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– BA4202

FINANCIAL MANAGEMENT

BA4202

FINANCIAL MANAGEMENT

UNIT I FOUNDATIONS OF FINANCE

Introduction to finance- Financial Management – Nature, scope and functions of Finance, organization of financial functions, objectives of Financial management, Major financial decisions – Time value of money – features and valuation of shares and bonds – Concept of risk and return – single asset and of a portfolio.

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 - Concept and measurement of cost of capital - Specific cost and overall cost of capital.

UNIT III FINANCING AND DIVIDEND DECISION

Leverages - Operating and Financial leverage – measurement of leverages – degree of Operating & Financial leverage – Combined leverage, EBIT – EPS Analysis- Indifference point. Capital structure – Theories – Net Income Approach, Net Operating Income Approach, MM Approach – Determinants of Capital structure. Dividend decision- Issues in dividend decisions, Importance, Relevance & Irrelevance theoriesWalter‟s – Model, Gordon‟s model and MM model. – Factors determining dividend policy – Types of dividend policies – forms of dividend.

UNIT IV WORKING CAPITAL MANAGEMENT

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

UNIT V LONG TERM SOURCES OF FINANCE

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

CHAPTER I

FOUNDATIONS OF FINANCE

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

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

Meaning Of Finance

Finance may be defined as the art and science of managing money. It includes financial service and financial instruments. Finance also is referred as the provision of money at the time when it is needed. Finance function is the procurement of funds and their effective utilization in business concerns. The concept of finance includes capital, funds, money, and amount. But each word is having unique meaning. Studying and understanding the concept of finance become an important part of the business concern.

Definition Of Finance

- According to **Khan and Jain,** "Finance is the art and science of managing money".
- **Webster's** Ninth New Collegiate Dictionary defines finance as "the Science on study of the management of funds' and the management of fund as the system that includes the circulation of money, the granting of credit, the making of investments, and the provision of banking facilities.

Definition Of Business Finance

According to the **Guthumann and Dougall**, "Business finance can broadly be defined as the activity concerned with planning, raising, controlling, administering of the funds used in the business".

Corporate finance is concerned with budgeting, financial forecasting, cash management, credit administration, investment analysis and fund procurement of the business concern and the business concern needs to adopt modern technology and application suitable to the global environment.

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

- Private Finance
- Public Finance

Types of Finance

Private Finance, which includes the Individual, Firms, Business or Corporate Financial activities to meet the requirements.

Public Finance which concerns with revenue and disbursement of Government such as Central Government, State Government and Semi-Government Financial matters.

OVERVIEW

Definition

The most popular and acceptable definition of financial management as given by **S.C. Kuchal** is that "Financial Management deals with procurement of funds and their effective utilization in the business".

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

Scope Of Financial Management

1. Financial Management and Economics

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

2. Financial Management and Accounting

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

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

3. Financial Management and Production Management

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

4. Financial Management and Marketing

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

5. Financial Management and Human Resource

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

Objectives Of Financial Management

Effective procurement and efficient use of finance lead to proper utilization of the finance by the business concern. It is the essential part of the financial manager. Hence, the financial manager must determine the basic objectives of the financial management. Objectives of Financial Management may be broadly divided into two parts such as:

1. Profit maximization
2. Wealth maximization.

Profit Maximization

- Profit maximization is also called as cashing per share maximization. It leads to maximize the business operation for profit maximization.
- Ultimate aim of the business concern is earning profit, hence, it considers all the possible ways to increase the profitability of the concern.
- Profit is the parameter of measuring the efficiency of the business concern. So it shows

the entire position of the business concern.

- ❖ Profit maximization objectives help to reduce the risk of the business.

Favourable Arguments for Profit Maximization

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

Unfavourable Arguments for Profit Maximization

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

Drawbacks of Profit Maximization

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

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

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

Wealth Maximization

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

Favourable Arguments for Wealth Maximization

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

(ii) Wealth maximization considers the comparison of the value to cost associated with the business concern. Total value detected from the total cost incurred for the business operation. It provides extract value of the business concern.
(iii) Wealth maximization considers both time and risk of the business concern.
(iv) Wealth maximization provides efficient allocation of resources.
(v) It ensures the economic interest of the society.

Unfavourable Arguments for Wealth Maximization

(i) Wealth maximization leads to prescriptive idea of the business concern but it may not be suitable to present day business activities.
(ii) Wealth maximization is nothing, it is also profit maximization, it is the indirect name of the profit maximization.
(iii) Wealth maximization creates ownership-management controversy.
(iv) Management alone enjoys certain benefits.
(v) The ultimate aim of the wealth maximization objectives is to maximize the profit.
(vi) Wealth maximization can be activated only with the help of the profitable position of the business concern.

Approaches To Financial Management

Theoretical points of view, financial management approach may be broadly divided into two major parts.

- Traditional Approach
- Modern Approach

Traditional Approach

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

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

Functions Of Finance Manager

1. Forecasting Financial Requirements

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

2. Acquiring Necessary Capital

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

3. Investment Decision

The finance manager must carefully select best investment alternatives and consider the reasonable and stable return from the investment. He must be well versed in the field of capital budgeting techniques to determine the effective utilization of investment. The finance manager must concentrate to principles of safety, liquidity and profitability while investing capital.

4. Cash Management

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

5. Interrelation with Other Departments

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

Importance Of Financial Management

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.

Time Value Of Money

Concept

Time value of money shows the relation of **value of money** with **time**. **Time value of money** is also value of interest which we have earned for giving money to other for specific period. Value of Rs. 1 which you have today is more valuable than what Rs. 1 you will receive after one year because you can invest today receive Rs. 1 in any scheme and you can earn minimum interest on it. It means today received money is important than tomorrow receivable money. Interest rate is the cost of borrowing money as a yearly percentage. For investors, interest rate is the rate earned on an investment as a yearly percentage.

Time value of money results from the concept of interest. So it now time to discuss Interest.

1. Simple Interest

It may be defined as Interest that is calculated as a simple percentage of the original principal amount.The formula for calculating simple interest is

$$SI = P0\ (i)(n)$$

Future value of an account at the end of n period

$$FVn = P0 + SI = P0 + P0(i)(n)$$

1.2.2 Compound Interest

If interest is calculated on original principal amount it is simple interest. When interest is calculated on total of previously earned interest and the original principal it compound interest. Naturally, the amount calculated on the basis of compound interest rate is higher than when calculated with the simple rate.

$FV_n = P_o (1+ i)^n$

Where,

Annual rate of interest

i = ... = r/k

Number of payment periods per year

So, $FV_n = P_0 (1 + r/k)^n$

When compounding is done k times a year at an annual interest rate r.

Or

$FV_n = P_o (i + FVIF)_{in}$

Where,

Effective Rate of Interest

It is the actual equivalent annual rate of interest at which an investment grows in value when interest is credited more often than once a year. If interest is paid m times in a year it can be found by calculating:

$Ei = (1+ i/m)^m -1$

1.3.3 Present Value

"Present Value" is the current value of a "Future Amount". It can also be defined as the amount to be invested today (Present Value) at a given rate over specified period to equal the "Future Amount".

The present value of a sum of money to be received at a future date is determined by discounting the future value at the interest rate that the money could earn over the period. This process is known as **Discounting**. The present value interest factor declines as the interest rate rises and as the length of time increases.

$P_o = FV_n /(1+ i)^n$

$P_o = FV_n (1+ i)^{-n}$

Where,

FVn = Future value n years hence

I = Rate of interest per annum

n = Number of years for which discounting is done.

B. Discount (or) present value technique: -

$$V_o = \frac{V_n}{(1+i)}$$

Present value V_o = Future value (V_n) x DF_{in}

Introduction To The Concept Of Return Of A Single Asset

Introduction

Risk and Return of the investments are interrelated covenants in the selection any investments, which should be studied through the meaning and definition of risk and return and their classification of themselves in the first part of this chapter and the relationship in between them is illustrated in the second half of the chapter.

Meaning Of Return & Rate Of Return

Return is the combination of both the regular income and capital appreciation of the investments.The regular income is nothing but dividend/interest income of the investments. The capital appreciations of the investments are nothing but the capital gains of the investments i.e. the difference in between the closing and opening price of the investments.

Return symbolized as follows

D1 + Pt – Pt – 1 / Pt – 1

These two categories, Earnings yield and Capital gains yield

*Earnings Yield = Earnings per share / Market price per share***

Concept And Types Of Risk

- The variability of the actual return from the expected return which is associated with the investment/asset known as risk of the investment.Variability of return means that the Deviation in between actual return and expected return which is in other words as variance i.e., the measure of statistics.
- Greater the variability means that Riskier the security/ investment.Lesser the variability means that More certain the returns, nothing but Least risky

.

Interest Rate Risk

It is risk – variability in a security's return resulting from the changes in the level of interest rates.

Market Risk

It refers to variability of returns due to fluctuations in the securities market which is more particularly to equities market due to the effect from the wars, depressions etc.

Inflation Risk

Rise in inflation leads to Reduction in the purchasing power which influences only few people to invest due to Interest Rate Risk which is nothing but the variability of return of the investment due to oscillation of interest rates due to deflationary and inflationary pressures.

Business Risk

. Business risk is nothing but Operational risk which arises only due to the presence of the fixed cost of operations.

Financial Risk

Connected with the raising of fixed charge of funds viz Debt finance & Preference share capital. More the application of fixed charge of financial will lead to Greater the financial Risk which is nothing but the Trading on Equity.

Liquidity Risk

Liquidity risk reflects only due to the quality of benefits with reference to certainty of return to receive after some period which is normally revealed in terms of quality of benefits.

Measurement of Risk

Standard Deviation:

- Greater the standard deviation - Greater the risk
- Does not consider the variability of return to the expected value
- This may be misleading - if they differ in the size of expected values

Coefficient of variation = S.D/ Mean

Risk And Return Of The Portfolio

- Portfolio is the Combination of two or more assets or investments.
- Portfolio Expected Return is the weighted average of the expected returns of the securities or assets in the portfolio.Weights are the Proportion of total funds in each security which form the portfolio Wj Kj.
- Wj = funds proportion invested in the security.
- Kj = expected return for security J.
- Benefits of portfolio holdings are bearing certain benefits to single assets.
- Including the various types of industry securities - Diversification of assets.
- It is not the simple weighted average of individual security.
- Risk is studied through the correlation/co-variance of the constituting assets of the portfolio. The Correlation among the securities should be relatively considered to maximize the return at the given level of risk or to minimize the risk.
- Correlation of the expected returns of the constituent securities in the portfolio.
- It is a Statistical expression which reveals the securities earning pattern in the portfolio as together.

Diversification of the Risk of Portfolio

❖ Diversification of the portfolio can be done through the selection of the securities which have negative correlation among them which formed the portfolio. The return of the risky and riskless assets is only having the possibilities to bring down the risk of the portfolio.

❖ The risk of the portfolio cannot be simply reduced by way adopting the principle of correlation of returns among the securities in the portfolio. To reduce the risk of the portfolio, the classification of the risk has to be studied, which are as follows:

❖ The risk can be further classified into two categories viz Systematic and Unsystematic risk of the securities

Systematic Risk: Which only requires the investors to expect additional return/ compensation to bear the

Unsystematic Risk*:* The investors are not given any such additional compensation to bear unlike the earlier.The relationship could be obviously understood through the study of Capital Asset Pricing Model (CAPM).

- Developed by William F. Sharpe
- Explains the relationship in between the risk and expected / required return
- Behaviour of the security prices
- Extends the mechanism to assess the dominance of a security on the total risk and return
- Highlights the importance of bearing risk through some premium
- No transaction costs - No intermediation cost during the transaction
- No single investor is to influence the market Risk and Return
- Highest return for given level of risk OrLowest risk for a given level of return
- Risk - Expected value, standard deviation

Relationship Between The Risk And Return

- ❖ Total Return - Risk free rate of return= Excess return (Risk premium)
- ❖ Total return = Risk free return + Risk premium
- ❖ Kj = Rf + bj (Km–Rf)
- ❖ Bj is nothing but Beta of the security i.e., market responsiveness of the security. It is normally expressed as a b
- ❖ b = Non Diversifiable risk of asset or Portfolio/ Risk of the Market Portfolio
- ❖ Risk of the portfolio = after diversification, the risk of the market portfolio is non
- ❖ diversifiable

Valuation Of Bonds And Shares

1.5.1Valuation Of Bonds

A bond or a debenture is a long-term debt instrument or security. It is issued by business enterprises or government agencies to raise long-term capital. A bond usually carries a fixed rate of interest. It is called as coupon payment and the interest rate is called as the coupon rate. The coupon payment can be either annually or semi-annually.

$$\text{Bond value} = \frac{\text{Interest}_1}{(1+r)^1} + \frac{\text{Interest}_2}{(1+r)^2} + \ldots\ldots\ldots + \frac{(\text{Interest}_n + \text{Maturity value})}{(1+r)^n}$$

.

Where:

Interest 1 to n = Interests in periods 1 to n.

Unless otherwise mentioned, the maturity value of the bond is the face value.

When the required rate of return is equal to the coupon rate, the bond value equals the par value.

When the required rate of return is more than the coupon rate, the bond value would be less than its par value. The bond in this case would sell at a discount.

When the required rate of return is less than the coupon rate, the bond value would be more than its par value. The bond in this case would sell at a premium.

1.5.2 Valuation Of Shares

Factors Which Influence The Value Of Shares

The factors which influence the value of shares can be broadly classified into two groups- internal and external factors. They are stated below-

(i) Internal factors

- ❖ Earning capacity of assets
- ❖ Return on investments
- ❖ Profit after tax
- ❖ Profit available to equity shareholders
- ❖ Earnings per share
- ❖ Dividend per share or Rate of dividend.

(ii) External Factors

- ❖ General economic condition of the country.
- ❖ Political and social environment.
- ❖ International economic scenario.
- ❖ International political environment.

METHODS OF VALUATION OF SHARES

The methods of valuation depend on the purpose for which valuation is required. Generally, there are three methods of valuation of shares:

1.Net Assets Method of Valuation of Shares

Under this method, the net value of assets of the company is divided by the number of shares to arrive at the value of each share. For the determination of net value of assets, it is necessary to estimate the worth of the assets and liabilities. The goodwill as well as non-trading assets should also be included in total assets.

Value per Share= (Net Assets-Preference Share Capital)/Number of Equity Shares

2. Yield or Market Value Method of Valuation Of Shares

The expected rate of return in investment is denoted by yield. The term "rate of return" refers to the return which a shareholder earns on his investment. Further it can be classified as (a) Rate of earning and (b) Rate of dividend. In other words, yield may be earning yield and dividend yield.

a. Earning Yield

Value per Share = (Expected rate of earning/Normal rate of return) X Paid up value of equity share
Expected rate of earning = (Profit after tax/paid up value of equity share) X 100

b. Dividend Yield

Expected rate of dividend = (profit available for dividend/paid up equity share capital) X 100
Value per share = (Expected rate of dividend/normal rate of return) X 100

3. Earning Capacity Method Of Valuation Of Shares

Under this method, the value per share is calculated on the basis of disposable profit of the company. The disposable profit is found out by deducting reserves and taxes from net profit.
Value per share = Capitalized Value/Number of Shares

Option Valuation

An option is a contract, or a provision of a contract, that gives one party (the option holder) the right, but not the obligation, to perform a specified transaction with another party (the option issuer or option writer) according to the specified terms. The owner of a property might sell another party an option to purchase the property any time during the next three months at a specified price.

There are two options which can be exercised:

- Call option, the right to buy is referred to as a call option.
- Put option, the right to sell is referred as a put option.

There are two types of options: the European options, which can be exercised only at expiration, and the American options, which may be exercised any time prior to expiration. The American option offers greater flexibility and hence its value, in general, is greater than the European one.

At this point, we are examining options on stocks that are not paying any dividends. When a stock pays a dividend then the value of the stock drops on the *ex* dividend date. This predictable drop in the price of a stock will have an effect on the price of the options on that stock.

Factors Affecting Value Of Options

• Price – value of the call option is directly proportionate to the change in the price of the underlying.

• Time – as options expire in future, time has an effect on the value of the options.

• Interest rates anVolatility – in case where the underlying asset is a bond or interest rate, interest rate volatility would have an impact on the option prices.

Properties of Option Values

1. The minimum value of an option is zero.
This is because an option is only a choice, not an obligation. The value of an option cannot be negative, because you do not have to do anything to get rid of it. The option will always have a zero, or a positive value.
2. The maximum value of a call option is equal to the value of the underlying asset.
This makes a lot of economic sense. An option allows you to buy a given asset at a certain exercise price. The most valuable option will be the one that allows you to acquire the asset at no cost, and the value of this option will be equal to the value of the underlying asset.

UNIT II
INVESTMENT DECISIONS

It is the process of making investment decision in capital expenditures. Capital expenditure defined as an expenditure the benefits of which are expected to be received more than one year. It is incurred in one point of time and the benefits are received in different point of time in future.

- Cost of acquisition of permanent asset as land and building, plant and machinery, goodwill
- Cost of addition, expansion and improvement or alteration in fixed assets
- Cost of replacement of permanent assets
- Research and development project cost etc.

Why the capital budgeting is considered as most important decision over the others?

- The capital budgeting is the decision of long term investments, which mainly focuses the acquisition or improvement on fixed assets.
- The capital budgeting decision is a decision of capital expenditure or long term investment or long term commitment of funds on the fixed assets.

Principles

- Decisions are based on cash flow not accounting income
- The capital budgeting decisions are based on the cash flow forecasts instead of relying on the accounting income.these are the incremental cash flows that is additional cash flows that will occur if the project undertaken compare to if the project is not undertaken
- Timing of cash flows
- To estimate the timing of cash flows as accurately as possible.it is used the concept of time value of money,the time at which the cash flows occur significantly impacts at the present value of the project.
- Financing cost should be ignored
- Cash flow should be considered
- Opportunity cost are also considered

Need and importance/Nature

(1) Large investment

- Involve large investment of funds
- Fund available is limited and the demand for funds exceeds the existing resources
- Important for firm to plan and control capital expenditure

(2) Long term commitment of funds

- Involves not only large amount of fund but also long term on permanent basis.
- It increases financial risk involved in investment decision.
- Greater the risk greater the need for planning capital expenditure.

(3) Irreversible Nature

- Once decision for acquiring permanent asset is taken, it become very difficult to dispose of these assets without heavy losses.

(4) Long-term effect on profitability

- Capital expenditure decision are long-term and have effect on profitability of a concern
- Not only present earning but also the future growth and profitability of the firm depends on investment decision taken today
- Capital budgeting is needed to avoid over investment or under investment in fixed assets.

(5) Difficulties of investment decision

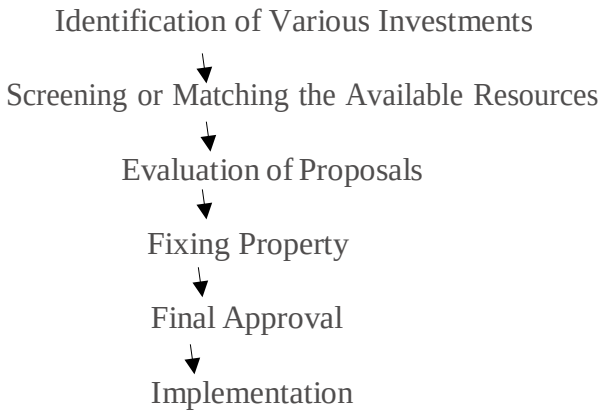
- Long term investment decision are difficult to take because (i) decision extends to a series of year beyond the current accounting period
- (ii) uncertainties of future
- (iii) higher degree of risk

(6) National importance

- Investment decision taken by individual concern is of national importance because it determines employment, economic activities and economic growth.

