earnings	120 Million
Debentures, 13.5% (500000 debentures, Rs100 Par)	50 Million
Term Loans, 12%	80 Million
TOTAL	360 Million

The next expected dividend per share is Rs. 1.50. The dividend per share is expected to grow at 7%. The current market price of a share is Rs. 20. Preference stock redeemable after 10 years, is currently selling for Rs.75 per share. Debentures, redeemable after 6 years, are selling for Rs.80 per debenture. The tax rate for the company is 50%. Calculate the average cost of capital using book value weights and market value weights. (Nov/Dec 2011)

Solution: (To be discussed in the class)

20. A limited company is considering investment in a project requiring a capital of Rs. 2, 00,000. Forecast for annual income after depreciation but before tax is as follows: (MAY/JUNE 2012)

Year	Rs.
1	1,00,000
2	1,00,000
3	80,000
4	80,000
5	40,000

Depreciation may be taken as 20% on original cost and taxation at 40% of the net income. You are required to evaluate the project according to each of the following methods.

(i) pay-back method
(ii) Accounting rate of return on original investment
(iii) Discounted cash flow method taking cost of capital as 10%
(iv) Internal rate of return method

21. From the following capital structure of a company, calculate the overall cost of capital, using
    (i) Book weight
    (ii) Market value weights

Sources	Book value (Rs.)	Market value (Rs.)
Equity share capital (Rs. 10 shares)	45,000	90,000
Retained earnings	15,000	---------
Preference share capital	10,000	10,000
Debentures	30,000	30,000

The after tax cost of different sources of finance is as follows:
Equity share capital – 14%; retained earnings – 13%
Preference share capital – 10%; debentures – 5% . (May/June 2012)

22. Explain the various factors influencing capital expenditure decisions. **(May/June 2012), (May/June 2014),**

Example: To be discussed in the class

23. A Company is considering two mutually exclusive projects. Both require an initial cash outlay of Rs. 10,000 each and have a life of five years. The company's required rate of return is 10% and pays tax at 50 % rate. The projects will be depreciated on a straight line basis. The before taxes cash flow expected to be generated by the projects are as follows:

	Before tax cash flow (Rs.)				
Project 1	2	3	4	5	
A	4000	4000	4000	4000	4000
B	6000	3000	2000	5000	5000

Calculate for each project (i) the payback (ii) The ARR (iii) the NPV (iv) IRR. Which project should be accepted and why? **(May/June 2013)**

24. Sagar Industries is planning to introduce a new product with a projected life of 8 years. The project, to be set up in a backward region, qualifies for one time (as its starting) tax free subsidiary from the government of Rs. 20 lakhs. Initial equipment cost will be needed at the beginning of the third year. At the end of 8 years, the original equipment will have no resale value, but the supplementary equipment can be sold for Rs.1 lakh. A working capital of Rs. 15 lakhs will be needed. The sales volume over the eight years period have been forecasted as follows:

Years	Units
1	80,000
2	1,20,000
3-5	3,00,000
6-8	2,00,000

A sale price of Rs. 100 per unit is expected and Variable expenses will amount to 40% of sales revenue. Fixed cash operating costs will amount to Rs. 16 lakhs per year. In addition, an extensive advertising campaign will be implemented, requiring annual outlays as follows:

Years	Rs. (in lakhs)
1	30
2	15
3-5	10
6-8	4

The company is subject to 50% tax rate and considers 12% to be an appropriate after –Tax cost of capital for this project. The company follows the straight line method of depreciation. Should the project be accepted? Assume that the company has enough income from its existing products. (May/June 2008)

UNIT-III

PART A(`10*2=20 MARKS)

1. State and brief any four factors which are relevant for determining the payout ratio. (May / June 2007)

-Fund requirement, -Liquidity, -Access to external source of financing, -Shareholders preference, -Control etc.,

2. List out the different form of Dividend Policies? (Nov/Dec 2007), (May/June 2014)

Dividend Practices

1. Constant dividend per share, 2. Constant percentage of net earnings, 3. Small constant dividend per share plus extra dividend, 4. Dividend as fixed percentage of market value.

Forms of dividend

1. Scrip dividend – Transferable note with or without interest-weak form of company, 2.Bond dividend- or Notes- long term, 3. Property dividend, 4.Cash dividend, 5.Stock dividend(Bonus shares).

3. PQR & Co., has issued 1000 equity shares of Rs. 100 each as fully paid. It has earned a profit of Rs. 10,000 after tax. The Market price of these shares is Rs. 160 per share. Find out the cost of equity capital. (Nov/Dec 2007)

Cost of Equity = D/MP *100 = 10/160*100 = 6.25%

4. What is stock split? (May / June 2007), (May/June 2008), (Nov/Dec 2008), (Nov/Dec 2009), (May/June 2009) (Nov/Dec 2010), (Nov/Dec2011), (May/June 2012)

Share split is a method to increase the number of outstanding shares through a proportional reduction in the par value of shares. A share split affects only the par value and the number of outstanding shares, the shareholders total funds remains unchanged.

Reasons for stock split

- To make trading in shares attractive
- To signal the possibility of higher profits in the future
- To give higher dividends to shareholders

E.G. a company with 100 shares of stock priced at Rs.50 per share. The market capitalization is 100 × Rs.50, or Rs.5000. The company splits its stock 2-for-1. There are now 200 shares of stock and each shareholder holds twice as many shares. The price of each share is adjusted to Rs.25. The market capitalization is 200 × Rs.25 = Rs.5000, the same as before the split

5. What is trading on equity? (May/June 2008), (Nov/Dec 2009)

Trading on equity means to raise fixed cost capital (borrowed capital and preference share capital) on the basis of equity share capital so as to increasing the income of equity shareholders.

6. What is 'indifference point'?(May/June 2009)

Indifference point refers to the level of EBIT at which Earnings Per Share (EPS) or return on share capital is equal for different combinations of debt and equity. That is, at this level of EBDT, whatever is the debt-equity mix, the EPS remains uncharged.