Identifying Relevant Cash Flows &Capital budgeting Process

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



1.Identification of various investments proposals: The capital budgeting may have various investment proposals. The proposal for the investment opportunities may be defined from the top management or may be even from the lower rank. The heads of various department analyse the various investment decisions, and will select proposals submitted to the planning committee of competent authority.

2. Screening or matching the proposals: The planning committee will analyse the

various proposals and screenings. The selected proposals are considered with the available resources of the concern. Here resources referred as the financial part of the proposal. This reduces the gap between the resources and the investment cost.

3.Evaluation: After screening, the proposals are evaluated with the help of various methods, such as pay back period proposal, net discovered present value method, accounting rate of return and risk analysis.

4. Fixing property: After the evolution, the planning committee will predict which proposals will give more profit or economic consideration. If the projects or proposals are not suitable for the concern's financial condition, the projects are rejected without considering other nature of the proposals.

5.Final approval: The planning committee approves the final proposals, with the help of the following:

(a) Profitability,

(b) Economic

(c) Financial

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

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

Evaluation Of Investment Proposals

Traditional methods or Non-Discounted method

8.2.1Net Present Value method

Internal Rate of Return method

Rate of return method or accounting method

Time-adjusted method or discounted methods

(i) Net Present Value method

(ii) Internal Rate of Return method

(iii)Profitability Index method

Pay-back period method

This method represent the period in which total investment in permanent asset pays back itself. It measure the period of time for the original cost of a project to be recovered from the additional earning of a project itself.

Investment are ranked according to the length of the payback period, investment with shorter payback period is preferred.

How the payback period is calculated?

The payback period is ascertained in the following manner

- Calculate annual net earnings(profit) before depreciation and after taxes, these are called annual cash inflow
- Divide the initial outlay(cost) of the project by the annual cash inflow, where the project generates constant annual cash inflow

Payback period = cash outlay of the project or original cost of the asset
Annual cash inflows

- Where the annual cash inflows (profit before depreciation and after taxes) are unequal the payback period is found by adding up the cash inflows until the total is equal to the initial cash outlay of the project.

Selection criterion

Lesser the pay back period is better for acceptance of the project

Improvement of Traditional Appraoch To Payback Period:

$$\text{PPPI} = \frac{\textit{post pay back profit}}{\textit{investment}} \times 100$$

Post payback profitability = Annual cash inflow (estimated life-payback period)

Payback Reciprocal Method

$$\text{Payback Reciprocal method} = \frac{\textit{Annual csh inflow}(¿)\textit{Total investment}}{\textit{Cash outlay of project}} = \frac{10000}{50000} = 0.2$$

Discounted payback period : - (time value of money in consider)

Merits

- ❖ It is a simple method to calculate and understand
- ❖ It is a method in terms of years for easier appraisal

Demerits

- It is a method rigid
- It has completely discarded the principle of time value of money
- It has not given any due weight age to cash inflows after the payback period
- It has sidelined the profitability of the project.

Average Rate of Return method (ARR)

This method takes in to account the earnings expected from the investment over their whole life. It is known as accounting rate of return.

The project which gives the higher rate of return is selected when compared to one with lower rate of return.

Selection criterion of the projects:

Highest rate of return of the project only is given appropriate weightage.

The Accounting rate of return can be computed as follows

$$\text{Accounting Rate of Return (ARR)} = \frac{\text{Annual Return}}{\text{Original Investment}} \times 100$$

$$\text{Accounting Rate of Return (ARR)} = \frac{\text{Average Annual Return}}{\text{Average Investment}} \times 100$$

Average annual return= Average profit after depreciation and taxation of the entire life of project i.e. for many number of years

$$\text{Average Investment} = \frac{\text{Opening Investment} + \text{Closing Investment}}{2}$$

$$= \frac{\text{Opening Investment} - \text{Scrap}}{2}$$

.

Merits

- It is simple method to compute the rate of return
- Average return is calculated from the total earnings of the enterprise through out the life of the firm
- The entire rate of return is being computed on the basis of the available accounting data

Demerits

- Under this method, the rate of return is calculated on the basis of profits extracted from the books but not on the basis of cash inflows
- The time value of money is not considered
- It does not consider the life period of the project
- The accounting profits are different from one concept to another which leads to greater confusion in determining the accounting rate of return of the projects

Net present value method(NPV)

It is a modern method of evaluating investment proposals. It takes into consideration time value of money and calculates the return on investment by introducing the factor of time element.

- First determine the rate of interest that should be selected as the minimum required rate of return
- Compute the present value of total investment outlay
- Compute the present value of total cash inflows
- Calculate Net Present Value by subtracting the present value of cash inflow by present value of cash outflow.
- NPV = is positive or zero the project is accepted
- NPV= is negative then reject the proposal
- In order for ranking the project the first preference is given to project having maximum positive net present value

NPV= Present value of cash inflow – present value of cash outflow/Initial investment

Selection criterion of Net present value method

Initial Outlay <Present value of Benefits=> +ve NPV:- Project can be accepted
Initial Outlay>Present value of Benefits=>-ve NPV:-Project can be rejected

Internal Rate of Return Method (IRR)

Under the internal rate of return method, the cash flows of a project are discounted at a suitable rate by hit and trial method, which equates the net present value so calculated to the amount of investment.

- Determine the future net cash flows during the entire economic life of the project. The cash inflows are estimated for future profits before depreciation but after taxes
- Determine the rate of discount at which the value of cash inflow is equal to the present value of cash outflows
- Accept the proposal if the internal rate of return is higher than or equal to the cost of capital or cut off rate.
- In case of alternative proposals select the proposal with the highest rate of return.

Profitability index method or Benefit cost Ratio (P.I)

It is also called Benefit cost ratio is the relationship between present value of cash inflow and present value of cash outflow

$$\text{PI (Gross)} = \frac{\text{present value of cash inflows}}{\text{Present value of cash outflows/ Initial Investment}}$$

PI (net) = NPV (Net Present Value)

Initial investment

The proposal is accepted if the profitability index is more than one and is rejected the profitability index is less than one

The various projects are ranked; the project with higher profitability index is ranked higher than other.

Profitability Index Method (or) Benefit cost Ratio: -

$$PI = \frac{PVCI}{PV\ of\ cash\ out\ flows}$$

Project Selection Under Capital Rationing

Capital Rationing

Capital rationing refers to a situation where the firm is constrained for external, or self imposed, reasons to obtain necessary funds to invest in all investment projects with positive net present value (NPV). Under capital rationing, the management has not simply to determine the profitable investment opportunities, but it has also to decide to obtain that combination of the profitable projects which yields highest net present value (NPV) within the available funds.

Why capital rationing?

Capital rationing may rise due to external factors or internal constraints imposed by the management. Thus there are two types of capital rationing.

- External capital rationing
- Internal capital rationing

External capital rationing

External capital rationing mainly occurs on account of the imperfections in capital markets. Imperfections may be caused by deficiencies in market information, or by rigidities of attitude that hamper the free flow of capital. The net present value (NPV) rule will not work if shareholders do not have access to the capital markets. Imperfections in capital markets alone do not invalidate use of the net present value (NPV) rule. In reality, we will have very few situations where capital markets do not exist for shareholders.

Internal capital rationing

Internal capital rationing is caused by self imposed restrictions by the management. Various types of constraints may be imposed. For example, it may be decide not to obtain additional funds by incurring debt. This may be a part of the firm's conservative financial policy.

Inflation and capital budgeting

- Inflation is the increase in the general level of prices for all goods and services in an economy
- Nominal values are the actual amount of money making up cash flows
- real values reflect the purchasing power of the cash flows
- real values are found by adjusting the nominal values for the rate of inflation

Inflation effects two aspects of capital budgeting

- projected cash flows
- discount rate

if projected cash flows are in nominal terms (with inflation considered) the discount rate used should be a nominal rate

Is it better to use real or nominal values?

- Using nominal values is more common.
- Market interest rates are nominal values that already contain a premium for anticipated inflation.
- Income tax obligations are based on nominal values.
- Therefore, it is usually easier to use nominal values.
- However, if a nominal discount rate is used, projected cash flows should reflect anticipated inflation.

Risk And Capital Budgeting

Risk pertains to the possibility that the projected cash flows will be less than estimated

adjusting the discount rate

Discount rate components include:

- time preference

- inflation expectations
- risk premium

Risk premium is the cost of risk bearing

- increasing the discount rate adds a cost for taking risk by requiring a higher rate of return for risk bearing.

Certainty equivalent approach

- adjusts the cash flows to a level with a higher "certainty" that they will be received.
- conceptually similar to a risk premium.

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Concept And Measurement Of Cost Of Capital

The cost of capital of a firm is the minimum rate of return expected by its investors. It is the weighted average cost of various sources of finance used by the firm. The capital used may be debt, preference shares, retained earnings and equity shares.

- ❖ The decision to invest in particular project depends on cost of capital or cut off rate of the firm,.
- ❖ To achieve the objective of wealth maximization, a firm must earn a rate of return more than its cost of capital.
- ❖ Higher the risk involved in the firm, higher is the cost of capital.

Factors Affecting The Cost Of Capital Of A Firm

1) Risk Free Interest Rate:

The risk free interest rate, I_f , is the interest rate on the risk free and default-free securities. Theoretically speaking, the risk free interest rate depends upon the supply and demand consideration in financial market for long term funds. The market sources of demand and supply determines the I_f , which is consisting of two components:

a) Real interest Rate:

The real interest rate is the interest rate payable to the lender for supplying the funds or in other words, for surrendering the funds for a particular period.

b) Purchasing power risk premium:

Investors, in general, like to maintain their purchasing power and therefore, like to be compensated for the loss in purchasing power over the period of lending or supply of funds. So, over and above the real interest rate, the purchasing power risk premium is added to find out the risk free interest rate. Higher the expected rate of inflation, greater would be the purchasing power risk premium and consequently higher would be the risk free interest rate.

2) Business Risk:

Another factor affecting the cost of capital is the risk associated with the firm's promise to pay interest and dividends to its investors. The business risk is related to the response of the firm's Earnings Before Interest and Taxes, EBIT, to change in sales revenue. Every project has its effect on the business risk of the firm. If a firm accepts a proposal which is more risky than average present risk, the investors will probably raise the cost of funds so as to be compensated for the increased risk. This premium is added for the business risk compensation is also known as Business Risk Premium.

3) Financial Risk:

The financial risk is a type of risk which can affect the cost of capital of the firm. The particular composition and mixing of different sources of finance, known as the financial plan or the capital structure, can affect the return available to the investors. The financial risk is affected by the capital structure or the financial plan of the firm. Higher the proportion of fixed cost securities in the overall capital structure, greater would be the financial risk.

4) Other Consideration:

The investors may also like to add a premium with reference to other factors. One such factor may be the liquidity or marketability of the investment. Higher the liquidity available with an investment, lower would be the premium demanded by the investor. If the investment is not easily marketable, then the investors may add a premium for this also and consequently demand a higher rate of return.

Computation Of Cost Of Capital

A. Computation of cost of specific source of finance
B. Computation of cost of weighted average cost of capital

Computation of specific source of finance

(i) Cost of debt

It is the rate of interest payable on debt.

Debenture before tax

- Issued at par
- Issued at premium or discount

Debenture after tax

(ii) Cost of redeemable debt

The debt is to be redeemed after a certain period during the life time of the firm. Such debt issued is known as redeemable debt.

- Before tax cost of redeemable debt
- After tax cost of redeemable debt

(iii) Cost of preference capital

A fixed rate of dividend is payable on preference shares. Dividend is payable at the discretion of the board of directors and there is no legal binding to pay dividend. In case dividend are not paid, it will affect the fund raising capacity of the firm. Hence dividends are paid regularly except when there is no profit

- Issued at par
- Issued at premium or discount

Cost of redeemable preference shares

Redeemable preference shares are issued which can be redeemed or cancelled on maturity date.

(iv) Cost of equity share capital

The cost of equity is the maximum rate of return that the company must earn on equity financed position of its investments in order to leave or unchanged the market price of its stock.It may or may not be paid. Shareholders invest money in equity shares on the expectation of getting dividend and the company must earn this minimum rate so that the market price of the shares remains unchanged.

(a) Dividend yield method or dividend / price ratio method
(b) Dividend yield plus growth in dividend method
(c) Earnings yield method

(v) Cost of retained earnings

The retained earnings do not involve any cost because a firm is not required to pay dividend on retained earnings. But shareholder expects return on retained earnings.

Computation Of Cost Of Capital

Computation of cost of capital consists of two important parts:

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

Measurement of Cost of Capital

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

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

Cost of Equity

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

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

Cost of equity can be calculated from the following approach:

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

Dividend Price Approach

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

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

$$Ke=D/Np$$

Where,

K_e = Cost of equity capital

D = Dividend per equity share

N_p = Net proceeds of an equity share

CHAPTER 3
FINANCING AND DIVIDEND DECISION

Leverage refers to "an increased means of accomplishing some purpose". Leverage allows us to accomplish certain things which are otherwise not possible, viz lifting of heavy objects with the help of leverages.

In financial management , the term 'leverage' is used to describe the firm's ability to use fixed cost asset or funds to increase the return to its owners i.e, Equity shareholders.

The employment of an asset or sources of funds for which the firm has to pay a fixed cost or fixed return. The fixed cost is also called as fixed operating cost and the fixed return is called financial cost remains constant irrespective of the change in volume of output of sales

Higher the degree of leverage, higher is the risk as well as return to the owner.

1. Financial leverage or Trading on equity
2. Operating leverage
3. Combined leverage or composite leverage

Financial leverage

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

Financial leverage is defined as "the ability of a firm to use fixed financial charges to magnify the effects of changes in EBIT on the earnings per share".

Financial leverage may be favourable or unfavourable depends upon the use of fixed cost funds.Favourable financial leverage occurs when the company earns more on the assets purchased with the funds, then the fixed cost of their use. Hence, it is also called as positive financial leverage.

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

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

Degree of Financial Leverage

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

$$\frac{\text{percentage change in taxable profit}}{\text{percentage change in earning before interest and tax (EBIT).}}$$

changes to magnify the effects of change in EBIT and EPS".

FL = Financial Leverage

EBIT = Earning Before Interest and Tax

EPS = Earning Per share.

Uses of Financial Leverage

- Financial leverage helps to examine the relationship between EBIT and EPS.
- Financial leverage measures the percentage of change in taxable income to the percentage change in EBIT.
- Financial leverage locates the correct profitable financial decision regarding capital structure of the company.
- Financial leverage is one of the important devices which is used to measure the fixed cost proportion with the total capital of the company.
- If the firm acquires fixed cost funds at a higher cost, then the earnings from those assets, the earning per share and return on equity capital will decrease.
- The impact of financial leverage can be understood with the help of the following exercise.

Operating leverage

The leverage associated with investment activities is called as operating leverage.

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

$$\frac{C}{OP}$$

Where,

OL = Operating Leverage

C = Contribution

OP = Operating Profits

Uses of Operating Leverage

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

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

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

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

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

DISTINGUISH BETWEEN OPERATING LEVERAGE AND FINANCIAL LEVERAGE

Operating Leverage	Financial Leverage
Operating leverage is associated with investment activities of the company.	Financial leverage is associated with financing activities of the company.
Operating leverage consists of fixed operating expenses of the company.	Financial leverage consists of operating profit of the company.
It represents the ability to use fixed operating cost.	It represents the relationship between EBIT and EPS.
A percentage change in the profits resulting from a percentage change in the sales is called as degree of operating leverage.	A percentage change in taxable profit is the result of percentage change in EBIT.
Trading on equity is not possible while the company is operating leverage.	Trading on equity is possible only when the company uses financial leverage.
Operating leverage depends upon fixed cost and variable cost.	Financial leverage depends upon the operating profits.
Tax rate and interest rate will not affect the operating leverage.	Financial leverage will change due to tax rate and interest rate.

Composite leverage

Combination of operating &financial leverage is called composite leverage

Working Capital Leverage

One of the new models of leverage is working capital leverage which is used to locate the investment in working capital or current assets in the company.

Working capital leverage measures the sensitivity of return in investment of charges in the level of current assets.

Capital Structure

Introduction

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

Meaning of Capital Structure

Capital structure refers to the kinds of securities and the proportionate amounts that make up capitalization. It is the mix of different sources of long-term sources such as equity shares, preference shares, debentures, long-term loans and retained earnings.

The term capital structure refers to the relationship between the various long-term source financing such as equity capital, preference share capital and debt capital. Deciding the suitable capital structure is the important decision of the financial management because it is closely related to the value of the firm.

Capital structure is the permanent financing of the company represented primarily by long-term debt and equity.

Definition of Capital Structure

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

According to the definition of **Gerestenbeg,** "Capital Structure of a company refers to the composition or make up of its capitalization and it includes all long-term capital resources".

3.2 .1 Meaning Of Capital Structure

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

Financial Structure = Total liabilities

Or

Financial Structure = Capital Structure + Current liabilities.

Financial Structures	Capital Structures
1. It includes both long-term and short-term sources of funds	1. It includes only the long-term sources of funds.
2. It means the entire liabilities side of the balance sheet.	2. It means only the long-term liabilities of the company.
3. Financial structures consist of all sources of capital.	3. It consist of equity, preference and retained earning capital. 4. It is one of the major determinations of the value of the firm.

Optimum Capital Structure

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

Optimum capital structure may be defined as the capital structure or combination

of debt and equity, that leads to the maximum value of the firm.

.2 Objectives of Capital Structure

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

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

Forms of Capital Structure

Capital structure pattern varies from company to company and the availability of finance. Normally the following forms of capital structure are popular in practice.

- Equity shares only.
- Equity and preference shares only.
- Equity and Debentures only.
- Equity shares, preference shares and debentures.

Factors Determining Capital structure

Leverage

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

Cost of Capital

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

- **Nature of the business:** Use of fixed interest/dividend bearing finance depends upon the nature of the business. If the business consists of long period of operation, it will apply for equity than debt, and it will reduce the cost of capital.
- **Size of the company:** It also affects the capital structure of a firm. If the firm belongs to large scale, it can manage the financial requirements with the help of internal sources. But if it is small size, they will go for external finance. It consists of high cost of capital.
- **Legal requirements:** Legal requirements are also one of the considerations while dividing the capital structure of a firm. For example, banking companies are restricted to raise funds from some sources.
- **Requirement of investors:** In order to collect funds from different type of investors, it will be appropriate for the companies to issue different sources of securities.

Cost Of Capital And Valuation

- Every rupee invested in a firm has a cost
- It is the minimum return expected by the suppliers.
- Debt is the cheaper source of finance due to (I) fixed rate of interest on debt (ii) legal obligation to pay interest (iii) repayment of loan (iv) priority at the time of winding up of the company
- Equity shares , not legal obligation to pay dividend and shareholders undertake more risk, investment is repaid at the time of winding up after paying to others
- Preference capital is also cheaper, less risk involved, fixed rate of dividend payable and priority given at the time of winding up of the company

Cash flow ability to service debt

- Firm generating larger and stable cash inflow use more debt in capital structure
- Debt implies burden of fixed charge due to the fixed payment of interest and principal
- Whenever firm wants to raise additional funds ,it should estimate, project future cash inflow to cover the fixed charges

Nature and size of firm

- All public utility has different capital structure as compared to manufacturing concern
- Public utility employ more debt because of stable and regularity of earnings
- Concern cannot provide stable earnings will depend on equity shares
- Small companies depend on owned capital it is very difficult to raise long term loans

Control

- Whenever additional funds are required by firm the management should raise without any loss of control over the firm
- If firm issue equity shares then the control of existing share holder is diluted
- So it might be raised by debt or preference capital
- Preference share and debt do not have voting right.

Flexibility

- Capital structure should be flexible
- It should be capable of being adjusted according to the needs of the changing condition
- It should be possible to raise additional funds with mush risk and delay.
- Redeemable preference shares and convertible debenture is preferred for flexibility

Requirement of investors

- Requirement is the another factor that influence the capital structure of the firm
- It is necessary to meet requirement of institutional as well as investor when debt financing is used
- Investors 3 kinds
  Bold investor- takes all type of risk; prefer capital gains and control – so equity capital is preferred

Over-cautious – prefer safety of investment and stability in returns – so debenture is preferred
Less cautious - prefer stability in return – so preference share capital is used.

Capital market condition

- Capital market conditions do not remain same forever.
- Sometime depression or may be boom in the market
- Share market depressed, then company should not issue equity capital as investor prefer safety
- Boom period, firm must issue equity shares.

Asset structure

- The liquidity and composition of assets should kept in mind while selecting capital structure.
- Fixed asset contribute the major portion of the company then company should raise long-term debt.

Purpose of financing

- Funds are required for productive purpose – debt financing is suitable because the company can pay interest out of profit generated.
- Funds are needed for unproductive or general development – company prefer equity capital

Period of finance

- The period is an important factor to be kept in mind while selecting appropriate capital mix
- Finance required for limited period (7 years) – debenture should be preferred
- Redeemable preference shares is also used for limited period
- Funds needed for permanent basis equity share capital is more appropriate.

Designing Capital structure

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

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

Traditional Approach

It is the mix of Net Income approach and Net Operating Income approach. Hence, it is also called as intermediate approach. According to the traditional approach, mix of debt and equity capital can increase the value of the firm by reducing overall cost of capital up to certain level of debt. Traditional approach states that the K_O decreases

only within the responsible limit of financial leverage and when reaching the minimum level, it starts increasing with financial leverage.

Assumptions

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

- There are only two sources of funds used by a firm; debt and shares.
- The firm pays 100% of its earning as dividend.
- The total assets are given and do not change.
- The total finance remains constant.
- The operating profits (EBIT) are not expected to grow.
- The business risk remains constant.
- The firm has a perpetual life.
- The investors behave rationally.

Net Income (NI) Approach

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

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

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

- There are no corporate taxes.
- The cost debt is less than the cost of equity.
- The use of debt does not change the risk perception of the investor.

where

$V = S+B$

V = Value of firm

S = Market value of equity

B = Market value of debt

Market value of the equity can be ascertained by the following formula:

$S = NI / K_e$

where

NI = Earnings available to equity shareholder

K_e = Cost of equity/equity capitalization rate

Format for calculating value of the firm on the basis

Net operating income (EBIT) Less: interest on debenture (i)	XXX XXX XXX
Earnings available to equity holder (NI) Equity capitalization rate (K_e) Market value of equity (S) Market value of debt (B)	XXX XXX XXX XXX XXX%

Net Operating Income (NOI) Approach

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

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

NI approach is based on the following important assumptions;

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

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

$$V = \text{EBIT} / K0$$

Modigliani and Miller Approach

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

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

- There is a perfect capital market.
- There are no retained earnings.
- There are no corporate taxes.
- The investors act rationally.
- The dividend payout ratio is 100%.
- The business consists of the same level of business risk.

Dividend Policy

The term dividend refers to that part of profits of a company which is distributed by the company among its shareholders. It is the reward of the shareholders for investments made by them in the shares of the company. The investors are interested in earning maximum return to maximize their wealth.

A firm needs funds to meet its long-term growth. If a company pays most of the profit as dividend, then for business requirement or further expansion then it will have to depend on outsiders for funds. Such as issue of debt or new shares.

Firms decision to pay dividend in equitable proportion of dividend and retained earnings.

3.5.1 Determinants Of Dividend Policy

1. Legal restrictions

Legal provision related to dividends are laid down in sec 93,205,205A, 206 and 207 of companies act.Dividend can be paid only out of current profit or past profit after providing depreciation Company providing more than 10% dividend to transfer certain percentage of current year profit to reserves.

2. Magnitude and trend of earnings

The amount and trend of earnings is an important in dividend policy.Dividend can be paid only out of present or past year's profit; earnings of a company fix the upper limit on dividends.Past trend is kept in mind while decision dividend decision

3. Desire and type of shareholders

Discretion to declare dividend or not is decided by the board of directors.Directors give importance to the desire of the shareholder in declaration of dividends.Desire for dividend depends on their economic status.Investor such as retired person, widows and other economically weaker person view dividend as a source of funds to meet their day-to-day living expenses – the company will pay regular dividend.Investor with high income tax bracket will not prefer current dividend they will expect only capital gains.

4. Nature of industry

Nature of industry to which the company is engaged also affects dividend policy.Certain industry has steady and stable demand irrespective of prevailing economic condition. Eg : people used to drink liquor both in boom and in recession. Such firm gets regular earning and hence follows consistent dividend policy.Earning are uncertain in such case conservative dividend policy is used.Such firms should retain substantial part of their current earnings during boom period in order to provide funds to pay dividends in recession period

5. Age of the company

Age also influence the dividend decision of the company.Newly established concern has limit in payment of dividend and retain substantial part for financing future growth and development
Older company has sufficient reserves can pay liberal dividends.

6. Future financial requirement

Future financial requirement is to be considered while deciding dividend.Company has profitable investment opportunities then the firm will pay limited amount as dividend and invest the remaining amount.If there is no investment opportunities then the company will pay more dividend

7. Government economic policy

The dividend policy of a firm has also to be adjusted to the economic policy of the government

In 1974 and 1975 companies were allowed to pay dividends not more than 33 % of their profits or 12% on paid-up value of the shares, whichever was lower

8. Taxation policy

A high or low rate of business taxation affect the net earnings of company and thereby its dividend policy.A firm's dividend policy may be dictated by the income-tax status of its shareholders. If the dividend income of shareholders is heavily taxed being in high income bracket, then the shareholder will prefer capital gains and bonus shares.

Aspects Of Dividend Policy

Relevance Of Dividend

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

Walter's Model

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

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

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

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

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

Assumptions

Walters model is based on the following important assumptions:

1. The firm uses only internal finance.

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

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

Criticism of Gordon's Model

Gordon's model consists of the following important criticisms:

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

Ke and r cannot be constant in the real practice.

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

Practical aspects of dividend policy

Two important dimensions of a firms dividend policy are:

* Quantum of the average payout ratio

* Stability of dividends over a time period

These two dimensions are conceptually distinct from one another.

The considerations which are relevant for determining the average payout ratio are:

Funds requirements.
Liquidity.
Access to external sources of financing.
Shareholdersâ€™ preferences.
Differences in the cost of external equity and retained earnings.
Control&Taxes.

Irrespective of the long-run payout ratio followed, the fluctuations in the year-to-year dividend may be determined mainly by one of the two guidelines.

(i) Stable dividend payout ratio
(ii) Stable dividends or steadily changing dividends. Firms generally follow a policy of stable dividends or gradually rising dividends.

Since internal equity (in the form of retained earnings) is cheaper than external equity an important dividend prescription advocates a residual policy to dividends. According to this policy the equity earnings of the firm are first applied to provide equity finance required for supporting investments. The surplus, if any, is distributed as dividends.

Firms subscribing to the residual dividend policy may adopt one of the following approaches: (i) Pure residual dividend policy approach (ii) Fixed dividend payout approach and (iii) smoothed residual dividend approach. The smoothed residual dividend approach, which produces a table and steadily growing stream of dividend, often appears to be the most sensible approach in practice.

Not withstanding the normative prescription of the smoothed residual dividend approach, Lintnerâ€™s classic study of corporate dividend behavior showed that: (i) Most of the firms think primarily in terms of the proportion of earnings that should be paid out as dividends

Forms Of Dividend Policy

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

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

Regular Dividend Policy

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

Stable Dividend Policy

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

Constant dividend per share

Constant payout ratio

Stable rupee dividend plus extra dividend.

Irregular Dividend Policy

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

No Dividend Policy

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

Forms Of Dividends

Cash Dividend

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

Stock Dividend

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

Bond Dividend

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

Property Dividend

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

Share Split

Definition

A corporate action in which a company's existing shares are divided into multiple shares. Although the number of shares outstanding increases by a specific multiple, the total dollar value of the shares remains the same compared to pre-split amounts, because no real value has been added as a result of the split.

Share split

Share split is the process of splitting shares with high face value into shares of a lower face value.

- Alteration of shares
- Increase the number of outstanding shares
- Approval from board of directors

Reasons of share splits

- The price of their stock exceeds the amount smaller investors would be willing to pay. it is aimed at making the stock more affordable and liquid from retail investors point of view

- There are more buyers and sellers of shares trading Rs 100 than say Rs 400 as retail shareholders may find low price stocks to be better bargains.

Significance of share splits

- To improve the market liquidity
- To make an investor attention with other high quality securities
- Stock split means of converting odd lot holders into round lot holders
- Round lot holder plays a very important role in a stocks marketability and liquidity on the exchange

CHAPTER 4

WORKING CAPITAL MANAGEMENT

Capital required for a business can be classified into fixed capital and working capital. Every business needs funds for two purposes for its establishment. Working capital is required to carry out day to day expenses. Long term funds are required to create production facilities through

Matching or hedging approach/policy

This approach or policy is a moderate policy that matches assets and liabilities to maturities. Basically, a firm uses long term sources to finance fixed assets and permanent current assets and short term financing to finance temporary current assets

Example

A fixed asset/equipment which is expected to provide cash flow for 8 years should be financed by say 8 years long-term debts .Assuming a firm needs to have additional inventories for 2 months, it will then sought short term 2 months bank credit to match it.

Conservative approach/policy

- Conservative because the firm prefers to have more cash on hands
- Fixed and part of current assets are financed by long-term or permanent funds
- As permanent or long-term sources are more expensive, this leads to "lower risk lower return"
- Having excess cash at off-peak period hence the need to invest the idle or excess cash to earn returns.

Aggressive approach/policy

The firm wants to take high risk where short term funds are used to a very high degree to finance current and even fixed assets.

purchase of fixed assets such as plant and machinery, land, building; furniture etc. funds are also needed for short-term purpose for the purchase of raw material, payment of wages, and other day-to-day expenses etc. These funds are known as working capital

Long term funds are required to create production facilities through purchase of fixed assets such as plants, machineries, lands, buildings & etc

Short term funds are required for the purchase of raw materials, payment of wages, and other day-to-day expenses. . It is otherwise known as revolving or circulating capital

It is nothing but the difference between current assets and current liabilities. i.e.

Working Capital = Current Asset – Current Liability.

Concept Of Working Capital

- ❖ Balance sheet concept
- ❖ Operating cycle or circular flow concept

Balance sheet concept

- Gross Working capital- It is the capital invested in the total current asset of the enterprise
- Net working capital- It is the excess of current assets over over current liabilities

Net working capital = current Assets – Current Liabilities

KINDS OF WORKING CAPITAL

- ❖ On the basis of concept
- ❖ On the basis of time

On the Basis of Concept

- ❖ Gross working capital
- ❖ Net working capital

On the Basis of time

Permanent or fixed working capital

It is the minimum amount which is required to ensure effective utilization of fixed facilities and for maintaining the circulation of current assets

- ❖ Regular working capital – circulation of current asset from cash to inventories and from inventories to receivables and from receivable to cash and so on.
- ❖ Reserve working capital – excess the amount of regular working capital which may be provided for contingencies that may arise at unstated period such as strikes, rise in prices, depression etc

Temporary or variable working capital

It is the amount of working capital which is required to meet seasonal demands.

It is classified in to seasonal and special working capital.

- Seasonal working capital – to meet the seasonal needs of the enterprise
- Special working capital – to meet special exigencies such as launching of extensive marketing campaign for conducting research etc.

Need Of Working Capital Policy The

various working capital policies are

Liquidity policies

Under this policy, finance manager will increase the amount of liquidity for reducing the risk of business. If business has high volume of cash and bank balance, then business can easily pays his dues at maturity. But finance manger should not forget that the excess cash will not produce and earning and return on investment will decrease. So liquidity policy should be optimized.

Profitability policy

Under this policy, finance manger will keep low amount of cash in business and try to invest maximum amount of cash and bank balance. It will sure that profit of business will increase due to increasing of investment in proper way but risk of business will also increase because liquidity of business will decrease and it can create bankruptcy position of business. So, profitability policy should make after seeing liquidity policy and after this both policies will helpful for proper management of working capital.

Matching or hedging approach/policy

This approach or policy is a moderate policy that matches assets and liabilities to maturities. Basically, a firm uses long term sources to finance fixed assets and permanent current assets and short term financing to finance temporary current assets

Example

A fixed asset/equipment which is expected to provide cash flow for 8 years should be financed by say 8 years long-term debts .Assuming a firm needs to have additional inventories for 2 months, it will then sought short term 2 months bank credit to match it.

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Aggressive approach/policy

The firm wants to take high risk where short term funds are used to a very high degree to finance current and even fixed assets.

Nature or characteristics of Business

- Working capital requirement depends upon the nature of its business
- Public utility undertaking like electricity, water supply and railways need very limited working capital because they offer cash sales only supply services not products.
- Trading and financial firm require less investment in fixed asset but invest large amount in current asset like inventories, receivables and cash.
- Manufacturing undertaking require working capital along with fixed investment

Size of Business / Scale of Operation

- Working capital requirement of a concern influenced by size of its business which is measured in term s of scale of operation
- Size of business unit large- require more working capital
- Size of business unit small – require less working capital

Production Policy

- Production is based on seasonal variation.
- Requirement of working capital depends on production policy.
- Production is seasonal less working capital
- Production is carried out throughout the year the working capital requirement is more

Manufacturing Process / Length of Production cycle

- Longer the process or period of manufacture, larger the amount of working capital is required
- Short the length of production cycle, smaller the amount of working capital requirement

Seasonal Variation

- For certain industries raw material is not available throughout the year.
- They have to buy raw material in bulk during the season and process them during the entire year
- A huge amount is blocked in the form of inventories during such season which give rise to more working capital requirement.
- During busy season a firm requires larger working capital than in the slack season.

Working capital cycle

- In manufacturing concern, the working capital cycle starts with the purchase of raw material and ends with the realization of cash from the sale of finished products.

Business Cycle

- It refers to alternate expansion and contraction in general business activity.
- Boom period when business is prosperous – larger amount of working capital due to increase in sales
- Depression – sales decline, difficulties are faced in collection from debtors and firms may have larger amount of working capital requirement.

Earning capacity of the Firm

- ❖ Some firms have more earning capacity than others due to quality of their products, monopoly condition etc.
- ❖ Such firms with high earning capacity may generate cash profit from operation and to contribute to their working capital.
- ❖ Dividend policy influences the requirement of working capital.

Issues & Estimation Of Working Capital Requirement

- ❖ Components such as cash, marketable securities, receivables and inventory
- ❖ Working capital management requires much of the financial managers time.
- ❖ It has greater signifivcance for all firms but it is very critical for small firms
- ❖ The need for working capital is directly related to the firms growth.

Performa of the Working Capital Requirement

Current Assets:			
i) Cash		XXXX	
ii) Debtors	XXXX		
iii) Stocks	XXXX		
iv) Advanced payments		XXXX	
v) Others	XXXX		
Less:			
Current liabilities			
i) Creditors	XXXX		
ii) Lag in payment of expenses		XXXX	
iii) Outstanding expenses if any		XXXX	
Working capital (Current assets-Current liabilities)			XXXX
Add: Provision for contingencies	XXXX		
Net working capital required			XXXX

Sources Of Working Capital

Working Capital requirement can be normalized from short-term and long-term sources. Each source will have both merits and limitations up to certain extract. Uses of Working Capital may be differing from stage to stage.

Internal sources

- Retained Earnings
- Reserve and Surplus
- Depreciation Funds etc.

External sources Public Deposits

- Loans from Banks and Financial Institutions

- Advances and Credit
- Financial arrangements like Factoring, etc.

Determining the Finance Mix

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

1. Hedging or matching approach
2. Conservative approach
3. Aggressive approach.

Hedging Approach

Hedging approach is also known as matching approach. Under this approach, the business concern can adopt a financial plan which matches the expected life of assets with the expected life of the sources of funds raised to finance assets.

When the business follows matching approach, long-term finance shall be used to fixed assets and permanent current assets and short-term financing to finance temporary or variable assets.

- Temporary Current Assets
- Short-term

Conservative Approach

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

Aggressive Approach

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

Receivables Management Concept of

Receivables Management

The receivables are normally arising out of the credit sales of the firm.

What is meant by the accounts receivable?

It is an asset owed to the firm by the buyer out of the credit sales with the terms and conditions of repayment on an agreed time period.

4.2 .1 Meaning of the receivables management

The receivables out of the credit sales crunch the availability of the resources to meet the day today requirements. The acute competition requires the firm to sustain among the other competitors through more volume of credit sales and in the intention of retaining the existing customers. This requires the firm to sell more through credit sales only in order to encourage the buyers to grab the opportunities unlike the other competitors they offer in the market.

4.2 .2 Objectives of Accounts Receivables

i) Achieving the growth in the volume of sales
ii) Increasing the volume of profits
iii) Meeting the acute competition

4.2 .3 Cost of Maintaining the Accounts Receivables

Capital cost

Due to insufficient amount of working capital with reference to more volume of credit sales which drastically affects the existence of the working capital of the firm. The firm may be required to borrow which may lead to pay certain amount of interest on the borrowings. The interest which is paid by the firm due to the borrowings in order to meet the shortage of working capital is known as capital cost of receivables.

Administrative cost

Cost of maintaining the receivables.

Collection cost

Whatever the cost incurred for the collection of the receivables are known as collection cost.

Defaulting cost

This may arise due to defaulters and the cost is in other words as cost of bad debts and so on.

.4 Factors Affecting the Accounts Receivables

i) Level of sales

The volume of sales is the best indicator of accounts receivables. It differs from one firm to another.

ii) Credit policies

The credit policies are another major force of determinant in deciding the size of the accounts receivable. There are two types of credit policies viz lenient and stringent credit policies.

Lenient credit policy

Enhances the volume of the accounts receivable due to liberal terms of the trade which normally encourage the buyers to buy more and more.

Stringent credit policy

It curtails the motive buying the goods on credit due stiff terms of the trade put forth by the supplier unlike the earlier.

iii) Terms of trade

The terms of the trade are normally bifurcated into two categories viz credit period and cash discount

Credit period

Higher the credit period will lead to more volume of receivables, on the other side that will lead to greater volume of debts from the side of buyers.

Cash discount

If the discount on sales is more, that will enhance the volume of sales on the other hand that will affect the income of the enterprise.

Management of Accounts Payable/Financing the Resources

It is more important at par with the management of receivable, in order to avail the short term resources for the smooth conduct of the firm.