7. What is 'dividend payout ratio'? Brief with a simple illustration (May/June 2009)

Dividend Payout Ratio shows that the percentage share of net earnings distributed to the share holders as dividends. It is calculated as follows :

Dividend per share

Dividend Payout Ratio = $\frac{\text{Dividend per share}}{\text{Earning per share}}$

8. State the advantage of trading on equity? (May/June 2010)

It is the use of long term fixed interest bearing debt and Preference shares along with equity share capital. The use of long-term debt increases and magnifies the EPS if the firm yields a return higher than the cost of debt. This is positive leverage. However, if the firm yields a lower return than the cost of debt, it is adverse leverage. EPS also increases with the use of preference share capital also, but due to the fact that interest is allowed to be deducted while computing the tax, the leverage impact of debt is more.

9. What you mean by an optimal capital structure? (May/June 2010), (May/June 2011), (May/June 2012), (Nov/Dec 2013)

The optimum capital structure may be defined as "that capital structure or combination of debt and equity that leads to the maximum value of the firm". Optimal capital structure maximize the value of the company and hence the wealth of its owners and minimizes the company's cost of capital.

10.Distinguish debt-equity ratio and interest coverage ratio on two aspects. (Nov/Dec 2010)

a. Debt – Equity ratio

Debt ratio = (Debt / Equity)

b. Interest cover ratio

Interest cover = PBIT / Interest charges

Note: preference dividend is excluded from interest charges

11. What are the different types of Dividend policy?(May/June 2011)

a. Stable Dividend Policy, -b. Fluctuating Dividend Policy, -c. Small Constant Dividend per Share plus Extra Dividend.

Forms of dividend:-

1. Cash dividend, 2. Bond dividend, 3. Property dividend, 4. Stock dividend

12. What is arbitrage? Give an example. (Nov/Dec 2011)

Arbitrage is the practice of taking advantage of a price difference between two or more markets: striking a combination of matching deals that capitalize upon the imbalance, the profit being the difference between the market prices. When used by academics, an arbitrage is a transaction that involves no negative cash flow at any probabilistic or temporal state and a positive cash flow in at least one state; in simple terms, it is the possibility of a risk-free profit at zero cost

13. What do you mean by stable dividend?(May/June 2012)

The term stability of dividends means consistency in the payment of dividends. It refers to regular payment of a certain minimum amount as dividend year after year. Even if the company's earnings fluctuate from year to year, its dividend should not. This is because the shareholders generally value stable dividends more than fluctuating ones.

Stable dividend can be in the form of:

1. Constant dividend per share

2. Constant percentage

3. Stable rupee dividend plus extra dividend

14. Define the concept of dividend. (May/June 2012)

Dividend refers to that part of the earnings (profits) of a company which is distributed to shareholders.

15. What do you mean by financial leverage? (Nov/Dec 2013)

Financial Leverage is a leverage created with the help of debt component in the capital structure of a company. Higher the debt, higher would be the financial leverage because with higher debt comes the higher amount of interest that needs to be paid.

16. Explain the concept of script dividend.(May /June 2013)

It is the issue of additional shares by a company to shareholders in lieu of a dividend. The shares have an equivalent cash value to the dividend. No dealing charges or stamp duty is payable on the issue of the new shares.

17. What is composite leverage?(May/June 2014)

18. What is reverse split? (May/June 2014)

corporate action in which a company reduces the total number of its outstanding shares. A reverse stock split involves the company dividing its current shares by a number such as 5 or 10, which would be called a 1-for-5 or 1-for-10 split, respectively. A reverse stock split is the opposite of a conventional (forward) stock split, which increases the number of shares outstanding. Similar to a forward stock split, the reverse split does not add any real value to the company. But since the motivation for a reverse split is very different from that for a forward split, the stock's price moves after a reverse and forward split may be quite divergent. A reverse stock split is also known as a stock consolidation or share rollback.

PART- B (5*16 = 80 MARKS)

1. Explain in detail the impact of financial leverage on 'earnings –per-share' (May/June 2007)
2. A firm has sales of Rs.75,00,000 variable cost of Rs.42,00,000 and fixed cost of Rs.6,00,000. It has a debt of Rs.45,00,000 at 9% and equity of Rs. 55,00,000. Calculate operating, financial and combined leverage of them. Also calculate the new EBIT, if the sales drop to Rs. 50,00,000. (May/June 2007)
3. Explain Modigliani Miller approach on cost of capital.(May/ June 2007)
4. Discuss in detail the legal and procedural aspects of dividend payments. (May/ June 2007)
5. Explain the considerations involved in evolving a balanced capital structure of a corporation. (Nov/Dec 2007), (May/June 2012)
6. What are the various factors influencing Dividend Policy? Explain. (Nov/Dec 2007), (May/June 2009), (May/June 2012)

7. Firms X and Y are identical except that firm 'X' is not leveraged while firm 'Y' is leveraged. The following data relate to them: (Nov/Dec 2007)

	Firm 'X'	Firm 'Y
Assets	5,00,000	5,00,000
Debt Capital	0	2,50,000
Equity share capital		(9%Interest)
(50,000 shares of Rs. 10 each)	5,00,000	2,50,000
		(25,000 shares of Rs.10 each)
Rate of return on assets	20%	20%

Calculate EPS for both Firms, assuming a tax-rate of 50%. Will it be advantageous to Firm 'y' to raise the level of debt capital to 75%?

8. What are the different types of Dividend Policy? (May/June 2008)

9. Determine the market Value of equity shares of the company from the following information as per Walter's model. **(May/June 2008)**

Earnings of the company Rs. 5, 00,000

Dividend paid	Rs. 3,00,000
Number of shares outstanding	Rs. 1,00,000
Price earnings ratio	8
Rate of return on investment	15%
Cost of capital	13.2%

10. A companies Capital structure consist of the Following: **(May/June 2008)**

Equity share capital of Rs. 100 each	Rs. 20 Lakhs
Retained Earnings	Rs. 10 Lakhs
9% Preference shares	Rs. 12 Lakhs
7% Debentures	Rs. 8 Lakhs
	Rs. 50 lakhs

The company earns 12% on its capital. The income tax rate is 50% The company requires a sum of Rs. 25 lakhs to finance its expansion programme for which following alternatives are available to it.

iv) Issue of 20,000 equity shares at a premium of Rs. 25 per share
v) Issue of 10% preferences shares
vi) Issue of 8% debentures

It is estimated that the P/E rations in the cases of equity, preference and debenture financing would be 21.4, 17 and 15.7 respectively. Which of the three financing alternatives would you recommend and why?