Factoring

Factoring is a service of financial nature involving the conversion of credit bills into cash. Accounts receivables, bills recoverables and other credit dues resulting from credit sales appear, in the books of accounts as book credits. Here the risk of credit, risk of credit worthiness of the debtor and as number of incidental and consequential risks are involved. These risks are taken by the factor which purchase these credit receivables without recourse and collects them when due. These balance-sheet items are replaced by cash received from the factoring agent.

History

Roman

Factoring has not been documented as having been used by the Romans. However, the word 'factoring' has a Roman root. It is derived from the Latin verb 'facio' which can be translated as "he who does things". In Roman times this referred to agent of a property owner, i.e., his business manager. Though the root word has nothing to do with the industry, as they attempt to help their clients through their financial problem.

Factoring in United States

Factoring arose in the United States during 19th century, as direct result of the inability of manufacturers to maintain constant and timely communications with their sales forces in the field. At that time, as the case today, the sales force was paid by

communications. If all sales were at the risk of the manufacturer, the salesman had no incentive to exercise prudence in connection with whom to sell to on credit.

On the other hand, the distant manufacturer was not in the position to make the credit risk on sales. The risk of defective or non-conforming merchandise remained with the manufacturer. The credit risk was now separated from disputes as to quality, workmanship and conformity of goods. Soon after, the salesman began to act as independent sales agencies. It was common for them to act for more than one manufacturer. Still later the sales function was separated from the credit function and "Traditional Factoring" as the people know, it had, at that point, developed in the United States.

History Factoring in India

Banks provide generally bill collection and bill discounting and with recourse. They provide working capital finance based on these bills classified by amounts maturity wise. Such bills if accumulated in large quantities will burden the liquidity and solvency position of the company and reduces the credit limits from the banks. It is therefore felt necessary that the company assigns these book debts to a factor for taking them off from the balance sheet. This reduces the workload, increases the solvency and improves the liquidity position of the company.

Vaghul Committee report on money market reforms has confirmed the need for factoring services to be developed in India as part of the money market instruments. Many new instruments were already introduced like Participation certificates, Commercial papers, Certificate of deposits etc., but the factoring service has not developed to any significant extent in India.

The Reserve Bank allowed some banks to set up subsidiaries on a zonal basis to take care of the requirements of companies in need of such service. Thus Canara Bank, State Bank of India, Punjab National Bank and a few other banks have been permitted to set up jointly some factor, for Eastern, Western, Northern, and Southern Zones. The progress of the activity did not show any worth while dimension, so far.

Modus of Operations

If a company wants to factor its receivables it submits a list of customers, their credit rating, amount involved in maturity and other terms. If the factor scrutinizes the list of buyers and they are in the approved list, the factor gives its decision of the clients and the amounts they may take all receivables on wholesale discounting basis. The factor then takes all the documents in respect of approved list and pays up to 80% to 90% of the amount due less commission to the company which in turn removes these instruments, from base of accounts and shows cash flow as against bills receivables written off.

Factoring services rendered the following services:

- Purchase of book debts and receivables.
- Administration of sales ledger of the clients.

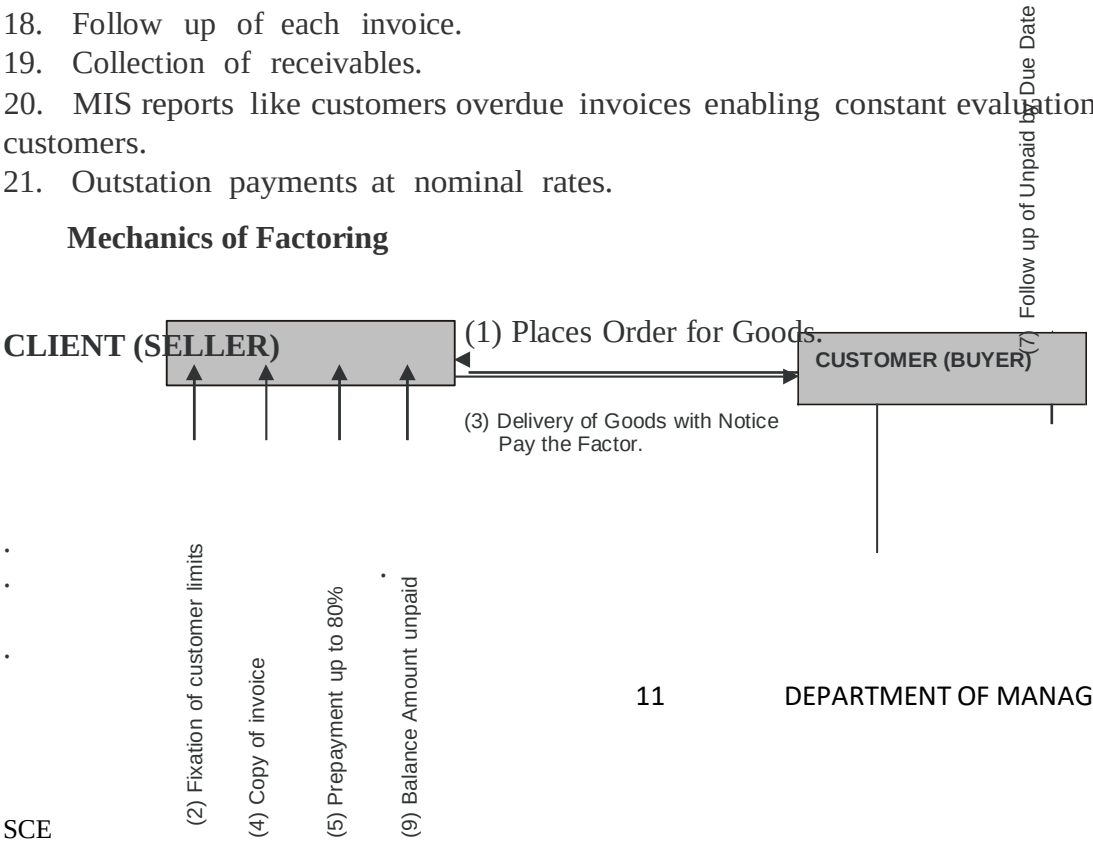
- ❖ Prepayments of debts partially or fully.
- ❖ Collection of book debts or receivables or with or without documents.
- ❖ Covering the credit risk of the suppliers.
- ❖ Dealing in book debts of customers without recourse.

Why Factoring?

Factoring is one of the most important and unavoidable part of the business concern which meets the short-term financial requirement of the concern. Factoring is favorable to the industrial concern for the following reasons.

. 1 . Quickest response–Customer oriented timely decisions and decision on sanction within a week.
2. Low cost.
3. Low service charges (0.1% to 0.3%).
4. Low margin (20% onwards).
5. Instant finance–against each invoice.
6. Generous grace period.
7. Improves cashflow.
8. Substitutes sundry creditors.
9. Increases sales through better terms on sales.
10. More operating cycles and more profits.
11. No upfront recovery of charges.
12. Interest on daily products.
13. Very easy to operate.
14. Flexible credit periods.
15. No penal interest up to grace period.
16. Empowers cash purchase.
17. Improves credit reputation.
18. Follow up of each invoice.
19. Collection of receivables.
20. MIS reports like customers overdue invoices enabling constant evaluation of customers.
21. Outstation payments at nominal rates.

Mechanics of Factoring



Mechanics of Factoring

The following are the steps for factoring:

- The customer places an order with the seller (client).
- The factor and the seller enter into a factoring agreement about the various terms of factoring.
- Sale contract is entered into with the buyer and the goods are delivered. The invoice with the notice to pay the factor is sent alongwith.
- The copy of invoice covering the above sale to the factor, who maintains the sale ledger.
- The factor prepays 80% of the invoice value.
- The monthly statement are sent by the factor to the buyer.
- Follow up action is initiated if there are any unpaid invoices.
- The buyer settles the invoices on the expiry of the credit period allowed.
- The balance 20% less the cost of factoring is paid by the factor to the client.

Types Of Factoring

- **Notified factoring**
  Here, the customer is intimated about the assignment of debt to a factor, also directed to make payments to the factor instead of to the firm. This is invariably done by a legend and the invoice has been assigned to or sold to the factor.
- **Non-notified or confidential factoring**
  Under this facility, the supplier/factor arrangement is not declared to the customer unless or until there is a breach of the agreement on the part of the client, or exceptionally, where the factor considers himself to be at risk.
- **With recourse or without recourse factoring**
  Under recourse arrangements, the client will carry the credit risk in respect of debts sold to the factor. In without recourse factoring, the bad debts are borne by the factor.
- **Bank Participation Factoring**
  The client creates a floating charge on the factoring reserves in favour of banks and borrow against these reserves.
- **Export Factoring**
  There is usually the presence of two factors: an export factor and an import factor. The former buys the invoices of a client exporter and assumes the risk in case of default by the overseas customers. Because of distance, different condition or lake of information, the export factor usually forms out to an agent, known as the import factor, the administrative job of servicing the debts owed to its exporting clients.

Difference between Factoring And Forfeiting

The following are differences between factoring and forfeiting

Sl. No.	Characteristic	Factoring	Forfaiting
1.	Suitability	For transactions with short-term maturity	For transactions with medium-term maturity period
2.	Recourse	Can be either with or without recourse	Can be without recourse only
3.	Risk	Risk can be transferred to seller	All risks are assumed by the forfaiter
4.	Cost	Cost of factoring is usually borne by the seller	Cost of forfeiting is borne by the overseas buyer (importer)
5.	Coverage	Covers a whole set of jobs at a predetermined price	Structuring and costing is done on a case-to-case basis
6.	Extent of Financing	Only a certain percent of receivables factors is advanced	Hundred percent finance is available
7.	Basis of financing	Financing depends on the credit standing of the exporter	Financing depends on the financial standing of the availing bank
8.	Services	Besides financing a Factor also provides other services such as ledger administration etc.	It is a pure financing arrangement
9.	Exchange fluctuations	No security against exchange rate fluctuations	A forfeiter guards against exchange rate fluctuations for a premium charge
10.	Contract	Between seller and Factor	Between exporter and Forfaiter

Inventory M anagement

Introduction

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

A proper planning of purchasing of raw material, handling, storing and recording is to be considered as a part of inventory management. Inventory management means, management of raw materials and related items. Inventory management considers

what to purchase, how to purchase, how much to purchase, from where to purchase, where to store and when to use for production etc.

Meaning

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

Kinds of Inventories

Inventories can be classified into five major categories.

Raw Material

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

Work in Progress

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

Consumables

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

Finished Goods

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

Spares

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

Objectives of Inventory Management

The major objectives of the inventory management are as follows:

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

Techniques of Inventory Management

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

Inventory management techniques may be classified into various types:

A. Techniques based on the order quantity of Inventories

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

Stock Level

Stock level is the level of stock which is maintained by the business concern at all times. Therefore, the business concern must maintain optimum level of stock to smooth running of the business process. Different level of stock can be determined based on the volume of the stock.

Minimum Level

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

Re-order Level

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

Re-order level=maximum consumption × maximum Re-order period.

Maximum Level

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

Maximum level = Re-order level + Re-order quantity
– (Minimum consumption × Minimum delivery period)

Danger Level

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

Lead Time

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

Safety Stock

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

Economic Order Quantity (EOQ)

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

EOQ can be calculated with the help of the mathematical formula:

$$EOQ = 2\sqrt{ab/c}$$

Where,

a = Annual usage of inventories (units)

b = Buying cost per order

c = Carrying cost per unit

Techniques Based On The Classification Of Inventories

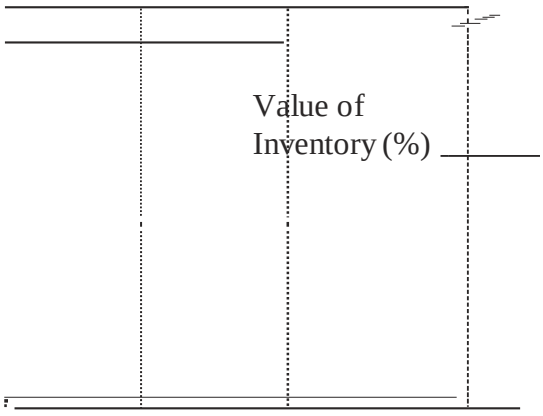
analysis

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

Inventory Breakdown Between Value and Volume

Category	Volume (%)	Value (%)
A B C	10 20 70	70 20 10
Total	100	100

ABC analysis can be explained with the help of the following Graphical presentation.



A B C

Inventories

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

where,

F = Fast moving inventories

N = Normal moving inventories

S = Slow moving inventories

D = Dead moving inventories

VED Analysis

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

V = Vital item of inventories

E = Essential item of inventories

D = Desirable item of inventories

HML Analysis

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

H = High value of inventories

M = Medium value of inventories

L = Low value of inventories

Techniques On The Basis Of Records

A. Inventory budget

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

B. Inventory reports

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

Valuation of Inventories

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

- First in First Out Method (FIFO)
- Last in First Out Method (LIFO)
- Highest in First Out Method (HIFO
- Nearest in First Out Method (NIFO)
- Average Price Method
- Base Stock Method
- Standard Price Method
- Market Price Method

Cash Management

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

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

Objectives of Cash Management

Meeting the cash requirement

Meeting of cash requirements on time which normally involves in the maintenance of the goodwill of the firm. The firm should keep the adequate cash balances to meet the requirement which are greater in importance.

Minimising the funds locked up in the cash balances

The funds locked up in the form of cash resources should be more, but it should only to the tune of the requirement.

Basic Problems of Cash Management

Controlling level of cash

(a) **Preparing the cash budget:** Through the preparation of the budget, the cash requirement could be identified which would normally facilitate the firm to trim off the excessive cash in holding.
(b) **Providing room for unpredictable discrepancies:** The separate amount should be maintained for the purpose to meet out the discrepancies which are not easily foreseen.

Controlling of inflows of cash

(a) Concentration banking

The amount of collection from the local branches are normally deposited in a particular account of the firm, as soon as the deposit has reached the certain limit , the amount in the respective branch account will be transferred to the account at where the firm maintains in the head office. This process of transfer is normally taking place only through telegraphic transfer during the early days but on now a day the anywhere banking is facilitated to transfer the amount of deposit instantaneously.

(b) Lock box system

The process of collection is carried out with the help of local post offices only in order to avoid the postal delays in the transit. This system enhances the speed of the collection at rapid and finally the local branch messenger collects the cheques from the parties through specified post box allocated for the process of collection.

Controlling of cash outflows

(a) Centralizing of disbursing the payments

The centralizing the process of payment may facilitate the enterprise to take advantage of time in settling the payments i.e., reduces the need of immediate cash requirements.

(b) Stretching payment schedule

It is another methodology to avail the maximum possible credit period to postpone the payment by making use of the cash resources most effectively.

Investing the excessive cash surplus

(a) Determine the need of the surplus cash

Identify the excessive cash resources which are kept simply idle more than the requirement.

(b) Determination of the various avenues of investment

After identifying the various investment opportunities , the excessive cash resources should be invested to earn appropriate rate of return during the slack season at when the firm does not require greater volume of working capital and vice versa.

Cash Management Models

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

1. Baumol model

The basic objective of the Baumol model is to determine the minimum cost amount

of cash conversion and the lost opportunity cost.

It is a model that provides for cost efficient transactional balances and assumes that the demand for cash can be predicated with certainty and determines the optimal conversion size.

2. Orgler's model

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

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

Working Capital Finance

Working Capital Financing By Banks

A commercial bank is a business organization which deals in money i.e. lending and borrowing of money. They perform all types of functions like accepting deposits, advancing loans, credit creation and agency functions. Besides these usual functions, one of the most important functions of banks is to finance working capital requirement of firms. Working capital advances forms major part of advance portfolio of banks. In determining working capital requirements of a firm, the bank takes into account its sales and production plans and desirable level of current assets.

Cash Credit – Under this facility, the bank specifies a predetermined limit and the borrower is allowed to withdraw funds from the bank up to that sanctioned credit limit against a bond or other security. However, the borrower cannot borrow the entire sanctioned credit in lump sum; he can draw it periodically to the extent of his requirements. Similarly, repayment can be made whenever desired during the period. There is no commitment charge involved and interest is payable on the amount actually utilized by the borrower and not on the sanctioned limit.

Overdraft – Under this arrangement, the borrower is allowed to withdraw funds in excess of the actual credit balance in his current account up to a certain specified limit during a stipulated period against a security. Within the stipulated limits any number of withdrawals is permitted by the bank. Overdraft facility is generally available against the securities of life insurance policies, fixed deposits receipts, Government securities, shares and debentures, etc. of the corporate sector. Interest is charged on the amount actually withdrawn by the borrower, subject to some minimum (commitment) charges.

Loans – Under this system, the total amount of borrowing is credited to the current account of the borrower or released to him in cash. The borrower has to pay interest on the total amount of loan, irrespective of how much he draws. Loans are payable either on demand or in periodical instalments. They can also be renewed from time to time. As a form of financing, loans imply a financial discipline on the part of the borrowers.

Bills Financing – This facility enables a borrower to obtain credit from a bank against its bills. The bank purchases or discounts the bills of exchange and promissory notes of the borrower and credits the amount in his account after deducting discount. Under this facility, the amount provided is covered by cash credit and overdraft limit. Before purchasing or discounting the bills, the bank satisfies itself about the creditworthiness of the drawer and genuineness of the bill.

Letter of Credit – While the other forms of credit are direct forms of financing in which the banks provide funds as well as bears the risk, letter of credit is an indirect form of working capital financing in which banks assumes only the risk and the supplier himself provide the funds.

Working Capital Loan – Sometimes a borrower may require additional credit in excess of sanctioned credit limit to meet unforeseen contingencies. Banks provide such credit through a Working Capital Demand Loan (WCDL) account or a separate 'non–operable' cash credit account..

Trade Credit

Trade credit is a form of short term financing common to almost all businesses. In fact, it is the largest source of short term funds for business firms collectively. In an advanced economy, most buyers are not required to pay for goods upon delivery but are allowed a short deferment period before payment is due. During this period, the seller of the goods extends credit to the buyer. Because suppliers generally are more liberal in the extension of credit than are financial institutions, small companies in particular rely on trade credit.

Three types of trade credit

- open account
- notes payable&trade acceptances

by far the most common type is the open account arrangement. The seller ships goods to the buyer and sends an invoice that specifies the goods shipped, the price, the total amount due, and the terms of the sale. Open account credit derives its name from the fact that the buyer does not sign a formal debt instrument evidencing the amount owed the seller. The seller extends credit based upon a credit investigation of the buyer.

In some situations, promissory notes are employed instead of open account credit. The buyer signs a note that evidences a debt to the seller. The note itself calls for the payment of the obligation at some specified future date. Promissory notes have been used in businesses such as those dealing in furs and jewelry. This arrangement is employed when the seller wants the buyer to recognize the debt formally. For example, a seller might request a promissory note from a buyer if the buyer's open account became past due.

A trade acceptance is another arrangement by which the indebtedness of the buyer is recognized formally. Under this arrangement, the seller draws a draft on the buyer, ordering

the buyer to pay the draft at some date in the future. The seller will not release the goods until the buyer accepts the time draft.' Accepting the draft, the buyer designates a bank at which the draft will be paid when it comes due. At that time, the draft becomes a trade acceptance; and depending upon the creditworthiness of the buyer, it may possess some degree of marketability. If the trade acceptance is marketable, the seller of the goods can sell it at a discount and receive immediate payment for the goods. At final maturity, the holder of the acceptance presents it to the desigated bank for collection.