11. Why must the finance manager keep in mind the degree of financial leverage in evaluating financing plans? When does leverage become favorable? (Nov/Dec 2008)

12. What are the practical considerations in formulating the dividend policy? (Nov/Dec 2008)

13. Write short notes on forms of dividends.(Nov/Dec 2008)

14. ABC Ltd. Provides following details :

Profit	3,00,000
Less : Interest on debentures	60,000
Earnings before taxes	2,40,000
Less : taxes @ 35%	84,000
Earnings after taxes	1,56,000
No. of equity shares @ Rs.10 each	40,000
Earnings per share	3.9
Market price of share (Rs)	39
P/E ratio	10

The company has undistributed reserves, Rs.6,00,000. It needs Rs.2,00,000 for expansion which will earn the same rates as funds already employed. The debt equity ratio higher than 35% will push the P/E Ratio down to 8 and raise the interest rate on additional amount borrowed to 14%. Calculate the price of equity share (1) If the additional funds are raised s debt; (2) If the amount is raised by equity shares at current market price.

15. The Evergreen company has the choice in raising an additional sum of Rs.50 Lakhs either by the sale of 10% debentures or by issue of additional equity shares Rs.50 per share. The capital structure of the company consists of 10 lakhs ordinary shares and not debt. At what level of EBIT after the new capital is acquired, would EPS be the same whether new funds are raised either by issuing ordinary shares or by issuing debentures? Also determine the level of EBIT at

which uncommitted EPS (UEPS) would be the same, if sinking fund obligation amount to Rs.5 Lakhs per year. Assume a 50% tax rate. Discuss the relevance of this calculation and also verify your results. (May/June 2009)

16. Calculate financial leverage and operating leverage under situations A and B financial plans I and II respectively from the following relation to the operations and capital structure of ABC ltd. (May/June 2010)

Installed capacity	1000 units
Actual production and sales	800 units
Selling price per unit	Rs. 20
Variable cost per unit	Rs. 15
Fixed cost: situation-A	Rs.800
Situation-B	Rs.1500

Capital structure:

	Financial plan	
	I	II
Equity capital	Rs. 5000	Rs. 7000
Debt	Rs. 5000	Rs. 2000

SOLUTION: To be discussed in class

17. Explain the approach of weighted average cost of capital and state its limitations? (May/June 2010)

18. How to measure the degree of operating, financial leverage? Illustrate with an example. (Nov/Dec 2010)

19. Firms A and B are similar except that A is unlevered, while B has Rs. 200000 of 5% debenture outstanding. Assume that the tax rate is 40%. NOI is Rs. 40000 and the cost of equity is 10% . (Nov/Dec 2010)

(i) Calculate the value of the firm, if the M-M assumptions are met.

(ii) Suppose V_B = Rs. 3,60,000, according to M-M ado these represent equilibrium values?

(iii) How will equilibrium be set? Explain.

SOLUTION: To be discussed in class

20. Discuss the various factors influencing the capital structures of a company. May/June 2011), (May/June 2012)

21. A firm has sales of Rs. 10,00,000, variable cost of 70%, total costs Rs.9,00,000 and debt of Rs.5,00,000 at 10% rate of interest. Tax rate is 40%. What are the operating and financial leverage and earning after tax (EBIT), how much of a rise in sales would be needed on a percentage basis? (To be discussed in the class) (May/June 2011)

25. A company's present capital structure contains 15,00,00 equity shares and 5,00,000 preferences shares. The firm's current EBIT is Rs.7.2 million. Preference shares carry a dividend of Rs. 122 per share. The earning per share is Rs. 2. The firm is planning to raise Rs. 10 million of external financing. Two financing alternatives are being considered:

(i) Issuing 10,00,000 equity shares for Rs.10 each Issuing debentures for Rs.10 million carrying 15% interest.

Compute the EPS-EBIT indifference point. Which is the best alternative? Solution: (To be discussed in the class) **(Nov/Dec 2011)**

22. What is the difference between a policy of stable dividend payout ratio and a policy of stable dividends or steadily changing dividends? What are the reasons for a firm to choose a specific dividend policy?(Nov/Dec 2011)

23. Explain the impact of various combinations of operating and financial leverage? Which combination is considered to be an ideal situation for a company? (May/June 2012)

24. A company needs Rs.5,00,000 for construction of a new plant. The following three financial plants are feasible:

(i) The company may issue Rs. 50,000 ordinary shares at Rs. 10 per share.

(ii) The company may issue 25,000 ordinary shares at Rs. 10 per share and 2500 debentures of Rs. 100 denomination bearing a 8% rate of interest.

(iii) The company may issue 25,000 ordinary share at Rs. 10 per share and Rs. 2,500 preference share at Rs. 100 per hare bearing a 8% rate of dividend. If the company's earnings before interest and taxes are Rs. 10,000, Rs. 20,000, Rs. 40,000, Rs. 60,000 and Rs. 1,00,000, What are the earnings per share under each of the three financial plans? Which alternative would you recommend and Why? Determine the indifference points by formulating and solving graphically. Assume a corporate tax rate 50%. (May/June 2013)

25. Distinguish between operating and financial leverage. Explain the scope of operating and financial leverage analysis for a financial executive in corporate profit and financial structure. (May/June)

UNIT – IV

PART A (`10*2=20 MARKS)

1. What is 'Commercial paper'? State its two features. (May / June 2007), (May/June 2009) (Nov/Dec 2011) (May/June 2012), (Nov/Dec 2013),

An unsecured, short-term debt instrument issued by a corporation, typically for the financing of accounts receivable, inventories, and short-term liabilities. Maturities on commercial paper rarely are longer than 270 days, and commercial paper usually is issued at a discount to prevailing market interest rates. To help meet their immediate needs for cash, banks and corporations sometimes issue unsecured, short-term debt instruments known as commercial paper. Commercial paper usually matures within a year and is an important part of what's known as the money market.