Because the use of promissory notes and trade acceptances is rather limited, the subsequent discussion will be confined to open account trade credit. The terms of sale make a great deal of difference in this type of credit. These terms, specified in the invoice, may be placed in several broad categories according to the net period within which payment is expected and according to the terms of the cash discount.

COD and CBD No, Extension of Credit: COD terms mean cash on delivery of the goods. The only risk the seller undertakes in this type of arrangement is that the buyer may refuse the shipment. Under such circumstances, the seller will be stuck with the shipping costs. Occasionally, a seller might ask for cash before delivery (CBD) to avoid all risk. Under either COD or CBD terms, the seller does not extend credit. CBD terms must be distinguished from progress payments, which are very common in certain industries. With progress payments, the buyer pays the manufacturer at various stages of production prior to actual delivery of the finished product. Because large sums of money are tied up in work in progress, aircraft manufacturers request progress payments from airlines in advance of the actual delivery of aircraft.

Net Period No Cash Discount: When credit is extended, the seller specifies the period of time allowed for payment. The terms "net 30" indicate that the invoice or bill must be paid within 30 days. If the seller bills on a monthly basis, it might require such terms as "net/15 EOM," which means that all goods shipped before the end of the month must be paid for by the fifteenth of the following month.

Net Period with Cash Discount In addition to extending credit, the seller may offer a cash discount if the bill is paid during the early part of the net period. The terms "2/10, net 30" indicate that the seller offers a 2 percent discount if the bill is paid within 10 days; otherwise, the buyer must pay the full amount within 30 days. Usually, a cash discount is offered as an incentive to the buyer to pay early.

Datings: In a seasonal business, sellers frequently use datings to encourage customers to place their orders before a heavy selling period. A manufacturer of lawn owners may give seasonal datings specifying that any shipment to a dealer in the winter or spring does not have to be paid for until summer.

Bank Finance

Banks generally do not provide working capital finance without adequate security. The nature and extent of security offered play an important role in influencing the decision

of the bank to advance working capital finance. The bank provides credit on the basis of following modes of security:

Hypothecation

Under this mode of security, the banks provide working capital finance to the borrower against the security of movable property, generally inventories. It is a charge against property for the amount of debt where neither ownership nor possession is passed to the creditor. In the case of default the bank has the legal right to sell the property to realise the amount of debt.

Pledge

A pledge is bailment of goods as security for the repayment of a debt or fulfillment of a promise. Under this mode, the possession of goods offered as security passes into the hands of the bank. The bank can retain the possession of goods pledged with it till the debt (principal amount) together with interest and other expenses are repaid. . In case of non-payment of loan the bank may either; Sue the borrower for the amount due; Sue for the sale of goods pledged; or After giving due notice, sell the goods.

Lien

Lien means right of the lender to retain property belonging to the borrower until he repays the debt. It can be of two types: (i) Particular lien and (ii) General lien.

Particular lien is a right to retain property until the claim associated with the property is fully paid. On the other hand, General lien is applicable till all dues of the lender are paid. Banks usually enjoy general lien.

Mortgage

Mortgage is the transfer of a legal or equitable interest in a specific immovable property for the payment of a debt. In case of mortgage, the possession of the property may remain with the borrower, while the lender enjoys the full legal title. The mortgage interest in the property is terminated as soon as the debt is paid. Mortgages are taken as an additional security for working capital credit by banks.

Charge

Where immovable property of one person is made security for the payment of money to another and the transaction does not amount to mortgage, the latter person is said to have a charge on the property and all the provisions of simple mortgage will apply to such a charge. A charge may be created by the act of parties or by the operation of law. It is only security for payment.

Commercial Paper

Commercial paper is a fairly new instrument which was originated in US. It helps private companies with good credit rating to raise money directly from the market and

investors. They raise money by issuing commercial papers in tight money market conditions through sources other than banks. CP is a fairly popular instrument and exists in most of the developed economies. Large corporate and private companies find CPs cheaper, simpler and more flexible due to their better credit rating.

By definition, CP is a promissory note issuing by leading, reputed and highly rated corporate to raise money for short-term requirements. In India, the maximum period (tenor) is 1 year.

Main Characteristics of Commercial Paper are

- Commercial paper is a short term debt instrument (money market instrument) issued by both financial and non-financial companies.
- These debt instruments are unsecured in nature, that is, they do not require any change to be created on the company's assets.
- If the company fails to pay back the investors the amount of commercial papers after their maturity, the investors cannot sell a particular asset and recover their dues.
- Commercial papers are discount instruments, which mean they are issued at discount and redeemed at face value.
- IT can have different maturity periods but it varies within 1 yeat. In Inda, the matury period varies between 90 days to 365 days.
- In India, RBI regulates the commercial paper instruments. Companies have to adhere to the norms set by the RBI in order to raise money using commercial papers.

Benefits of Commercial papers:

- Investors get higher yield compared to other short-term investments
- These are more liquid in nature
- For the issuer, the rates are economical because they are in direct contact with the investors.
- Issuers can match the exact amount and maturity requirements of investors, and therefore gets favorable exposure to variety of investors.

CHAPTER 5

LONG TERM SOURCES OF FINANCE

Indian Capital &stock Market

• Capital Market/ Securities Market
o Primary capital market
o Secondary capital market
• Money Market
• Debt Market

5.1.2 Capital Market in india

Government Securities Market

This is also known as the Gilt-edged market. This refers to the market for government and semi-government securities backed by the Reserve Bank of India (RBI).

Industrial Securities Market

This is a market for industrial securities i.e. market for shares and debentures of the existing and new corporate firms. Buying and selling of such instruments take place in this market. This market is further classified into two types such as the New Issues Market (Primary) and the Old (Existing) Issues Market (secondary). In primary market fresh capital is raised by companies by issuing new shares, bonds, units of mutual funds and debentures. However in the secondary market already existing i.e old shares and debentures are traded. This trading takes place through the registered stock exchanges. In India we have three prominent stock exchanges. They are the Bombay Stock Exchange (BSE), the National Stock Exchange (NSE) and Over The Counter Exchange of India (OTCEI).

Development Financial Institutions (DFIs) : This is yet another important segment of Indian capital market. This comprises various financial institutions. These can be special purpose institutions like IFCI, ICICI, SFCs, IDBI, IIBI, UTI, etc. These financial institutions provide long term finance for those purposes for which they are set up.

Financial Intermediaries

The fourth important segment of the Indian capital market is the financial intermediaries. This comprises various merchant banking institutions, mutual funds, leasing finance companies, venture capital companies and other financial institutions.

New Issue Market

The primary market refers to the set up by which the industry raises funds by issuing different types of securities. These securities are issued directly to the investors, both individual and institutions. The primary market discharges the important function of transfer of savings, especially of the individual, Government and public sector undertakings.

In the primary market, the new issues of securities are presented in the form of Public issues, Right issues and Private Placements. Its efficient operation is made possible by the financial intermediaries and financial institutions, who arrange long-term financial transactions for the clients.

Issues of the securities in the primary market may be made through

(i) Prospectus,
(ii) Offer for sale
(iii) Private placement. The securities offered

to the public through prospectus are directly subscribed by the investor. The issuing companies widely publicise the offer through various media. The Securities Exchange Board of India (SEBI) has classified various issues in three groups *i.e.*, New issues, Right issues and Preferential issues.

The SEBI has issued various guidelines regarding proper disclosure for investor's protection. These guidelines are required to be duly observed by the companies making issue of capital. The guidelines issued by the SEBI broadly cover the requirements regarding issue of capital by the companies. The guidelines are applicable to all the companies after the repeal of Controller of Capital Issues (CCI) Act 1947.

The boom in the primary capital market, that started in the mid-eighties and accelerated thereafter, started slowing down by 1995. There are several reasons for this slowing down of resource mobilization in the primary market. In particular, the low return on new issues, some resulting in stock market fiasco, seems to have shattered the confidence of the investors.

Long Term Finance

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

Characters of Finance

Security finance consists of the following important characters:

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

Shares

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

Features of Equity Shares

1. **Maturity of the shares:** Equity shares have permanent nature of capital, which has no maturity period. It cannot be redeemed during the lifetime of the company.
2. **Residual claim on income:** Equity shareholders have the right to get income left after paying fixed rate of dividend to preference shareholder. The earnings or the income available to the shareholders is equal to the profit after tax minus preference dividend.
3. **Residual claims on assets:** If the company wound up, the ordinary or equity shareholders have the right to get the claims on assets. These rights are only available to the equity shareholders.
4. **Right to control:** Equity shareholders are the real owners of the company.
5. **Voting rights:** Equity shareholders have voting rights in the meeting of the company with the help of voting right power; they can change or remove any decision of the business concern. Equity shareholders only have voting rights in the company meeting and also they can nominate proxy to participate and vote in the meeting instead of the shareholder.
6. **Pre-emptive right:** Equity shareholder pre-emptive rights. The pre-emptive right is the legal right of the existing shareholders. It is attested by the company in the first opportunity to purchase additional equity shares in proportion to their current holding capacity.
7. **Limited liability:** Equity shareholders are having only limited liability

to the value of shares they have purchased. If the shareholders are having fully paid up shares, they have no liability.

Advantages of Equity Shares

1. **Permanent sources of finance:** Equity share capital is belonging to long-term permanent nature of sources of finance, hence, it can be used for long-term or fixed capital requirement of the business concern.
2. **Voting rights:** Equity shareholders are the real owners of the company who have voting rights. This type of advantage is available only to the equity shareholders.
3. **No fixed dividend:** Equity shares do not create any obligation to pay a fixed rate of dividend.
4. **Less cost of capital:** Cost of capital is the major factor, which affects the value of the company. If the company wants to increase the value of the company, they have to use more share capital because, it consists of less cost of capital (K_e) while compared to other sources of finance.
5. **Retained earnings:** When the company have more share capital, it will be suitable for retained earnings which is the less cost sources of finance while compared to other sources of finance.

Disadvantages of Equity Shares

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

Preference Shares

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

Preference shares may be classified into the following major types:

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

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

Irredeemable Preference Shares

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

Participating Preference Shares

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

Non-Participating Preference Shares

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

Convertible Preference Shares

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

Non-convertible Preference Shares

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

Features of Preference Shares

The following are the important features of the preference

shares:

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

Advantages of Preference Shares

Preference shares have the following important advantages.

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

Disadvantages of Preference Shares

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

deductible expense. Hence, it has disadvantage on the tax deduction point of view.

DEFERRED SHARES

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

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

Debenture

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

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

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

Types of Debentures

Debentures may be divided into the following major types:

1. **Unsecured debentures:** Unsecured debentures are not given any security on assets of the company. It is also called simple or naked debentures. This type of debentures are treaded as unsecured creditors at the time of winding up of the company.
2. **Secured debentures:** Secured debentures are given security on assets of the company. It is also called as mortgaged debentures because these debentures are given against any mortgage of the assets of the company.
3. **Redeemable debentures:** These debentures are to be redeemed on the expiry of a certain period. The interest is paid periodically and the initial investment is returned after the fixed maturity period.
4. **Irredeemable debentures:** These kind of debentures cannot be redeemable during the life time of the business concern.
5. **Convertible debentures:** Convertible debentures are the debentures whose holders have the option to get them converted wholly or partly into shares. These debentures are usually converted into equity shares. Conversion of the debentures may be:

   Non-convertible debentures

   Fully convertible

debentures Partly

convertible debentures

6. **Other types:** Debentures can also be classified into the following types. Some of the common types of the debentures are as follows:
   1. Collateral Debenture
   2. Guaranteed Debenture
   3. First Debenture
   4. Zero Coupon Bond
   5. Zero Interest Bond/Debenture

Features of Debentures

1. **Maturity period:** Debentures consist of long-term fixed maturity period. Normally, debentures consist of 10–20 years maturity period and are repayable with the principle investment at the end of the maturity period.
2. **Residual claims in income:** Debenture holders are eligible to get fixed rate of interest at every end of the accounting period. Debenture holders have priority of claim in income of the company over equity and preference shareholders.
3. **Residual claims on asset:** Debenture holders have priority of claims on Assets of the company over equity and preference shareholders. The Debenture holders may have either specific change on the Assets or floating change of the assets of the company. Specific change of Debenture holders are treated as secured creditors and floating change of Debenture holders are treated as unsecured creditors.
4. **No voting rights:** Debenture holders are considered as creditors of the company.

   Hence they have no voting rights. Debenture holders cannot have the control over the performance of the business concern.
5. **Fixed rate of interest:** Debentures yield fixed rate of interest till the maturity period. Hence the business will not affect the yield of the debenture.

Advantages of Debenture

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

1. **Long-term sources:** Debenture is one of the long-term sources of finance to the company. Normally the maturity period is longer than the other sources of finance.
2. **Fixed rate of interest:** Fixed rate of interest is payable to debenture holders, hence it is most suitable of the companies earn higher profit. Generally, the rate of interest is lower than the other sources of long-term finance.

3. **Trade on equity:** A company can trade on equity by mixing debentures in its capital structure and thereby increase its earning per share. When the company apply the trade on equity concept, cost of capital will reduce and value of the company will increase.
4. **Income tax deduction:** Interest payable to debentures can be deducted from the total profit of the company. So it helps to reduce the tax burden of the company.
5. **Protection:** Various provisions of the debenture trust deed and the guidelines issued by the SEB1 protect the interest of debenture holders.

Disadvantages of Debenture

Debenture finance consists of the following major disadvantages:

1. **Fixed rate of interest:** Debenture consists of fixed rate of interest payable to securities. Even though the company is unable to earn profit, they have to pay the fixed rate of interest to debenture holders, hence, it is not suitable to those company earnings which fluctuate considerably.
2. **No voting rights:** Debenture holders do not have any voting rights. Hence, they cannot have the control over the management of the company.
3. **Creditors of the company:** Debenture holders are merely creditors and not the owners of the company. They do not have any claim in the surplus profits of the company.
4. **High risk:** Every additional issue of debentures becomes more risky and costly on account of higher expectation of debenture holders. This enhanced financial risk increases the cost of equity capital and the cost of raising finance through debentures which is also high because of high stamp duty.
5. **Restrictions of further issues:** The company cannot raise further finance through debentures as the debentures are under the part of security of the assets already mortgaged to debenture holders.

Term loans

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

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

Short-term Loans

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

(a) Cash credit: A cash credit is an arrangement by which a bank allows his customer to borrow money up to certain limit against the security of

the commodity.

(b) Overdraft: Overdraft is an arrangement with a bank by which a current account holder is allowed to withdraw more than the balance to his credit up to a certain limit without any securities.

Development Banks

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

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

Lease Financing

Lease financing is one of the popular and common methods of assets based finance, which is the alternative to the loan finance. Lease is a contract. A contract under which one party, the leaser (owner) of an asset agrees to grant the use of that asset to another leaser, in exchange for periodic rental payments.

Lease is contractual agreement between the owner of the assets and user of the assets for a specific period by a periodical rent.

Definition

Lease may be defined as a contractual arrangement in which a party owning an asset provides the asset for use to another, the right to use the assets to the user over a certain period of time, for consideration in form of periodic payment, with or without a further payment.

According to the equipment leasing association of UK definition, leasing is a contract between the lesser and the leaser for hire of a specific asset selected from a manufacturers or vender of such assets by the lessee. The leaser retains the ownership of the asset. The leassee pass possession and uses the asset on payment for the specified period.

Elements of Leasing

- **Parties:** These are essentially two parties to a contract of lease financing, namely the owner and user of the assets.
- **Leaser:** Leaser is the owner of the assets that are being leased. Leasers may be
- individual partnership, joint stock companies, corporation or financial institutions.

- **Lease:** Lease is the receiver of the service of the assets under a lease contract.
- Lease assets may be firms or companies
- **Lease broker:** Lease broker is an agent in between the leaser (owner) and lessee.
- He acts as an intermediary in arranging the lease deals. Merchant banking divisions of foreign banks, subsidiaries indian banking and private foreign banks are acting as lease brokers.
- **Lease assets:** The lease assets may be plant, machinery, equipments, land, automobile, factory, building etc.

Types of Leasing

1. Financing lease

Financing lease is also called as full payout lease. It is one of the long-term leases and cannot be cancelable before the expiry of the agreement. It means a lease for terms that approach the economic life of the asset, the total payments over the term of the lease are greater than the leasers initial cost of the leased asset. For example: Hiring a factory, or building for a long period. It includes all expenditures related to maintenance.

2. Operating lease

Operating lease is also called as service lease. Operating lease is one of the short-term and cancelable leases. It means a lease for a time shorter than the economic life of the assets, generally the payments over the term of the lease are less than the leaser's initial cost of the leased asset. For example : Hiring a car for a particular travel. It includes all expenses such as driver salary, maintenance, fuels, repairs etc.

3. Sale and lease back

Sale and lease back is a lease under which the leasee sells an asset for cash to a prospective leaser and then leases back the same asset, making fixed periodic payments for its use. It may be in the firm of operating leasing or financial leasing. It is one of the convenient methods of leasing which facilitates the financial liquidity of the company.

4. Direct lease

When the lease belongs to the owner of the assets and users of the assets with direct relationship it is called as direct lease. Direct lease may be Dipartite lease (two parties in the lease) or Tripartite lease. (Three parties in the lease)

5. Single investor lease

When the lease belongs to only two parties namely leaser and it is called as single investor lease. It consists of only one investor (owner). Normally all types of leasing such as operating, financially, sale and lease back and direct lease are coming under this categories.

6. Leveraged lease

This type of lease is used to acquire the high level capital cost of assets and equipments. Under this lease, there are three parties involved; the leaser, the lender and the lessee. Under the leverage lease, the leaser acts as equity participant supplying a fraction of the total cost of the assets while the lender supplies the major part.

7. Domestic lease

In the lease transaction, if both the parties belong to the domicile of the same country it is called as domestic leasing.

8. International lease

If the lease transaction and the leasing parties belong to the domicile of different countries, it is called as international leasing.

Advantages of Leasing

Leasing finance is one of the modern sources of finance, which plays a major role in the part of the asset based financing of the company. It has the following important advantages.

1. Financing of fixed asset

Lease finance helps to mobilize finance for large investment in land and building, plant and machinery and other fixed equipments, which are used in the business concern.

2. Assets based finance

Leasing provides finance facilities to procure assets and equipments for the company. Hence, it plays a important and additional source of finance.

3. Convenient

Leasing finance is convenient to the use of fixed assets without purchasing. This type of finance is suitable where the company uses the assets only for a particular period or particular purpose. The company need not spend or invest huge amount for the acquiring of the assets or fixed equipments.

4. Low rate of interest

Lease rent is fixed by the lease agreement and it is based on the assets which are used by the business concern. Lease rent may be less when compared to the rate of interest payable to the fixed interest leasing finance like debt or loan finance.

5. Simplicity

Lease formalities and arrangement of lease finance facilities are very simple and easy. If the leaser agrees to use the assets or fixed equipments by the lessee, the leasing arrangement is mostly finished.

6. Transaction cost

When the company mobilizes finance through debt or equity, they have to pay some amount as transaction cost. But in case of leasing finance, transaction cost or floating cost is very less when compared to other sources of finance.

7. Reduce risk

Leasing finance reduces the financial risk of the lessee. Hence, he need not buy the assets and if there is any price change in the assets, it will not affect the lessee.

8. Better alternative

Now a days, most of the commercial banks and financial institutions are providing lease finance to the industrial concern. Some of the them have specialised lease finance company. They are established to provide faster and speedy arrangement of lease finance.

Leasing Finance Institutions in India

Presently, leasing finance becomes popular and effective financial sources for most of the business concerns. With the importance of lease finance, now a days banks and financial institutions provide leasing financial assistance to the industrial concern. The following institutions are famous and widely providing lease finance in India:

Leasing financial institutions in India may be classified into the following groups.

Leasing by Development Institutions

All India development institutions are providing leasing finance assistance to industrial concerns. Some of the public sector leasing finance company in India are follows:

- Industrial Credit & Investment Corporation of India (ICICI)
- Industrial Finance Corporation of India (IFCI)
- Industrial Investment Bank of India (IIBI)
- Small Industries Development Corporation (SIDC)
- State Industrial Investment Corporation (SIIC)

Leasing by Specialized Institutions

Specialized financial institutions also provide lease finance to the industrial concern. Some of the lease finance providing institutions are as follows:

- Life Insurance Corporation of India (LIC)
- General Insurance Corporation of India (GIC)
- Unit Trust of India (UTI)
- Housing Development Finance Corporation of India (HDFC)

Private Sector Leasing Company

Private sector leasing companies also provide financial assistance to the industrial concerns. The following are the example of the private sector leasing companies in India:

- Express Leasing Limited
- 20th Century Leasing Corporation Ltd.
- First Leasing Company of India

- Mazda Leasing Limited
- Grover Leasing Limited

Private Sector Financial Company

Private sector financial companies also involve in the field of leasing finance. The following are the example of the private sector finance companies:

- Cholamandal Investment and Finance Company Ltd.
- Dcl Finance Limited
- Sundaram Finance Limited
- Anagram Finance Limited
- Nagarjuna Finance Limited.

Hire purchase

5.5.1Introduction

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

- ❖ 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 repossess 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 goods in question.

Hire Purchase Agreement

1.Nature of Agreement: Stating the nature, term and commencement of the agreement.

2.Delivery of Equipment: The place and time of delivery and the hirer's liability to bear delivery charges.

3. Location: The place where the equipment shall be kept during the period of hire.

4. Inspection: That the hirer has examined the equipment and is satisfied with it.

5.Repairs: The hirer to obtain at his cost, insurance on the equipment and to hand over the insurance policies to the owner.

6.Alteration: The hirer not to make any alterations, additions and so on to the equipment, without prior consent of the owner.

7. Termination: The events or acts of hirer that would constitute a default eligible to terminate the agreement.

8. Risk: of loss and damages to be borne by the hirer.

9.Registration and fees: The hirer to comply with the relevant laws, obtain registration and bear all requisite fees.

10. Indemnity clause: The clause as per Contract Act, to indemnify the lender.

11. Stamp duty: Clause specifying the stamp duty liability to be borne by the hirer.

12. Schedule: of equipments forming subject matter of agreement.

13. Schedule of hire charges.

The agreement is usually accompanied by a promissory note signed by the hirer for the full amount payable under the agreement including the interest and finance charges.

DIFFERENCE BETWEEN LEASING AND HIRE-PURCHASE

BASIS	LEASE FINANCING	HIRE PURCHASE
Meaning	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.	Hire purchase is a type of instalment credit under which the hire purchaser agrees to take the goods on hire at a stated rental, which is inclusive of the repayment of principal as well as interest, with an option to purchase.
Option to user	No option is provided to the lessee (user) to purchase the goods.	Option is provided to the hirer (user).
Nature of expenditure	Lease rentals paid by the lessee are entirely revenue expenditure of the lessee.	Only interest element included in the HP instalments is revenue expenditure by nature.
Components	Lease rentals comprise of 2 elements (1) finance charge and (2) capital recovery.	HP instalments comprise of 3 elements (1) normal trading profit (2) finance charge and (3) recovery of cost of goods/assets.

Venture Capital

Venture Capital finance is a new type of financial intermediary which has emerged in India during 1980s. It is a long-term financial assistance provided to projects, which are established to introduce new products, inventions, idea and technology. Venture capital finance is more suitable to risky oriented business which consists of huge investment and provides results after 5 to 7 year.

Meaning

The term Venture Capital fund is usually used to denote Mutual funds or Institutional investors. They provide equity finance or risk capital to little known, unregistered, highly risky, young and small private business, especially in technology oriented and knowledge intensive business.

Venture Capital termed as long-term funds in equity or semi-equity form to finance hi-tech projects involving high risk and yet having strong potential of high profitability.

Definition

According to **Jame Koloski Morries**, venture capital is defined as providing seed, start up and first stage financing and also funding expansion of companies that have already

demonstrated their business potential but do not yet have access to the public securities market or to credit oriented institutional funding sources. Venture Capital also provides management in leveraged buy out financing.

1995 finance bill define Venture Capital as long-term equity investment in novel technology based projects with display potential for significant growth and financial return.

Features

Venture Capital consists of the following important features:

(1) Venture Capital consists of high risk and high return based financing.

(2) Venture Capital financing is equity and quasi equity financing instruments.

(3) Venture Capital provides moderate interest bearing instruments.

(4) Venture Capital reduces the financial burden of the business concern at the initial stage.

(5) Venture Capital is suitable for risky oriented and high technology based industry.

Venture Capital in india

- ICICI Venture Capital is the first Venture Capital Financing in India. It was started in 1988 by the joint venture of ICICI and UTI.
- The UTI launched Venture Capital Unit Scheme (VECAUS-I) to raise finance in 1990. Technology Development and Information Company (TDICI) is another major Venture Capital financing institution in India.
- Risk Capital and Technology Finance Corporation Ltd. (RCIFC)
- ANZ Grindlays Bank has set up India's first private sector Venture Capital fund.
- SBI and Canara Bank are also involved in Venture Capital Finance. They provide either equity capital or conditionals loans.

Private Equity

Private equity is a pooled investment vehicle used for making investments in various equity (and to a lesser extent debt) securities according to one of the investment strategies associated with private equity. Private equity is typically limited partnerships with a fixed term of 10 years (often with annual extensions).

Structure of Private Equity Firms

- Limited partnership
- Limited liability Company

- Management fee
- Publicly traded private equity'
- Private investment in Public Equity
- Pledged fund

Features of private equity

- Equity holders can enjoy the benefits of acquiring majority or minority stakes
- Usual duration of stay of private equity holder in a business enterprises varies from 3 to 6 years
- It takes around 3 months to complete a usual transactions

Process of private equity financing

- Fund formation stage
- Investment stage
- Management stage
- Exit stage

Fund formation stage

Its contain structuring ,raising and formation of new fund.agreement is made in this stage

Investment stage

It includes generation of deal flow,the selection of attractive companies and structuring of transactions

Management stage

The firm monitors the development of its portfolio companies and aims at adding value of the firm

Exit stage

The firm sells successful companies either to the stock market or other investors

TUTORIAL PROBLEMS AND WORKED OUT PROBLEMS

1. Simple Interest

Illustration: 1

If you invest Rs 10,000 (P0) in a bank at simple interest of 7% (i) per annum, what will be the amount at the end of three (n) years?

Solution

Future Value, FVn = P0 + SI = P0 + P0(i)(n) = 10,000 + 10,000(0.07)(3) = 12,100

Illustration 2:

2,000 (P0) is deposited in a bank for two (n) years at simple interest of 6% (i). How much will be the balance at the end of 2 years?

Solution

Required balance is given by

FVn = P0 + P0(i)(n) = 2,000 + 2000 (0.06)(2) = 2,000 + 240 = ` 2,240.

Illustration 3:

Find the rate of interest if the amount owed after 6 (n) months is ` 1,050 (A), borrowed amount being ` 1,000 (P0).

Solution

We know

FVn = P0 + P0(i)(n)

i.e. 1,050 = 1,000 + 1,000(i)(6/12)

Or 1,050-1,000 = 500(i)

Therefore (i) = 50/500 = 0.10

i.e. (i) = 10%

Compound Interest

Illustration 4: Determine the compound interest for an investment of Rs 7,500 at 6 % compounded half-yearly. Given that $(1+i)_n$ for i = 0.03 and n = 12 is 1.42576.

i = 6 / 2×100 = 0 03,

n = 6 × 2 = 12, P = 1,000

Compound Amount = $7,500(1+0.03)^{12}$ = 7,500 × 1.42576 = 10,693.20

Compound Interest = 10,693.20 – 7,500 = 3,193.20

Illustration 5: 2,000 is invested at annual rate of interest of 10%. What is the amount after 2 years if the compounding is done?

(a) Annually?

(b) Semi annually?

(c) Monthly?

(d) Daily?

Answer:

(a) The annual compounding is given by:

$FV_2 = P (1 + i)^n$, n being 2, i being 10/100 = 0.1 and P being 2000

(b) For semiannual compounding

n = 2 × 2 = 4, i = 0.1/2 = 0.05

FV4 = 2,000 (1 + 0.05)4 = 2,000 × 1.2155 = 2,431

(c) For monthly compounding, n = 12 × 2 = 24, i = 0.1/12 = 0.00833

FV24 = 2,000 (1.00833)24 = 2,000 × 1.22029 = 2440.58

(d) For daily compounding, n = 365 × 2 = 730, i = 0.1/ (365) = 0.00027

FV730 = 2,000 (1.00027)730 = 2,000 × 1.22135 = 2,442.70

FV4 = 2,000 (1 + 0.05)4 = 2,000 × 1.2155 =2,431

Effective Rate of Interest

It is the actual equivalent annual rate of interest at which an investment grows in value when interest is credited more often than once a year. If interest is paid m times in a year it can be found by calculating:

$Ei = (1+ i/m)^m -1$

Illustration 6*: If the interest is 10% payable quarterly, find the effective rate of interest.*

Solution

$E = (1+ 0.1/4)^4 -1$

= 0.1038 or 10.38%

Present Value

Illustration 7: What is the present value of Re. 1 to be received after 2 years compounded annually at 10%?

Solution

Here $FV_n = 1$, i = 0.1

Required Present Value = $FV_n (1+i)^{-n}$

$FV_n = 1 / (1.1)^2 = 1 / 1.21$

= 0.8264 = Re. 0.83

Thus, Re. 0.83 shall grow to Re. 1 after 2 years at 10% compounded annually.

Illustration 8. **Future Value of A Series of Payments**: -

Calculate the Future value at the end of 5 years of the following series of payment at 10% rate of interest.

R_1 = Rs.1000 at the end of 1st year

R_2 = Rs.2000 at the end of 2nd year.

R_3 = Rs.3000 at the end of 3rd year.

R_4 = Rs.2000 at the end of 4st year.

R_5 = Rs. 1500 at the end of 5th year

$V_n = R_1(1+i)^{n-1} + R_2(1+i)^{n-2} + R_3(1+i)^{n-3} + R_4(1+i)^{n-4} + R_n$

$= 1000(1+.10)^{5-1} + 2000(1+.10)^{5-2} + 3000(1+.10)^{5-3} + 2000(1+.10)^{5-4} + 1500$

$= 1000(1.10)^4 + 2000(1.10)^3 + 3000(1.10)^2 + 2000(1.10)^1 + 1500$

$= 1000(1.464)+2000(1.3310)+3000(1.21) +2000(1.10) +1500$

$= 1464 + 2662 +3630 +2200+1500$

$V_n = 11456$

Another Method: -

Using Compounding Factor Table

End of year	Amt of payment	No. of yrs compounded	Compounded Interest factor	Future value
1	1000	4	1.464	1464
2	2000	3	1.331	2662
3	3000	2	1.210	3630
4	2000	1	1.100	2200
5	1500	0	1	1500
				11456

Future value of the end of 5 years = 11456

Compound Value of Annuity

Mr. A deposits Rs. 1000 at the end of every year, for a 4 years and the deposits earnscompound interest at 10% per annum. Determine how much money he will have at the end of 4 years.

R (1+i) $^{n-1}$ + (1+i) $^{n-2}$ + …… + 1)
1000 (1+.10) $^{4-1}$ + (1+.10) $^{4-2}$ +(1+.10)$^{4-3}$ + 1)
1000 (1+.10) ^{3} + (1+.10) ^{2} +(1+.10)^{1} + 1)
1000 (1.3310+1.2100+1.1000+ 1)
1000(4.6410)
=4641
(OR)

a) Using compounding Factor table
V_n = ® (ACF_{in})
= 1000 x 4.641
= 4641

Compound Value of Annuity Due:

1. Mr. X deposits Rs. 5000 at beginning of each year of 5 years in a bank and the deposit earns a compound interest at 8% per annum. Determine how many money be will have at the end of 5 years.

=(R)((1+i) ^{n} + (1+i) $^{n-1}$ + …… + (1+i)^{1})
= 5000[(1+.08)^{5} + (1+.08)$^{5-1}$+ (1+.08)$^{5-2}$+(1+.08)$^{5-3}$ +(1+.08)^{1}]
= 5000[(1+.08)^{5} + (1+.08)^{4}+ (1+.08)^{3}+ (1+.08)^{2} +(1+.08)^{1}]
= 5000[(1.0800)^{5}+ (1.0800)^{4}+ (1.0800)^{3}+(1.0800)^{2}+(1.0800)^{1}]
= 5000(1.4693+1.3605+1.2597+1.664+1.0800)
= 5000(6.3359) = 31679.5

b) Using compounding factor table
V_n= ® (ACF_{in}) (1+P)
= 5000x5.867 (1+.08)
= 5000 x 5.867 (1.08)
= 31681

B. Discount (or) present value technique: -

You have an opportunity to buy a debenture today and you will get back Rs, 1000 after one year. What will you be willing to pay for the debenture today if your time performance for money is 10% per annum?

$$V_o = \frac{V_n}{(1+i)} = = \frac{1000}{(1+.10)}$$

$$= \frac{1000}{(1.1000)} = 909.0909$$

Present value V_o = Future value (V_n) x DF_{in}

= 1000 x 0.90909

= 909.0900

Present Value Series of Payment

Calculate present value of the following cash flows assuming a discount rate of 10%

Year	Cash flow
1	5000
2	10000
3	10000
4	3000
5	2000

Solution

Year	Cash Flow	Present value Factor (10%)	Present value of cash flow
1	5000	0.909	4545
2	10000	0.826	8260
3	10000	0.751	7510
4	3000	0.683	2049
5	2000	0.620	1240

Total present value of cash flow = 23604

Present Value of an Annuity

1. Mr. X has to receive Rs. 2000 per year for 5 years. Calculate present value of equity assuming that he can earn interest on his investment at10% P.A.

$V_o = (R) (ADF_{in})$
= 2000 x 3.791
= 7582

Present Value of an Annuity Due:-

1. Mr. A has to receive Rs. 1000 at the beginning of each year for 5 years. Calculate the present value of an annuity due assuming 10% rate of interest.

$V_o = (1000) (3.791) (1+-10)$
= 1000 x 3.791 (1.10)

= 4170

Present Value of an Annuity Growing at Constant Rates

1. Mr. X has rented out a portion of his house for 4 years at an annual rent Rs. 6000 units with the stipulation that rent will increase by 10% every year. If the required rate of return is 15%. What is the present value of the expected series of Rent?

a) Calculate the series of payment of rent

Year	Amount of Rent (Rs.)	
1	6000	
2	6600	(10% 6000 x 10/100)= 600
3	7260	(6600 x 10/100) = 660
4	7986	(7260x 10/100) = 726

Solution

Year	Cash in flow	Present value factor (15%)	Present value of cash flow
1	6000	0.869	5214
2	6600	0.756	4989
3	7260	0.657	4769
4	7986	0.591	4719
		Total P.V. of C.F.	19691

Valuation Of Bonds

ILLUSTRATION

Let us assume the face value of the bond is $1,000 (maturity value $1,000). The bond has a 10% coupon rate payable semi-annually and the yield to maturity (return) is 9%. The bond matures in 5 years period from now. What is the value of the bond?

Interest 1 till 10 = $50 per semi-annual period. ($100 annually)

n=10 because 5 years x 2 payments per period.

Yield to maturity = 9%, therefore, semi-annual YTM (return) =9/2 = 4.5% or 0.045

Solving for the above equation, we get
Bond price = $1,040 (rounded)

Payback period

Illuatration

If the cash flows are equivalent, how the payback period is to be calculated?

The cost of the project is Rs.1,00,000. The annual earnings of the project is Rs.20,000. Calculate the payback period.
Payback period = Average Annual Earnings / Initial Investment
= 1,00,000 / 20,000 = 5 years

It is obviously understood that, Rs.20,000 of annual earnings (cash inflows) requires 5 years time period to get back the original volume of the investment.

Illuatration

If the cash flows are not equivalent, how the payback period is to be calculated?
The cost of the project is Rs.1,00,000. The annual earnings of the project are as follows

Year	1st	2nd	3rd	4th	5th
Net Income Amount Rs	40,000	30,000	20,000	20,000	20,000

- The ultimate aim of determining the cumulative cash inflows to find out how many number of years taken by the firm to recover the initial investment.
- The next step under this method is to determine the cumulative cash flows

Year	Annual Net Incomes Rs	Cumulative cash flows Rs.
1.	40,000	40,000
2.	30,000	70,000
3.	20,000	90,000
4.	20,000	1,10,000
5.	20,000	1,30,000

3 years full time required to recover the major portion of investment Rs.90,000

The uncollected portion of the investment is Rs,10,000. This Rs.10,000 is collected from the 4th year Net income / cash inflows of the enterprise. During the 4th year the total earnings amounted Rs.20,000 but the amount required to recover is only Rs.10,000. For earning Rs.20,000 one full year is required but the amount required to collect it back is amounted Rs.10,000. How many months the firm may require to collect Rs.10,000 out of the entire earnings Rs.20,000.

- Payback period consists of two different components
- Payback period for the major portion of the investment collection in full course - E.g.: 3 years
- Payback period for the left /uncollected portion of the investment
- For the second category 0.5 years
- = 10000/20000 = 0.5 years

Total payback period= 3 Years +.5 year = 3.5 years

Illustration

A project costs Rs.2,00,000 and yields and an annual cash inflow of Rs.40,000 for 7 years. Calculate payback period

First step is identify the nature of the annual cash inflows

In this problem, the annual cash inflows are equivalent throughout life period of the project

Pay Back Period = 2,00,000/ 40,000 = 5years

Illustration

Calculate the payback period for a project which requires a cash outlay of Rs.20,000 and generates cash inflows of Rs 4,000 Rs.8,000 Rs. 6,000 and Rs. 4,000 in the first, second, third, and fourth year respectively

First step is to identify the nature of the cash inflows

The cash inflows are not equivalent/constant

Year	Cash Inflows Rs	Cumulative Cash Inflows Rs
1.	4,000	4,000
2.	8,000	12,000
3.	6,000	18,000
4.	4,000	22,000

- Cost of the project is to be recovered Rs.20,000. The project takes 3 full year's time period to recover the major portion of the initial investment which amounted Rs.18,000 out of Rs.20,000
- The remaining amount of the initial investment is recovered only during the fourth year.
- The left portion Rs.2,000 has to be recovered only from the fourth year cash inflows of Rs.4,000.
- Pay Back Period = Pay Back period of the major portion + Pay Back period of the remaining portion
- Pay Back period of the major portion = 3 years

Illustration A project cost Rs. 500000 and yield annually a profit Rs. 80000, after depreciation at 12% per annum but before tax 50%. Calculate payback period.