2. Z & Co. requires 2000 units of an item per year. The purchase price per unit is Rs. 30 the carrying cost of inventory is 25% and the fixed cost per order is Rs.1000. Determine the economic ordering quantity. **(May / June 2007)**

EOQ = $\sqrt{2co/c}$ =$\sqrt{}$(2*1000*2000)/(30*0.25) = 730 units

3. List the three popular methods available for forecasting working capital requirements. **(Nov/ Dec 2007),**

- Cash forecasting method –cash position at the end of the period
- Balance sheet method-based o assets & liability position
- Profit and loss adjustment method

- % of sales method
- Operating cycle method

4. What are the specific advantages of inventory control?(Nov/Dec 2007)

1. Maximize the level of customer service by avoiding under stocking
2. Promote efficiency in production and purchasing by minimizing the cost of providing an adequate level of customer service.

5. What is Factoring?(May/June 2008), (May/June 2011), (Nov/Dec 2011)

Factoring is defined as an agreement in which receivables arising out of sale of goods or services are sold to their 'factor' as a result of which the title to the goods/services represented by the said receivables passes on to the factor. Debt collection services are called factoring services

6. What do you understand by the term "float"?(Nov/Dec 2008)

The cash balance shown by a firm on its books is called the ledger, whereas the balance shown in its bank account is called the available or collected balance. The difference between the available balance and the ledger balance is referred to as the float.

7. What is meant by ABC analysis? (Nov/Dec 2008)

ABC analysis is a selective approach to inventory control which calls for a great concentration on inventory items accounting for the bulk of usage value. This analysis classified the inventors into three categories :

- " Category A representing the most important items, generally consists of 15 to 25 percent of inventory items and accounts for 60 and 75 percent of annual usage value
- " Category B representing the moderate important items, generally consists of 20 to 30 percent of inventory items and accounts for 20 to 30 percent of annual usage value
- " Category C representing the least important items, generally consists of 40 to 60 percent of inventory items and accounts for 10 to 15 percent of annual usage value

8. Present the diagram showing working capital operating cycle and brief (or) cash cycle. (May/June 2008) (May/June 2009), (Nov/Dec 2009), (Nov/Dec 2013)

Time gap between purchase of raw materials into realization of cash, is termed as operating cycle of the business.

The term "Operating Cycle" refers to the length of time necessary to complete the following cycle of events :-Conversion of cash into inventory, -Conversion of inventory into receivables,-Conversion of receivable into cash.

9.Explain the nature of cash.(Nov/Dec 2009)

Cash is the important current assets for the operations of the business. Cash is the basic input needed to keep the business running on a continuous basis. Cash is the money which a firm can disburse immediately without any restriction.

10. State the difference types of working capital?(May/June 2010) (Nov/Dec2012)

(i)Gross working capital (ii) Net working capital (iii) permanent working capital (iv) Variable working capital.

11. How are receivables forecasted?(May/June 2010)

-Calculate former turnovers for receivables, -2. Calculate average turnovers for receivables, -Forecast numbers using formula,-Sales forecasting

12. State the three motives of holding cash in a firm? (Nov/Dec 2010)

-Transaction Motive, -Precautionary Motive, -Speculative motive

13. A manufacturing company is need of 50000 units of a certain types of ball bearing next year. The company spends Rs. 200 to process an order and it incurs Rs .5/p.a/year in holding the bearing in inventory. Calculate economic ordering quantity. (Nov/Dec 2010)

Solution: To be discussed in class

14. State the objective of cash management.(May/June 2011)

1) To make Payment According to Payment Schedule, -(2) To minimize Cash Balance

15. Define the term fixed working capital?(May/June 2012)

Fixed or (permanent) working capital is the minimum amount of working capital required to ensure effective utilization of fixed assets and support the normal operations of the business.

16. What does cash management mean? (May/June 2012)

Cash management refers to a broad area of finance involving the collection, handling, and usage of cash. It involves assessing market liquidity, cash flow, and investments.

17. What is the significance of factoring? (May/June 2013)

Factoring is a financial transaction whereby a business sells its accounts receivable (i.e., invoices) to a third party (called a factor) at a discount in exchange for immediate money with which to finance continued business.

- Factoring could be helpful to any organization that works using records receivables, if they are a wholesaler, maker, merchant, or in the administration business. Organizations that are new, have negative total assets, or are development turned will be helped the most by factoring.
- A practice of factoring helps minor entrepreneurs to tackle their money issues as well as assistance in expanding deals. Minor entrepreneurs can additionally focus on their organizations instead of pursuing their clients for installments and money.
- Factoring practice helps various sorts of minor to medium entrepreneurs if they are a little trucking organization or any makers.

PART- B (5*16 = 80 MARKS)

1. Discuss the various techniques of control of receivables. Also explain 'Aging Schedule'. (May/June 2007)

2. Assuming a year of 50 weeks of 5 days each, calculate the working capital requirements, using the following data, sales 1,50,000 units at Rs.10/piece on credit. Customers are allowed 60 days credit. Production cost include, Rs.5/piece for raw material, Rs. 2/piece for labour and Rs.2.5/piece for other expenses. Production cycle time 20 days. Credit allowed by suppliers 50 days. Cash requirement is one quarter of the remaining current assets. Stock levels raw material, 40 days of supply and finished goods 30 days. Ignore work-in progress. (May/June 2007)

3. What is 'float' in cash management? Explain the different kinds of float in cash management. (May/June 2007)

4. A company has sales of Rs.10,00,000. Average collection period is 50 days, bad debt losses 6% of sales and collection expenses Rs. 10,000. The cost of funds is 15% p.a. the company has two alternative collection programs. (May/June 2007)

	I	II
Average collection period reduced to	40 days	30 days
Bad debt losses reduced to	4% of sales	3% of sales
Collection expenses	Rs.20,000	Rs. 30,000

Evaluate which program is viable

5. A proforma cost sheet of a company provides the following particulars:

Elements of cost	Amount per unit
Raw material	80

Direct Labour	30	
Overheads		60
Total Cost		170
Profits		30
Selling price		200

The following further particulars are available:
Raw materials are in stock on average one month. Materials are in process, on average ½ month. Finished goods are in stock on average one month. Credit allowed by suppliers is one month. Credit allowed to debtors is two months. Lag in payment of wages is 1 ½ weeks. Lag is payment of overhead expenses is one month. One-fourth of the output is sold against cash. Cash on hand and at bank is expected to be Rs. 25,000.
You are required to prepare a statement showing the working capital needed to finance a level of activity of 1,04,000 units of production. You may assume that production is carried on evenly throughout the year, wages and overheads accrue similarly and a time period of 4 weeks is equivalent to a month. (Nov/Dec 2007)
6. What are the objectives of inventory management? Explain. (Nov /Dec 2007).
7. Purchase manager places order each time for a lot of 500 numbers of a particular item. From the available data, the following results are obtained. (May/June 2008)

Inventory carrying cost	-	40%
Ordering Cost per order	-	Rs.600
Cost per unit	-	Rs. 50
Annual Demand	-	1,000

Find out the loss to the organization due to his ordering policy.
8. Calculate the amount of working capital requirement for jolly & Co Limited from the following information:

	(Rs. per Unit)
Raw Materials	160
Direct Labor	60
Overheads	120
Total Cost	340
Profit	60
Selling Price	400

Raw materials are held in stock on average for one month. Materials are in process on an average for half month. Finished goods are in stock on a average for one month. Credit allowed by suppliers is one month and credit allowed to debtors is two months. Time lag in payment of wages is 1.1/2 weeks. Time lag in payment of overhead expenses is one month. One fourth of the finished goods are sold against cash. Cash in hand and at bank is expected to be Rs. 50,000 and expected level of production amounted to 1,04,000 units. You may assume that production is carried on evenly throughout the year, wages and overheads accrue similarly and time period of four weeks is equivalent to a month. (May/June 2008)
9. A proforma cost sheet of a company provides the following particulars :

Particulars	Amount / Unit
Elements of Cost	Rs.
Raw Materials	80
Direct Labour	30
Overheads	60
Total Cost	170
Profit	30
Selling Price	200

The following particulars available :

Raw materials in stock, on average, one month; work in progress (completion stage 50 percent); on average, half a month; finished goods in stock, on average, one month. Credit allowed by suppliers is one month; credit allowed to debtors is two months; average tie lag in payment of wages is 1.5 weeks and one month in overhead expenses; one fourth of the output is sold against cash; cash in hand and at bank is desired to be maintained at Rs.365000. Prepare a statement showing the working capital needed to finance a level of activity of 104000 units of production. You may assume that production is carried on evenly throughout the year and wages and overheads accrue similarly. For calculation purposes; 4 weeks may be taken as equivalent to a month. (Nov/Dec 2008)

10. Krishnan and Co. requires aluminum for its factory. The probability distributes on the daily usage rate and the lead time for procurement are given below. (The distributions are independent) (May/June 2009)

Daily usage rate (in tones)	Probability	Lead time (in days)	Probability
2	0.2	25	0.2
3	0.6	35	0.5
4	0.2	45	0.3

The stock out cost of estimated at Rs.8,000 per tonne and the carrying cost is Rs.2,000 per tonne per year. Calculate (i) optimum level of safety stock and (ii) probability of stock out .

11. Vivek and Co. is a large retailer of consumer durable, 25% of its sales are for cash; the balance is on one month's credit, though at least 20% (of the total sales), end up being collected in the second month following sales. Work out the cash collections expected during April, May and June, using the following data. (May/June 2009)

	Rs. in lakhs
Total sales achieved in	
January	100
February	120
March	160
Total sales estimated in :	
April	200
May	200
June	200

Calculation Cash & Credit Sales & Its Realization.

Month	Total sales	Cash sales	Credit Sales	I Realization	Last Realization
January	100	25	75	55	20
February	120	30	90	72	18
March	160	40	120	96	24

April	200	50	150	120	30
May	200	50	150	120	30
June	200	50	150	120	30

Statement of cash collections Expected :

(Rs. In lakhs)

Particulars	April	May	June
Cash sales	50	50	50
Credit Sales	96	120	120
Credit Sale (Bal)	18	24	30
Total	**164**	**194**	**200**

13. State the significance of working capital. Also state the advantages of adequate working capital and disadvantages of redundant working capital. (May/June 2009)
14. NMK brothers desires to purchase a business and has consulted you and one point on which you are asked to advise them is the average amount of working capital which will be required in the first year. You are given the following estimates and are instructed to add 10 percent to you computed figures to allow contingencies. (May/June 2009)
15. Discuss the factors that determine working capital. (May/June2010), (May/June 2013), (May/June 2011), (Nov/Dec 2011), (May/June 2014),

16. A corporation has presently no safety stock of raw materials of orders 30000 units every 30 days .Due to recent fluctuations in usage, the company finds it necessary to establish an optimal safety stock. The probability distribution for inventory usage is as follows:(May/June 2010)

Usage (in units)	probability
27000	0.04
28000	0.07
29000	0.17
30000	0.32
31000	0.20
32000	0.10
33000	0.06
34000	0.04

It takes 2 days to place an order and receive delivery. The average monthly carrying cost is Re.1 per unit and the stock outs are estimated to cost Rs.3 per unit. You are required to find out the optimal safety stock. **Solution**: To be discussed in class

17. With an example discuss the concept of working capital cycle. (Nov / Dec 2010)
18. The proforma cost sheet of a company provides the following data:

Cost per unit	Rs
Raw materials	52.0
Direct labour	19.5
Overheads	39.0
Total cost per unit	110.0
Profit	19.5
Selling price	130.0

Following additional data is available:

Average raw materials in stock: One month; Average materials in process: half a month ;credit allowed by the suppliers: one month ;credit allowed to the suppliers :one month; credit allowed to the debtors: two months; time lag in payment of wages: one and half weeks; over heads :one month; one forth of the sales are on cash basis: cash balance is expected to be Rs120,000.

Prepare a statement showing the working capital needed to finance a level activity of 7000 units of output.