Profit before tax = 80000

(-) before tax 50% (80000 x 50/100) = 40000

40000

(+) 12% after dep (500000x 12/100) 60000

Cash in flow 100000

Payback period = $\frac{cash\,outlay\,of\,project}{Annual\ \ cash \in flows} = \frac{500000}{100000}$ 5 years payback period

Improvement of Traditional Appraoch To Payback Period:

a) PPPI $= \frac{post\ pay\ back\ profit}{investment} \times 100$

b) Post payback profitability = Annual cash inflow (estimated life-payback period)

Illustration

Calculate post payback profitability index. Initial outlay Rs. 50000, Annual cash flow(after tax before depreciation) Rs. 10000, Estimated life 8 years.

Payback period = $\frac{cashoutlay\,of\,project}{Annual\,cash\,inflow} = \frac{50000}{10000} = 5$ yrs

Post payback profitability = 10000 (8-5) = 10000 x 3 = 30000

PPPI = $\frac{30000}{50000}$ x 100 = 60%

Discounted payback period

Illustration

Calculate discounted payback period from the information given below.

Cost of project = Rs. 600000
Life of project = 5 years
Annual cash inflows Rs. 200000 for each year
Cutoff rate 10%

Years	**Cashinflow**	**PV@10%**	**Present values**	**Cumulative cash in flow**
1	200000	0.909	181800	181800
2	200000	0.826	165200	347000

3	200000	0.751	150200	497200
4	200000	0.683	136600	633800
5	200000	0.620	124000	757800

$= \quad 600000 - 497200$

$= \quad \frac{102800}{136600} \times 12$

Discounted payback period = 3 yrs and 9 months

Illustration

From the following particulars, compute:

1. Payback period.
2. Post pay-back profitability and post pay-back profitability index. (a)

Cash outflow	Rs. 1,00,000
Annual cash inflow (After tax before depreciation)	Rs. 25,000
Estimate Life	6 years
(b) Cash outflow	Rs. 1,00,000
Annual cash inflow (After tax depreciation)	
First five years	Rs. 20,000
Next five years	Rs. 8,000
Estimated life	10 Years
Salvage value	Rs. 16,000

Solution

(a) (i) Pay-back period

$$= \frac{\text{Initial investment}}{\text{Annual cash inflows}}$$

$$= \frac{1,00,000}{25,000} = 4 \text{ Years}$$

(ii) Post pay-back profitability

=Cash inflow (Estimated life – Pay-back period)

=25,000 (6 – 4)

=Rs. 50,000 (iii) Post

pay-back profitability index

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

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

(i)

Year	Cash Inflows (Rs.)	Cumulative Cash Inflows (Rs.)
1	20,000	20,000
2	20,000	40,000
3	20,000	60,000
4	20,000	80,000
5	20,000	1,00,000
6	8,000	1,08,000
7	8,000	1,16,000
8	8,000	1,24,000
9	8,000	1,32,000
10	8,000	1,40,000

(ii) Post pay-back profitability.

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

= 8,000 (10–5)

= 8000×5 = 40,000 (iii)

Post pay-back profitability index

$$= \frac{40,000}{1,00,000}$$

×100=40%

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

	Proposal I	**Proposal II**
	Automatic Machine	Ordinary Machine
Cost of the machine	Rs. 2,20,000	Rs. 60,000
Estimated life	5½ years	8 years
Estimated sales p.a.	Rs. 1,50,000	Rs. 1,50,000
Costs : Material	50,000	50,000
Labour	12,000	60,000
Variable Overheads	24,000	20,000

Compute the profitability of the proposals under the return on investment method.

Solution

Profitability Statement

	Automatic Machine	**Ordinary Machine**
Cost of the machine	Rs. 2,20,000	Rs. 60,000
Life of the machine	5½ years	8 years
	Rs.	**Rs.**
Estimated Sales	(A) 1,50,000	1,50,000
Less : Cost : Material	50,000	50,000
Labour	12,000	60,000
Variable overheads	24,000	20,000
Depreciation (1)	40,000	7,000
Total Cost	(B) 1,26,000	1,37,000
Profit (A) – (B)	24,000	12,500

Working:

(1) Depreciation = Cost ÷ Life

Automatic machine = 2,20,000 ÷ 5½ = 40,000

Ordinary machine = 60,000 ÷ 8 = 7,500

Average profit

SCE

$\frac{12,500}{60,000} \times 100$ ——

10.9% 20.8%

Automatic machine is more profitable than the ordinary machine.

Average Rate of Return method (ARR)

Illustration

Calculate the average rate of return for Projects X and Y from the following

	Project X	Project Y
Investments	Rs.40,000	Rs.60,000
Expected Life	4 years	5 years

Projected net income (after interest, depreciation and taxes)

Year	Project X Rs	Project Y Rs
1.	4,000	6,000
2.	3,000	6,000
3.	3,000	4,000
4.	2,000	2,000
5.	——-	2,000
	12,000	20,000

- If the required rate of return is 10% which project should be undertaken?
- Average Rate of Return = Original Investment / Average Annual Income X100
- The first step is to find out the average annual income of the two different projects X and Y
- Average Annual Income Total income throughout the Project / Life of the Project
- Average Annual Income (Project X) = Rs. 12,000 / 4 years = Rs. 3,000
- Average Annual Income (Project Y) = Rs. 20,000 / 5 years = Rs. 4,000
- The next step is to find out the Average rate of return:
- Average rate of return (Project X) = Rs. 3,000 / Rs.40,000 X100 =7.5%
- Average rate of return (Project Y) = Rs.5,000/ Rs. 60,000 X 100 = 8.33%
- Both the projects are lesser than the given required rate of return. These two projects are not advisable to invest only due to lesser accounting rate of return.

Net present value method(NPV)

Illustration

Calculate the NPV of 2 projects and suggest which of 2 projects should be accepted assuming a discount rate 10%

Particular	Project 'X'	Project 'Y'
Initial investment	20000	30000
Estimate life	5 yrs	5 yrs
Scrap value	1000	2000

The profit before dep. & Tax, cash flows are as follows

Year	**1**	**2**	**3**	**4**	**5**
Project X	5000	10000	10000	3000	2000
Project Y	20000	10000	5000	3000	2000

Solution

Project 'X'

S.No.	**Cash inflow**	**PV @ 10%**	**PV of cash inflows**
1	5000	0.909	4545
2	10000	0.826	8260
3	10000	0.751	7510
4	3000	0.683	2049
5	2000	0.620	1240
6	1000 (scrap value)	0.620	620
		Total PV of cash in flows	**24224**

NPV = PV cash of inflow - PV of cash outflows

= 24224 - 20000 NPV = 4224

Project Y

S.NO.	**Cash in flow**	**PV@ 10%**	**PV of cash inflows**

1	20000	0.909	18180
2	10000	0.826	8260
3	5000	0.751	3755
4	3000	0.683	2049
5	2000	0.620	1240
6	2000 (scrap value)	0.620	1240
		Total PV of cash inflows	**34724**

NPV = PV of cash inflow - PV of cash outflows

NPV = 34724 – 30000

NPV = 4724

Comment:

NPV of project y is higher than the NPV of project x. Hence, it is suggested that project y should be selected.

Illustration

A company is considering investment in a project that cost Rs. 2 lakh the project that cost Rs. 2 lakh the project has an expected life of 5 years and zero solvage (scrap) value. The company uses straight line method of depreciation (40,000),Tax Rate is 40%

Year	**Earning before dept & tax**	**PV @ 10%**
1	70000	.909
2	80000	.826
3	120000	.751
4	90000	.683
5	60000	.620

You are require to calculate the Net present value @ 10 % and advice the company

Solution

Year	Earnings year before Tax	Dept	Earning before Tax	Tax	Earning after Tax	+(Dept)	Cash in flow
1	70000	40000	30000	12000	18000		58000
2	80000	40000	40000	16000	24000		64000
3	120000	40000	80000	32000	48000		88000
4	90000	40000	50000	20000	30000		70000
5	60000	40000	20000	8000	12000		52000
	Total cash inflow						**332000**

S.NO.	Cash in flow	PV @ 10%	PV of cash inflow
1	58000	0.909	52722
2	64000	0.826	52864
3	88000	0.751	66088
4	70000	0.683	47810
5	52000	0.620	32240
		Total PV of cash in flow	**251724**

NPV = PV of cash inflow – PV of cash outflow

= 251724 – 200000

= 51724

Profitability Index Method (or) Benefit cost Ratio: -

Initial cash outlay of a project Rs. 50000, cash flows 20000, 15000, 25000, 10000 for 4 years Rate of Discount 10% calculate PI

Illustration

Year	**Cash in flow**	**Discount Rate 10%**	**PV cash in flow**
1	20000	0.909	18180
2	15000	0.826	12390
3	25000	0.751	18775
4	10000	0.683	6830
		PV of ash inflow	**56175**

$$PI = \frac{PVCI}{PV\ of\ cash\ out\ flows} = \frac{56175}{50000} = 1.1235$$

$$PI_{gross} = \frac{56175}{50000} = 1.1235$$

$$PI_{(Net)} = \frac{6175}{50000} = 0.1235$$

Internal Rate of Return Method (IRR)

Illustration

1) Initial outlay Rs. 50000, life of an asset 5 years Annual cash flow RS. 12500, calculate IRR

$$\text{Present value Factor} = \frac{Initial outlay}{Annual\ cashflow} = \frac{50000}{12500} = 4$$

Present value

Illustration

Initial outlay Rs. 50000, life of an asset 5 years Annual cash flow Rs. 12500, Calculate IRR

Present value Factor = $\frac{Initial\ outlay}{Annual\ cash\ flow} = \frac{50000}{12500} = 4$

Present value of annuity table 8 % approximately

IRR = 8 %

Illustration

When the annual cash flows over the life of the asset.

Initial investment Rs. 60000, Life of the Assets 4 years

1st year - 15000
2nd year – 20000
3rd year – 30000
4th year -20000
Calculate the IRR

Discount 10%				12%		14%		15%	
Year	Annual cash time	PVF	P value	PVF	P value	PVF	P. VALUE	PVF	P Value
1	15000	.909	13635	.892	13380	.877	13155	.869	13055
2	20000	.826	16520	.797	15940	.769	15380	.756	15120
3	30000	.751	22530	.711	21330	.674	20220	.657	19710
4	20000	.683	13660	.635	12700	.592	11840	.571	11420
			66345		63350		60595		59285

Workings:
15% = 715 (60000 – 59285)
14% = 595 (60595 – 60000)

$14 + \frac{595}{715+595} \times (15-14)$

$14+\frac{595}{1310} \times (1)$

14+0.45 (1)
IRR = 14.45 %

Dividend Price Approach

Illustration

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

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

Solution

A. Book value

Computation of Weighted Average Cost of Capital

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

$$K_W = \frac{XW}{\Sigma W}$$

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

10.2(2)Computation Weighted Average Cost of Capital

B. Market Value

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

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

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

Financial Leverage

Illustration

A Company has the following capital structure.

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

The present EBIT is Rs. 50,000.

Calculate the financial leverage assuring that the company is in 50% tax bracket.

Solution

Statement of Profit Rs. Earning Before Interest and Tax (EBIT) 50,0000 (or) Operating Profit

. Interest on Debenture

1,25,000 × 8 × 100

Earning before Tax (EBT) 10,000

40,000

Income Tax 20,000

Profit 20000

Financial leverage =operating profit/EBT

(5000/40000)

=1.25

Illustration

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

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

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

Solution

When EBIT is Rs. 5,000

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

When EBIT is Rs. 12,500

Particulars	Plan A	Plan B
Earnings before interest and tax (EBIT). Less: Interest on debt (10%)	12,500 4,000	12,500 4,000
Earning before tax (EBT) Less : Tax at 50% Earnings available to equity shareholders	8,500 4,250	11,500 5,750
No. of equity shares Earning per share	4,250 1,000	5,750 4,000
	4.25	1.44

Operating Leverage

Illustration

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

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

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

Solution

Statement of Profit

	Company A Rs.	Company B Rs.

Sales Variable cost	25,00,000 12,50,000	30,00,000 7,50,000
Contribution	12,50,000	22,50,000
Fixed cost	7,50,000	15,00,000
Operating Profit	5,00,000	7,50,000

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

A" Company Leverage=2.5

"B" Company Leverage = 3

Comments

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

Illustration

The following information is available for two companies.

	X Ltd.	**Y Ltd.**
Fixed Assets	Rs. 4,00,000	1,00,000
Current Assets	Rs. 10,00,000	4,00,000
Total Assets	Rs. 14,00,000	14,00,000
Earning before interest and taxes	Rs. 1,50,000	1,50,000

You are required to compare the sensitivity earnings of the two companies for 30%

charge in the level of their current assets.

Solution

$$\text{Working capital leverage} = \frac{\text{Current Assets}}{\text{Total Assets} \pm \text{DCA}}$$

$$\text{X Ltd.} = \frac{1,00,000}{14,00,000 - 3,00,000}$$

$$= \frac{10,00,000}{11,00,000}$$

$$= 0.90$$

$$\text{Y Ltd.} = \frac{4,00,000}{14,00,000 - 1,20,000}$$

$$= \frac{4,00,000}{12,80,000}$$

$$= 0.3125$$

ILLUSTRATION

Calculate operating leverage and financial leverage under situations A, B and C and financial plans 1, 2 and 3 respectively from the following information relating to the operating and financial leverage which give the highest value and the least value.

Capital Structure	**Financial Plan**		
	1	2	3
Equity	Rs. 5,000	Rs. 7,500	Rs. 2,500
Debt	Rs. 5,000	Rs. 2,500	
Cost of debt (for all plans)		12 per cent	Rs. 7,500

Solution

	A	B	C
S – VC	4,000	4,000	4,000
EBIT	3,000	2,000	1,000
DOL = $\frac{\text{EBIT}}{\text{S-VC}}$	1.33	2	4
VC	1	2	3
Situation A			
EBIT	3,000	3,000	3,000
Less : Interest	600	300	900
EBT	2,400	2,700	2,100
Financial Leverage	1.25	1.11	1.43
Situation B			
EBIT	2,000	2,000	2,000
Less : Interest	600	300	900

Installed capacity (units)			1,200
Actual production and sales (units)			800
Selling price per unit (Rs.)			15
Variable cost per unit (Rs.)			10
Fixed costs (Rs.) Situation A			1,000
Situation B			2,000
Situation C			3,000
EBT	1,400	1,700	1,100
Financial Leverage	1.43	1.18	1.82
Situation C			
EBIT	1,000	1,000	1,000
Less : Interest	600	300	900
EBT–I	400	700	100
Financial Leverage	2.5	1.43	10

INANCIAL STRUCTURE

Example

From the following information, calculate the capitalization, capital structure and financial structures.

Balance Sheet

Liabilities	**Assets**

Equity share capital	50,000	Fixed assets	25,000
Preference share capital	5,000	Good will	10,000
Debentures	6,000	Stock	15,000
Retained earnings	4,000	Bills receivable	5,000
Bills payable	2,000	Debtors	5,000
Creditors	3,000	Cash and bank	10,000
	70,000		70,000

(i) Calculation of Capitalization

S. No.	Sources	Amount
1.	Equity share capital	50,000
2.	Preference share capital	5,000
3.	Debentures	6,000
	Capitalization	**61,000**

ii) Calculation of Capital Structures

S. No.	Sources	Amount	Proportion
1.	Equity share capital	50,000	76.92
2.	Preference share capital	5,000	7.69
3.	Debentures	6,000	9.23
4.	Retained earnings	4,000	6.16
		65,000	**100%**

(iii) Calculation of Financial Structure

S. No.	Sources	Amount	Proportion
1.	Equity share capital	50,000	71.42
2.	Preference share	5,000	7.14
3.	capital Debentures	6,000	8.58
4 .	Retained earnings	4,000	5.72
5.	Bills payable	2,000	2.85
		70,000	**100%**

illustration

ABC Ltd., needs Rs. 30,00,000 for the installation of a new factory. The new factory expects to yield annual earnings before interest and tax (EBIT) of Rs.5,00,000. In choosing a financial plan, ABC Ltd., has an objective of maximizing earnings per share (EPS). The company proposes to issuing ordinary shares and raising debit of Rs. 3,00,000 and Rs.
10,00,000 of Rs. 15,00,000. The current market price per share is Rs. 250 and is expected to drop to Rs. 200 if the funds are borrowed in excess of Rs. 12,00,000. Funds can be raised at the following rates.

–up to Rs. 3,00,000 at 8%

–over Rs. 3,00,000 to Rs. 15,000,00 at 10%

–over Rs. 15,00,000 at 15%

Assuming a tax rate of 50% advise the company.

Solution

Earnings Before Interest and Tax (BIT) less Interest Earnings Before Tax less: Tax@50%.

Alternatives

I (Rs. 3,00,000 debt)	II Rs. 10,00,000 debt)	III (Rs. 15,00,000 debt)
5,00,000 24,000	5,00,000 1,00,000	5,00,000 2,25,000
4,76,000 2,38,000	4,00,000 2,00,000	2,75,000 1,37,500
2,38,000 27,00,000 250 10800 2,38,000	2,00,000 20,00,000 250 8,000 2,00,000	1,37,500 15,00,000 200 7,500 1,37,500
No. of shares 10,800 Earnings per share 22.03	8,000 25	7,500 18.33

The secure alternative which gives the highest earnings per share is the best. Therefore the company is advised to revise Rs. 10,00,000 through debt amount Rs. 20,00,000 through ordinary shares.

illustration

Compute the market value of the firm, value of shares and the average cost of capital from the following information.

Net operating income Rs. 1,00,000

Total investment Rs. 5,00,000

Equity capitalization Rate:

(a) If the firm uses no debt 10%

(b) If the firm uses Rs. 25,000 debentures 11% (c)
If the firm uses Rs. 4,00,000 debentures 13%

Assume that Rs. 5,00,000 debentures can be raised at 6% rate of interest whereas Rs. 4,00,000 debentures can be raised at 7% rate of interest.

Solution

Computation of market value of firm value of shares and the average cost of capital.

Particulars	(a) No Debt	(b) Rs. 2,50,000 6% debentures	(c) Rs. 4,00,000 7% debentures
Net operating system	1,00,000	1,00,000	1,00,000
(–) Interest (i.e.) Cost of debt	–	15,000	28,000
Earnings available to Equity shareholders	1,00,000	85,000	72,000
Equity Capitalization Rate	10%	11%	13%
Market value of shares	10	100	$72{,}000 \times \frac{100}{13}$
	$10{,}000 \times \frac{100}{10}$	$85{,}000 \times \frac{100}{11}$	
Market Value of firm	Rs. 10,00,000/-	Rs. 772727/-	Rs. 553846/-
	10,00,000	10,22,727	9,53,846
	1,00,000	1,00,000	1,00,000
Average cost of capital	$\frac{1{,}00{,}000}{10{,}00{,}000} \times 100$	$\frac{1,00,000}{10,22,727} \times 100$	$\frac{1{,}00{,}000}{9{,}53{,}846} \times 100$
Earnings Value of the firm			
EBIT V	=10%	=9.78%	=10.48%

Comments

From the above data, if debt of Rs. 2,50,000 is used, the value of the firm increases and the overall cost of capital decreases. But, if more debt is used to finance in place of equity

i.e., Rs. 4,00,000 debentures, the value of the firm decreases and the overall cost of capital increases.

illustration

(a) A Company expects a net income of Rs. 1,00,000. It has Rs. 2,50,000, 8% debentures. The equality capitalization rate of the company is 10%. Calculate the value of the firm and overall capitalization rate according to the net income approach (ignoring income tax).

(b) If the debenture debts are increased to Rs. 4,00,000. What shall be the value of the firm and the overall capitalization rate?

Solution

(a) Capitalization of the value of the firm

Rs.

Net income	1,00,000
Less: Interest on 8% Debentures of Rs. 2,50,000	20,000
Earnings available to equality shareholders	80,000
Equity capitalization rate	10%

$$= \frac{80,000}{10} \times 100$$

Market value of equity = 8,00,000

Market value of debentures = 2,~~50,000~~

Value of the firm = 10,~~50,000~~

Calculation of overall capitalization rate

$$\text{Overall cost of capital } (K_o) = \frac{\text{Earnings}}{\text{Value of the firm } V} = \frac{\text{~~EBIT~~}}{V}$$

$$= \frac{1,00,000}{10,50,000} \times 100$$

= 9.52%

(b) Calculation of value of the firm if debenture debt is raised to Rs. 3,00,000.

	Rs.
Net income	1,00,000
Less: Interest on 8% Debentures of Rs. 4,00,000	32,000

XYZ expects a net operating income of Rs. 2,00,000. It has 8,00,000, 6% debentures. The overall capitalization rate is 10%. Calculate the value of the firm and the equity capitalization rate (Cost of Equity) according to the net operating income approach.

If the debentures debt is increased to Rs. 10,00,000. What will be the effect on volume of the firm and the equity capitalization rate?

Solution

Net operating income = Rs. 2,00,000
Overall cost of capital = 10%
Market value of the firm (V)

2,00,000

Market value of the firm = Rs. 20,00,000
Less: market value of Debentures = Rs. ~~8,00,000~~
~~12,00,000~~

Equity capitalization rate (or) cost of equity (K_e)

~~EBIT –~~ I

Where, V = value of the fir

illustration

Financing Decision and working capital management

- 1Capitalization rate is 10%, Earning per share Rs. 50. Assume rate of return on investment 12%, 8%,
- 10 % show the effect of dividend policy on market price per share applying watter's formula when
- dividend payout ratio is
- a) 0% D = 0
- b) 20% $K_e = 10\%$
- c) 40% r = 12%
- d) 80%
- e) 100% E = 50
-
- $P = \frac{D}{K_e} + \frac{r(E-D)/k_e}{K_e}$
- 10% $= \frac{0}{.10} + \frac{0.12(50-1)/.10}{.10}$
- $= 0 + \frac{60}{.10} = 600$
- 20% $= \frac{0.2}{.10} + \frac{0.12(50-0.2)/.10}{.10}$
- $= 2 + \frac{59.76}{.10} = 2+597.6 = 599.6.$
- 40% $= \frac{0.4}{.10} + \frac{0.12(50-0.4)/.10}{.10}$
- $= 4 + \frac{59.52}{.10} = 4+595.2 = 599.2$
- 80% $= \frac{0.8}{.10} + \frac{0.12(50-0.8)/.10}{.10}$
- $= 8+590.4 = 598.4$
- 100% $= \frac{0.100}{.10} + \frac{0.12(50-0.100)/.10}{.10}$
- $= 1+598.8 = 599.8$

r = 8%	**r = 10%**
0%	0%

$= \frac{0}{.10} + \frac{.08(50-0)/.10}{.10}$ $= 0+\frac{40}{.10} = 400$	$= \frac{0}{.10} + \frac{0.1(50-0)/.10}{.10}$ $= 0+ 500 =500$
20% $= \frac{0.2}{.10} + \frac{.08(50-0.2)/.10}{.10}$ $= 2+398.4 = 400.4$	20% $= \frac{0.2}{.10} + \frac{0.1(50-0.2)/.10}{.10}$ $= 2+498 =500$
40% $= \frac{0.4}{.10} + \frac{.08(50-0.4)/.10}{.10}$ $= 4+396.8 = 400.8$	40% $= \frac{0.4}{.10} + \frac{0.1(50-0.4)/.10}{.10}$ $= 4+496 =500$
80% $= \frac{0.8}{.10} + \frac{.08(50-0.8)/.10}{.10}$ $= 8+ 393.6 = 401.6$	80% $= \frac{0.8}{.10} + \frac{0.1(50-0.8)/.10}{.10}$ $= 8+ 492 =500$
100% $= \frac{.100}{.10} + \frac{.08(50-.100)/.10}{.10}$ $= 1+399.2 = 400.2$	100% $= \frac{.100}{.10} + \frac{0.1(50-.100)/.10}{.10}$ $= 1+ 499 =500$

2. The following information in available irrespective of r, k, e of ABC Ltd. Rate of reture R = 15%, r = 12% r = 10% cost of capital = 12%, Earning per share 10 determine the value of its shares using Gordons model assuming the following

	D/P Ratio (1-b)	**Retention Rate (b)**
a	100	0
b	80	20
c	40	40

Solution

r= 15 %	**r= 12 %**	**r= 10 %**
b = 0	**b=0**	**b = 0**
P $=\frac{E(1-b)}{K_e-br}$ $=\frac{10(1-0)}{.12-(0)(.15)}$ $=\frac{10}{.12}=83.33$ b = 20 $=\frac{10(1-.20)}{.12-(.20)(.15)}$ $=\frac{10(0,.8)}{.12-0.03}=\frac{8}{0.09}=88.88$ b=40 $=\frac{10(1-.40)}{.12-(.40)(.15)}$ $=\frac{10(1-.40)}{.12-(0.40)(.15)}$ $=\frac{10(0.6)}{.12-0.06}$ $=\frac{6}{0.06}=100$	$=\frac{E(1-b)}{K_e-br}$ $=\frac{10(1-0)}{.12-(0)(.12)}$ $=\frac{10}{.12}=83.33$ b = 20 $=\frac{10(1-.20)}{.12-(.20)(.12)}$ $=\frac{10(0.8)}{.12-0.024}=\frac{8}{0.096}=83.33$ b = 40 $=\frac{10(1-.40)}{.12-(.40)(.12)}$ $=\frac{6}{.12-0.48}=\frac{6}{0.072}=83.33$	$=\frac{E(1-b)}{K_e-br}$ $=\frac{10(1-0)}{.12-(0)(.10)}$ $=\frac{10}{.12}=83.33$ b = 20 $=\frac{10(1-.20)}{.12-(.20)(.1)}$ $=\frac{10(0.8)}{.12-0.02}=\frac{8}{0.01}=80$ b = 40 $=\frac{10(1-.40)}{.12-(.40)(.1)}$ $=\frac{6}{.12-0.04}=\frac{6}{0.08}=75$

$$= \frac{V - D}{}$$

$$= \frac{2,00,000 - 60,000}{20,00,000 - 10,00,000} \times 100$$

$$= \frac{1,40,000}{10,00,000} \times 100$$

$= 14\%.$

$= 9.26\%$

Thus, it is evident that with the increase in debt financing, the value of the firm has increased and the overall cost of capital has increased.

Problem

1. Prepare an estimate of working capital requirement from the following data of the XYZ Ltd.

a) Projected annual sales volume	2,00,000 units
b) Selling price	Rs.10 per unit
c) % of net profit on sales	25%
d) Average credit period allowed to customers	8 weeks
e) Average credit period allowed by suppliers	4 weeks
f) Average holding period of the inventories	12 weeks
g) Allow 10% for contingencies	

Solution

Statement of working capital requirements

Current Assets	**RS**
Current Asset Debtors (8 weeks)Rs.15,00,000 × 8/52(At cost)	2,30,769.23
Stock (12 weeks) Rs.15,00,000 × 12/52	3,46,153.38
Less Current liabilities	
Creditors (4 weeks) Rs15,00,000 × 4/52	1,15,384.61
Net working capital	4,61,538.0
Add: 10% contingencies	46,153.8
Working capital required	**5,07,691.8**

Average Credit Purchase Per Day

From the following informatioextracted from the books of a manufacturing company, compute the operating cycle in days and the amount of working capital required:

Period Covered	365 days
Average period of credit allowed by suppliers	16 days
Average Total of Debtors Outstanding	480 00
Raw Material Consumption	4,400 00
Total Production Cost	10,000 00
Total Cost of Sales	10,500 00
Sales for the year	16,000 00
Value of Average Stock maintained:	
Raw Material	320 00

Work-in-progress	350 00
Finished Goods	260 00

Solution

Computation of Operating Cycle

(i) *Raw material held in stock:*

$$\frac{\text{Average stocks of raw materials held}}{\text{Average consumption per day}} = \frac{320}{4{,}400 \times 365}$$

$$= \frac{320 \times 365}{4{,}400} = 275 \text{ days}$$

	16 days
Less: Average credit period granted by Suppliers	11 days

(ii) Work-in-progress:

$$\frac{\text{Average WIP maintained}}{\text{Average cost of production per day}} = \frac{350}{10{,}000/365}$$

$$= \frac{365 \times 320}{10{,}000} = 13 \text{ days}$$

(iii) Finished good held in stock:

$$\frac{\text{Average finished goods maintained}}{\text{Average cost of goods sold per days}} = \frac{260}{10{,}500/365}$$

$$= \frac{260 \times 365}{10{,}500} = 9 \text{ days}$$

$$= \frac{365 \times 480}{16{,}000} = 11 \text{days}$$

Total operating cycle period: (i) + (ii) + (iii) + (iv) = 44 days

Number of Operating cycles in a year = 365/44

= 8.30

$$\text{Amount of Working Capital required} = \frac{\text{Total operating cost}}{\text{Number of operating cycles in a year}}$$

= 10,500/8.3

= Rs. 1,265

Alternatively, the amount of working capital could have also been calculated by estimating the components of working capital method, as shown below:

Value of Average Stock Maintained	320
Raw Material	350
Work-in-progress	260
Finished Goods	480
Average Debtors Outstanding:	1,410
Less: Average Creditors Outstanding	145
	1,265

illustration

(a) Find out the economic order quantity and the number of orders per year from the following information:

Annual consumption: 36,000 units

Purchase price per units: Rs. 54

Ordering cost per order: Rs. 150
Inventory carrying cost is 20% of the average inventory.

Solution

$$\text{Inventory} = \sqrt{\frac{2AO}{C}}$$

$A = 36{,}000$ units
$O = $ Rs. 150
$C = 20\%$ of $54 \times 10 \times 8$

$$\sqrt{2 \times 36{,}000 \times 150} = 1{,}000 \text{ units}$$

$$EOQ = 1{,}000 \text{ units}$$

Illustration

From the following information calculate, (1) Re-order level (2) Maximum level (3) Minimum level (4) Average level Normal usage: 100 units per week Maximum usage: 150 units per week Minimum usage: 50 units per week Re-order quantity (EOQ) 500: units Log in time: 5 to 7 weeks

Solution

(1) Re-order Level

= Maximum consumption × Maximum Re-order period

$= 150 \times 7 = 1050$ units

(2) Maximum Level

= Re-order level+Re-order quantity

–(Minimum consumption×Minimum delivery period)

$= 1050 + 500 - (50 \times 5) = 1300$ units

(3) Minimum Level

= Re-order level – (Normal consumption×Normal delivery period)

$= 1050 - (100 \times 6) = 450$ units

(4) Average Lev

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Solution

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$$= \frac{320 \times 365}{4{,}400} = 275 \text{ days}$$

Less: Average credit period granted by Suppliers 16 days

11 days

(ii) Work-in-progress:

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$$= \frac{365 \times 320}{10{,}000} = 13 \text{ days}$$

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= 8.30

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= 10,500/8.3

= Rs. 1,265

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Less: Average Creditors Outstanding	145
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Exercise 1

(a) Find out the economic order quantity and the number of orders per year from the following information:

Annual consumption: 36,000 units

Purchase price per units: Rs.

Ordering cost per order: Rs. 150

Inventory carrying cost is 20% of the average inventory.

Solution

Inventory = $\sqrt{\frac{2AO}{C}}$

$A = 36{,}000$ units

$O = \text{Rs. } 150$

$C = 20\% \text{ of } 54 \times 10 \times 8$

$\sqrt{2 \times 36{,}000 \times 150} = 1{,}000 \text{ units}$

$EOQ = 1{,}000$ units

Illustration

From the following information calculate, (1) Re-order level (2) Maximum level (3) Minimum level (4) Average level Normal

usage: 100 units per week Maximum

usage: 150 units per week Minimum usage:

50 units per week Re-order quantity (EOQ)

500: units Log in time: 5 to 7 weeks

Solution

(1) Re-order Level

= Maximum consumption × Maximum Re-order period

$= 150 \times 7 = 1050$ units

(2) Maximum Level

= Re-order level+Re-order quantity

–(Minimum consumption×Minimum delivery period)

$= 1050 + 500 - (50 \times 5) = 1300$ units

(3) Minimum Level

= Re-order level – (Normal consumption×Normal delivery period)

$= 1050 - (100 \times 6) = 450$ units

Illustration

The board of directors of Aravind mills limited request you to prepare a statement showing the working capital requirements for a level of activity of 30,000 units of output for the year. The cost structure for the company's product for the above mentioned activity level is given below.

	Cost per Unit (Rs.)
Raw	20
Direct labour	5
Overheads	15
Total	40
Profit	10
	Selling price 50

Past experience indicates that raw materials are held in stock, on an average for 2 months.

(b) Work in progress (100% complete in regard to materials and 50% for labour and overheads) will be half a month's production.

(c) Finished goods are in stock on an average for 1 month. (d)

Credit allowed to suppliers: 1 month.

(e) Credit allowed to debtors: 2 months.

(f) A minimum cash balance of Rs 25,000 is expected to be maintained.

Prepare a statement of working capital requirements.

Solution

Output per annum = 30,000 units

Output per annum = 12% of 30,000 =2,500 units

Raw materials p. m. Rs. 20×2500 =	50,000
Labour p. m. Rs. 5×2,500 =	12,500
Overheads p. m. Rs. 15×2,500 =	37,500
1,00,000	

Statement of Working Capital Requirements

Particulars	Rs.	Rs.
Current assets		
Stock of raw materials (2 months) 50,000 x 2		1,00,000
Work-in-progress (1/2 months) Raw materials = 50,000 x ½	25,000	
Labour = 12,500 x ½ x 50/100	3,125	
Overheads = 37,500 x ½ x 50/100	9,375	
		37,500
		1,00,000
		2,00,000
Stock of finished goods (1 month) 1, 00,000 x 1		25,000
Debtors (2 month) 1,00,000 x 2		4,62,500
Cash balance required		50,000
Less: current liability		
Creditors (1 month) 50,000 x 1		
(Working capital required)		4,12,500

illustration

Prepare an estimate of working capital requirement from the following information of a trading concern.

Projected annual sales	10,000 units
Selling price	Rs. 10 per unit

Percentage of net profit on sales	20% Average
credit period allowed to customers	8 Weeks
Average credit period allowed by suppliers	4 Weeks
Average stock holding in terms of sales requirements	12 Weeks
Allow 10% for contingencies	

Solution

Statement of Working Capital Requirements

Current Assets	Rs.
Debtors (8 weeks) $\frac{80,000 \times 8}{52}$ (at cost)	12,307
Stock (12 weeks) $\frac{80,000 \times 12}{52}$	30,770
Less: Current Liability	
Credits (4 weeks) $\frac{80,000 \times 4}{52}$	6,154
	24,616
Add 10% for contingencies	2,462
	27,078

Working Notes

Sales = 10000×10 = Rs. 1,00,000

Profit 20% of Rs. 1,00,000 = Rs. 20,000

Cost of Sales=Rs.1,00,000 – 20,000 = Rs. 80,000

As it is a trading concern, cost of sales is assumed to be the purchases.

Illustration

Prepare an estimate of working capital requirement from the following informations of a trading concern.

Projected annual sales	Rs. 6,50,000
Percentage of net profit on sales	25% Average
credit period allowed to debtors	10 Weeks
Average credit period allowed by creditors	4 Weeks
Average stock holding in terms of sales requirements	8 Weeks
Allow 20% for contingencies	

Current Assets	Rs.
Debtors (10 weeks) (at cost) $\frac{5,20,000 \times 10}{52}$	1,00,000
Stock (8 weeks) $\frac{5,20,000 \times 8}{52}$	1,80,000
Less: Current Liability	
Credits (4 weeks) $\frac{5,20,000 \times 4}{52}$	40,000
	1,40,000
Add 20% for contingencies	28,000
	1,68,000

Working Notes

Sales=Rs. 6,50,000

Profit 25/125 of Rs. 6,50,000 = Rs. 1,30,000

Cost of Sales=Rs. 6,50,000 –1,30,000=Rs. 5,20,000

As it is a trading concern, cost of sales is assumed to be the purchases.

Illustration

A Performa cost sheet of a company provides the following particulars:

Elements of cost

Material	35%
Direct Labours	25%
Overheads	20%

Further particulars available are:

(i) It is proposed to maintain a level of activity of 2,50,000 units.

(ii) Selling price is Rs. 10/- per unit

(iii) Raw materials are to remain in stores for an average period of one month.

(iv) Finished foods are required to be in stock for an average period of one month.

(v) Credit allowed to debtors is 3 months.

(vi) Credit allowed by suppliers is 2 months.

You are required to prepare a statement of working capital requirements, a forecost profit and loss account and balance sheet of the company assuring that

Share Capital	Rs. 12,00,000
10% Debentures	Rs. 3,00,000
Fixed Assets	Rs. 11,00,000

Solution

Statement of Working Capital

Particulars	Rs.	Rs.
Current Assets		
of Raw Materials (1 Month) (5,00,000 x 35% x 1/12)		72,917
Work in process (1/2 months)	36,458	
Materials (25,00,000 x 35% x 1/24)	26,041	
Labour (25,00,000 x 25% x 1/24)	20,833	83,332
Overheads (25,00,000 x 20% x 1/24)	72,917	
of finished goods (one month) Materials	52,083	
(25,00,000 x 35% x 1/12) Labour		1,66,667
(25,00,000 x 25% x 1/12) Overheads	2,18,750	
(25,00,000 x 20% x 1/12)	1,56,250	
Debtors (2 months)At cost	1,25,000	5,00,000
Materials (25,00,000 x 35% x 3/12)		8,22,916
Labour (25,00,000 x 25% x 3/12)		
Overheads (5,00,000 x 20% x 3/12)		1,45,833

Forecast Profit and Loss Account

Dr. **Cr.**

To Materials (25,00,000 x 35%)	8,75,000	By cost of goods sold	20,00,000
To Wages (25,00,000 x 25%)	6,25,000		
To Overheads (25,00,000 x 20%)	5,00,000		
	20,00,000		20,00,000
To Cost of goods sold	20,00,000	By Sales	25,00,000
To Gross profit	5,00,000		
	25,00,000		25,00,000
To Interest on debentures	30,000	By Gross profit	5,00,000
To Net profit			
	5,00,000		5,00,000

Forecast Balance Sheet

Liabilities	Rs.	Assets	Rs.
Share capital	12,00,000	Fixed Assets	11,00,000
Net profit	4,70,000	**Stock**	
10% debentures	3,00,000	Raw material	72,917
Credits	1,45,833	Work-in-process	38,458
		Finished goods	1,66,667
		Debtors	5,00,000
	21,15,833	Cash and Bank Balance	2,37,791
			21,15,833