SOLUTION: To be discussed in class

19. Discuss the various sources of working capital in detail. (Nov/Dec 2010)

20. ABC Co. wants to relax its credit policy on sales from the current level of 1 month to 2 months. Due to this, sales would increase to Rs.72,00,000 from the present level of Rs 60,00,000 p.a. but the % of bad debt losses is likely to go up by 2% of sales which is now @ 3% of sales. The company's variable cost is 75% of sales and fixed expenses are Rs.12,00,000 p.a. The firm's required rate of return is 10% Advice the company on the implications of revising the credit policy. (To be discussed in the class) (May/June 2011)

21. Explain in detail the cash management models proposed by Baumol and Miller Orr with their merits and demerits. (Nov/Dec 2011), (May/June 2012)

22. " The average age of receivable is an important yard stick of testing the efficiency of receivable management of a firm" – Discuss. (May/June 2012)

Managing Accounts Receivable

23. From the following information prepare a statement in columnar form showing the working capital requirements: Budgeted sales (Rs. 10 per unit) Rs. 2, 60,000.

Analysis of one rupee of sales:

Raw materials	0.30
Direct labour	0.40
Overheads	0.20
TOTAL COST	0.90
Profit	0.10
Sales	1.00

It is estimated that

(i) Raw materials are carried in stock for three weeks and finished goods for two weeks

(ii) Factory processing will take three weeks

(iii) Suppliers will give full five weeks credit

(iv) Customers will require eight weeks credit

It may be assumed that production and overheads accrue evenly throughout the year. (May/June 2012) Solution : To be discussed in class

23. What are the different methods of forecasting working capital requirement of a business? Explain. (May/June 2012)

24. Write note on commercial paper and bank finance. (May/June 2012), (May/June2014),

25. Prepare an estimate of working capital requirement from the following information of a trading concern:

(i) projected annual sales – 1,50,000 units

(ii) Selling price Rs. 10 per unit

(iii) Percentage of net profit as sales 30

(iv)Average credit period allowed to customers – 10 weeks

(v) Average credit period allowed to supplies – 6 weeks

(vi) Average stock holding in terms of sales requirement – 10 weeks

(vii) Allow 15% for contingencies.

26. What are the Factors Determining Size of Investment in Receivables? (May/June2014)

27. What are the Factors Affecting The Size Of Investment In Inventories Or Determinants Of Inventories?

UNIT – V

PART A(`10*2=20 MARKS)

1. Distinguish 'authorized share capital' and Paid-up share capital on two aspects. (May / June 2007)

Authorized share capital is the amount of shares that a company is allowed to issue. The amount of authorized capital is specified in a company's memorandum of association and there needs to be a shareholder meeting to change the amount. Not all of the authorized share capital has to be issued. Authorized capital is that capital which is decided by the Registrar (recruited under companies act, 1956) as the maximum amount that can be raised from the shareholders. Say Rs.20 Crores.

Issued capital is that part of the authorized capital which is brought before the public for subscription. Say Rs. 18 crores. Subscribed capital is that part of the issued capital that is actually subscribed by the public. Say 16 crores. Paid-up capital is that part of the subscribed capital that is collected by the company as a part payment. Say 8 cores. The due part will be collected by the company is the immediate future.

2. What is meant by debenture? (Nov/Dec 2007)

A Debenture is a long-term Debt Instrument issued by government and big institutions for the purpose of raising funds. The Debenture has some similarities with bonds but the terms and conditions of securitization of Debentures are different from that of a Bond. A Debenture is regarded as an unsecured investment because there are no pledges (guarantee) or liens available on particular assets. Nonetheless, a Debenture is backed by all the assets which have not been pledged other wise

3. Name the three parties in leveraged lease transactions (Nov/Dec 2007)

A leveraged lease is one that involves a third party who is a lender, in addition to the Lessor and Lessee. Under this agreement, the lessor borrows fund from the lender and himself act as equity participant. Normally, the amount borrowed is substantial vis-avis the funds provided by the Lesssor himself. The third party usually involved in financing the transaction is a Financial Institution like UTI, Insurance Company, Commercial Banks, etc.,

4. What is operating Lease? (May/June 2008)

Operating lease is where by the lessee acquires the use of an asset on a period-to-period basis. The main characteristics of operating lease are as follows:

- The lease can be cancelled by the lessee prior to its expiration at a short notice
- The lessee is not given any uplift to purchase the asset at the end of the lease period
- The lease is for a smaller period
- The sum of all the lease payments by the lessee does not necessarily fully provide for the recovery of the cost of the asset.
- The lessor has the option to lease out the asset again to another party
- This type of lease is preferred by the lease when the long-term suitability of the asset is required to for uncertain, when the asset is subject to rapid obsolescence or when the asset is

required for immediate use to tide over a temporary problem. Computers and Office Equipment are the very common assets which form the subject matter of many operating Lease agreement.

5. Name any two venture capital firms? (May/June 2008)

ICICI Venture, Gujarat venture capital

6. Distinguish between term loan and bought out deal. (Nov/Dec 2008)

Term loans given by financial institutions and banks have been the primary source of long term debt for private firms and most public firms. Term loans differ from Bought out deal which is employed to finance short term working capital nee and tend to be self liquidating over a period time, usually less than one year.

7. Name at least 4 intermediaries associates with a company's issue of capital. (Nov/Dec 2008)

-Underwriter,-Stock Exchanges,-Merchant Banker,-Stock Brokers

8. State and brief any four rights of equity share holder.(May/June 2009)

-Right to income,-Right to dividend, -Right to control, -Pre-emptive rights, -Voting right

11. Distinguish between debenture and preference share capital. (May/June 2009)

* Debentures holders are paid interest on debentures. Preference share holders are paid dividend on the shares.

- Payment of interest for debenture holders is a legal obligation. It is payable even if there are no profits. Payments of dividend for preference share holder is not obligatory.
- Interest on debentures is tax deductible. Dividend on preference shares not tax deductible.

12. Define 'Lease'. (Nov/Dec 2009)

Lease is a contract between a lessor, the owner of the asset and a lessee, the user of the asset. Under the contract, the owner gives the right to use the asset to the user over an agreed period of time for a consideration called the lease rental.

13. Define Hire Purchase. (Nov/Dec 2009)

Hire-Purchase is a mode of financing the price of the goods to be sold on a future data. In a hire-purchase transaction, the goods are let on hire, the purchase price is to be paid in installments and linear is allowed on option to purchase the goods by paying all the installments.

14. State the various features of term loans? (May/June 2010)

-Maturity, -Negotiation, -Security, - Interest Payment And Principal Repayment

15. Define the term" venture capital"? (May/June 2010)

Venture refers to risky start-up of an enterprise or company. Venture Capital is the money and resources made available to start firms and small businesses with exceptional growth potential. Most Venture Capital money comes from an organized group of wealthy investors.

16. State and brief any four rights of equity share holder. (Nov/Dec 2010)

Ordinary or equity or common shares are shares which are not preferred with regard to dividend payments. The ordinary shareholder receives dividend after fixed dividends have been paid to preference shareholders. Ordinary dividends fluctuates. When the company is wound up, surplus not distributed is shared between the ordinary shareholders. Ordinary shares carry voting rights, thus ordinary shareholders are the effective owners of a company. They own the equity and reserves of the business.

17. What is' BOOT' in project financing? Quote a practical example. (Nov/Dec 2010)

Build-own-operate-transfer (**BOOT**) or **build-operate-transfer** (**BOT**) is a form of project financing, wherein a private entity receives a concession from the private or public sector to finance, design, construct, and operate a facility stated in the concession contract. This enables the project proponent to recover its investment, operating and maintenance expenses in the project. Due to the long-term nature of the arrangement, the fees are usually raised during the

concession period. The rate of increase is often tied to a combination of internal and external variables, allowing the proponent to reach a satisfactory internal rate of return for its investment.

18. What do you mean by private equity?(May/June 2011), (Nov/Dec 2011), (Nov/Dec 2014),

Private equity consists of investors and funds that make investments directly into private companies or conduct buyouts of public companies that result in a delisting of public equity. Capital for private equity is raised from retail and institutional investors, and can be used to fund new technologies, expand working capital within an owned company, make acquisitions, or to strengthen a balance sheet.

19. What are the advantages of debentures as a source of funds? (Nov/Dec 2011)

The Advantages of Debentures are as follows:

1) The holders of the debentures are entitled to a fixed rate of interest. It can be presented as "5% Debenture".

2) Debentures are for those who want a safe and secure income as they are guaranteed payments with high interest rates.

3) They have priority over other unsecured creditors when it comes to debt repayment.

20. What is NIMs?(May/June 2012)

- New Issues Market (NIM) comprises all people, institutions, method/mechanism, services and practices involved in raising fresh capital for both new and existing companies. This market is also called primary market.
- NIM helps raising resources from the investors by issuing them only new or fresh securities. Thus, NIM facilities direct conversion of savings into corporate investment or diversion of resources from the rest of the system to the corporate sector,

22. What are the various sources of short-term finance? (May/June 2012)

-Short term working capital loans, -Trade credit,-Credit papers, - Customers credit, - Factoring.

23. What do you mean by venture Capital? (May/June 2012)

Venture refers to risky start-up of an enterprise or company. Venture Capital is the money and resources made available to start firms and small businesses with exceptional growth potential. Most Venture Capital money comes from an organized group of wealthy investors

24. Distinguish Primary and Secondary Capital markets. (Nov/Dec 2010)

SI.NO	Primary Market	Secondary Market
1	It deals only with new or fresh issue of security	Deals in existing security
2.	No fixed geographical location needed	Need a fixed place to house the secondary market activities, viz., trading.
3.	Creating long-term instrument for borrowings.	Providing liquidity through marketability to those instruments

25. Explain the role of Indian capital market.(May/June2013)

1. Growth of savings,
2. Efficient allocation of investment resources,
3. Better utilization of the existing resources.

26. What are the benefits of lease financing? May/June2013)

a. Leasing also allows businesses to upgrade assets more frequently ensuring they have the latest equipment without having to make further capital outlays.

b. To buy a new piece of machinery or equipment can be costly and requires substantial capital. Leasing enables businesses to preserve precious cash reserves.
c. It offers the flexibility of the repayment period being matched to the useful life of the equipment.
d. It gives businesses certainty because asset finance agreements cannot be cancelled by the lenders and repayments are generally fixed.

PART- B (5*16 = 80 MARKS)

1. Explain the steps involved in a lease arrangement and a hire purchase agreement. (May/June 2007)
2. Discuss elaborately the organization and functions of Indian stock market. (May/ June 2007)
3. Discuss in detail the rights and position of equity shareholders (May/ June 2007)
4. What is Venture Capital and Explain its features in detail? (May/ June 2007)
5. What are the problems of stock market in India? Explain?(Nov/Dec 2007)
6. Distinguish between share holders and debenture holders. (Nov/Dec 2007)
7. What is venture capital financing ? Explain. (Nov/Dec 2007)
8. In the present economic scenario, which source of financing is more advantageous? Why? (May/June 2008)
9. ABC Company Ltd., is faced with two options as under in respect of acquisition of an asset valued Rs. 1,00,000. Either to acquire the asset directly by taking a Bank of Rs. 100,000 of asset value for 5 years end installments at an interest of 15% (or)

To Lease in the asset at yearly rentals of Rs. 320 per Rs. 1000 of the asset value for 5 years payable at year end. (May/June 2008)

The following additional information's are available

4) The rate of depreciation of the asset is 15% WDV
5) The Company has an effective tax of 50%
6) The company employs a discounting rate of 16%

You are to indicate in your report which option is more preferable to the Company.

10. List the procedural formalities for a company intending to raise share capital through a public issue. (Nov/ Dec 2008)
11. Present the features of venture capital financing. Indicate the present status in the country. (Nov/Dec 2008)
12. Discuss the features of any two long term sources of finance, in detail. (May/June 2009)
13. Explain the features of hire purchase with suitable examples. (May/June 2009)
14. Define a lease. How does it differ from a hire purchase? What are the cash flows consequences of a least? Illustrate. (May/June 2009),
15. What is the difference between the primary and the secondary market? Discuss the different classification of shares traded in stock exchanges. (May/June 2009)
16. Bring out the relationship of term financing with capital market. (May/June 2010)
17. Discuss the various sources of long term finance of Indian companies. (May/June 2010)
18. Explain the feature of a Convertible Security. (Nov/Dec 2010)
19. Explain the steps involved in a Venture capital investment process. (Nov/Dec 2010), (Nov/Dec 2014)
20. A company is considering the lease of an Equipment which has a purchase price of Rs. 3,50,000. The equipment has an estimated economic life of 5 years. 25% written down value Depreciation is allowed. Company's marginal tax rate is 50%. If the before tax borrowing rate

for the company is 16%, should the company base the equipment ? Ignore tax shield on depreciation after 5 years. (May/June 2013)

SOLUTION: To be discussed in class

21.What is debenture? Explain the features of a debenture. (May/June 2011)

22. Venture Capital Funds is a Non Banking Financial Company's business – Discuss. (May/June 2011)

23. Discuss the steps and parties involved in an IPO process in India. (Nov/Dec 2011)

24. Explain in detail about Venture Capital as a source of long term finance. (Nov / Dec 2011)

25. Describe briefly the recent trends in stock exchange. (May/June 2012)

26. Elucidate the role of new issue market. (May/June 2012)

Meaning of new issue market

27. Explain briefly the different types of lease financing in India. (May/June 2012)

28. Distinguish between hire purchase and installment purchase system. (May/June 2012)

29. Explain the various sources of long term finance. (May/June 2012)

30. Discuss leasing as a best source of finance to manufacturing industries. (May/June 2012)

31. A firm proposes to lease on asset of Rs. 20 lakhs. The annual, end-of-the year, lease rentals will be Rs. 5 lakh for 5 years. The firm is not in a position to pay tax for next 5 years. The depreciation rate (WDV) is 25% p.a. The lesser's marginal tax rate is 35%. Calculate the net present value of lease to the lessee and lessor. How can both benefit from the deal? Show your computations. Assume that the lessee's post –tax borrowing rate is 14%. (May/June 2013)

CASE STUDY

GLOSSARY OF FINANCIAL MANAGEMENT

Financial Resources
Resources which have a monetary value
Financial Management
Financial Management is planning, organizing and controlling the acquisition and use of financial resources for the purposes of achieving organizational goals.
Financing
Financing is the process of determining the appropriate forms and sources of finance
Financing strategy
Financing strategy is the determination of the type of finance used to purchase assets, and the resulting mix between equity, short term debt and long term debt
Investment
Investment is the use of finance to acquire an asset which will yield a required return
Investment strategy
Investment strategy is the determination of the appropriate mix of a business's assets
Asset
Item of value which is owned by an organization
Accounts receivable
(Short term/ current asset) - customer who owes the business money for buying goods/services on credit
Inventory
Stock - Items manufactured or purchased by the business for sale to the customers
Financial Intermediaries
Financial Intermediaries Are organizations which facilitate the flow of funds from individuals and organizations wanting to save, to individuals and organizations wanting to borrow.
Factoring
Factoring is a financial transaction where a struggling business sells its accounts receivable at a discount to another business.
Leasing
Leasing is an agreement between businesses detailing that the lessor allows the lessee the use of an asset for a certain period of time, in return of a payment or series of payments.
Debt Finance
Debt Finance is a liability and represents money owed to parties outside the business - may be short or long term
Equity finance
Equity finance Represents the monetary value of the owner's stake in the business - is considered long-term
Liability
Liability Amounts owed by a business to external parties
Prospectus

Legal document intended to fully and accurately inform the public about the company and its prospects

Mortgage loan

Mortgage loan is a long term debt, secured by a specific property of the borrower.

Bank overdraft

Bank overdraft is a short term debt, it is a facility provided by the bank which allows a business to have a negative balance in its cheque account

Capital expenditure

Capital expenditure Outlays made to purchase long term assets

Payback period

Payback period is the length of time it takes to recover the initial outlay

Net present value (NPV)

Net present value (NPV) is the sum of the discounted after tax cash flows over the life of the investment

Capital Structure

Capital Structure is the mix between the various finance sources and depends on where a business is in its life cycle

Under- capitalization

when the business does not have enough funds to run efficiently

over capitalization

when the business had more funds invested in the business than can be profitably employed

Risk management

Risk management is the process of identifying and minimizing the potential cost of unfavorable events.

Insurance

Insurance Is a service offering protection against future possible loss as a result of some unfavourable event in the future.

Budget

Budget is an expression of management plans in financial terms

Profitability

Profitability is a financial objective of the business and is concerned with the adequacy of profit

Liquidity

Liquidity is a financial objective of a business and is concerned with being able to meet all cash obligations when they are due

Growth

Growth is a financial objective and is concerned with increasing the size of the business

Cash budget

Cash budget is a plan for cash receipts, cash payments and the resultant cash balance at certain points in time

Targeted profit level

Targeted profit level should provide a reasonable return on the owners' investment - this means that the return on the capital invested should be equal to the prevailing bank interest rates plus a premium for risk

Fixed Costs (FC)

Fixed Costs (FC) Are costs which remain constant over a period of time and over a wide range of sales volume

Variable Costs (VC)
Vary in direct proportion to changes in sales volume
Total Costs (TC)
is the sum of fixed cost plus variable cost
Cost-volume-profit (CVP) analysis
is an analysis of the mathematical relationships between costs, volume of sales, and profit over a range of output
Break-even point
Break-even point is the output level where neither a profit or a loss is made because total costs equals sales
Financial information system
Financial information system is a system which attempts to provide accurate and timely financial information needed to manage an organization effectively
Accounting system
Accounting system consists of those processes, people, and equipment which capture and convert financial information for use in decision making
A Balance Sheet
A Balance Sheet is a list of all the assets, liabilities and owners equity of an organization at a point in time
An Income statement
An Income statement is a report detailing revenue and expenses of a period, and the resultant profit or loss
A Statement of Cash Flows
A Statement of Cash Flows is a report which shows the cash inflows and cash outflows of an organization during a particular period, and the resulting cash balances
Comparative financial statements
Comparative financial statements Are accounting reports which provide figures for at least two consecutive accounting periods
Extraordinary revenue or expenses
Extraordinary revenue or expenses items that are not of a reoccurring nature
Financial ratio analysis
Financial ratio analysis is a range of techniques that establish relationships between two or more variables so that meaningful financial comparisons can be made
Financial Controls
Financial Controls Are procedures, methods, tools, and techniques aimed at keeping an organization moving towards its goals and preventing financial losses.