

UNIVERSITY GRANTS COMMISSION

COMMERCE

CODE: 08

UNIT 4: BUSINESS FINANCE

SYLLABUS

SECTION – 1: Unit at a Glance

Sub Unit: 1 Scope and sources of finance; Lease financing

Concept of Finance

Finance is the art and science of managing money. It can also be defined as the art of collection of funds and investment of funds.

Scope of business finance

No doubt, the scope of finance function is wide because this function affects almost all the aspects of a firm's operations. The finance function includes judgments about whether a company should make more investment in fixed assets or not. It is largely concerned with the allocation of a firm's capital expenditure over time as also related decisions such as financing investment and dividend distribution. Most of these decisions taken by the finance department affect the size and timing of future cash flow or flow of funds.

Sources of finance

Sources of finance mean the sources from which capital or fund of the business enterprises are collected.

Different sources of finance

Sources of finance can be classified on the basis of repayment period of the funds. It can be classified as long term sources, middle term sources and short term sources. Again on the basis of ownership of sources of finance it may be classified as owned capital and loan capital or borrowed capital. Owned capital is sourced from promoters of the company or from the general public by issuing new equity shares and borrowed capital is sourced from outside sourced. On the basis of generation of funds it can be classified as internal sources of funds and external sources of funds. When the owners generated the funds within the organization is called internal sources of funds. The example of internal sources of funds is retained earnings, etc. The fund which is arranged from outside the business is called external sources of funds. For instance, issuance of equity shares to public, debentures, commercial banks loan, etc.

Lease Financing

Lease financing is a method of financing through agreement between the owner and user of assets for a specified period of time. Under this type of financing, the lessor i.e. the leasing company purchases the assets from the manufacturers or dealers or produces the assets and gives lease to the lessee i.e., the user and the lessee pays the instalments at periodical intervals. The instalments are treated as rent of the asset until the last payment is made. Lease financing is an alternative to the purchase of an asset out of own or borrowed funds.

Lease financing is made through the following form of leasing:

- Sale and lease back
- Direct leasing
- Leveraged leasing
- Financial lease

- Operating lease

Sub Unit: 2 Cost of capital and time value of money

Cost of Capital

Cost of capital may be defined as the 'minimum rate of return that a firm must earn on its investment for the market value of the firm to remain unchanged'. So, it is nothing but the cost that has to be incurred by an organisation for collecting funds from different sources.

Types of Cost of capital

- Explicit cost of capital:
- Implicit cost of capital:
- Specific cost of capital:
- Composite cost of capital:

Floatation cost

It is the cost associated with the issuing and selling of securities.

Time Value of Money

The time value of money (TVM) is the concept that money available at the present time is worth more than the identical sum in the future due to its potential earning capacity.

Importance of Time Value of Money:

- It helps to take investment decision in rational way.
- Helps to identify misconceptions about real cost and benefits of project.
- To make a budget decision because it allow business owner to adjust cash flow for the passage of time.

Some important concept relating to Time Value of Money:

- Present value
- Future Value
- Simple interest
- Compound interest

Sub Unit: 3 Capital structure

Capital structure

Capital is the amount contributed by the owner to run the business and structure is nothing but the arrangement of the different parts in an organised manner. Capital structure implies the proportion of long term debt capital and equity capital.

Capital structure and Financial Structure:

Capital structure implies the proportion between only long term debt capital and equity capital on the other hand financial structure implies the proportion between long term, short term debt and equity. So capital structure covers only long term sources of funds whereas financial structure covers both long term as well as short term sources.

Optimum Capital Structure:

An optimum capital structure is that proportion of debt and equity at which firms cost of capital become minimum and firms value become maximum.

Simple and Complex capital structure:

When a firm capital includes only equity and retained earnings it is called **Simple capital structure**. On the other hand when the firm's capital structure includes different sources of capital it is called **complex capital structure**.

Theories of capital structure:

- Net Income (NI) Approach
- Net Operating Income (NOI) Approach
- Traditional approach
- The Modigliani-Miller (M-M) Approach

Sub Unit: 4 Capital budgeting decisions: Conventional and scientific techniques of capital budgeting analysis**Concept of capital Budgeting**

It can be defined as the process of evaluating and selecting long- term investments that are consistent with the goal of shareholders (owner) wealth maximisation. Capital budgeting is the decision about capital expenditure of a particular firm. Capital expenditure is an outlay of funds that is expected to produce benefits over a period of time exceeding one year.

Different types of Investment Decision

- Accept-reject decision
- Mutually exclusive choice decision
- Capital rationing decision

Process of capital Budgeting

Identification of Potential Investment Opportunities→ Assembling of Investment Proposals→ Decision Making→ Preparation of Capital Budget and Appropriations→ Implementation→ Performance Review Techniques of Capital Budgeting Decision→

Traditional technique of capital budgeting

- Average Rate of Return (ARR)
- Pay Back Period (PBP)
- Discounted Pay Back Period

Scientific technique of capital budgeting

- Net Present Value (NPV) method
- Internal Rate of Return (IRR) method
- Profitability Index (PI) method

Sub Unit: 5 Working capital management; Dividend decision: Theories and policies

Concept of Working Capital: Working capital can be defined as the amount which is required to meet the day to day requirement of an enterprise. Again it can be defined as the excess amount of long term sources of fund which is invested in the current assets. 4.5.1.1

Types of working capital:

- Gross working capital
- Net working capital
- Positive Working capital
- iv) Negative working capital
- Zero working capital
- Permanent/fixed working capital
- Variable/Fluctuating working capital

Financing of Working Capital:

There are three basic approaches for financing working capital viz.

- Hedging/Matching approach
- Conservative approach
- Trade-off between Hedging and Conservative approach

Operating Cycle

It is a cyclical process of continuing flow from cash to suppliers, to inventory, to accounts receivable and back into cash.

Concept of dividend:

Dividend is that part of the net profit which is distributed among the shareholders by the company. It is received by the shareholders for investing their money and paid by the company for collecting funds from the shareholders. It is a periodical distribution made by the company considering its earning.

Types of Dividend:

- Final dividend
- Interim Dividend
- Cash Dividend
- Bonus Dividend
- Current profit dividend
- Retained earnings dividend
- Scrip dividend

Types of dividend policy

- Constant dividend per share
- Constant percentage of earnings
- Constant dividend per share plus extra dividend

Theories of Dividend

- Relevance theory of dividend
There are two sets of theories under this approach- i) Gordon's Model ii) Walter's Model
- Irrelevance theory of dividend

Sub Unit: 6 Risk and return analysis; Asset securitization**Concept of return**

Return can be defined as the actual income received by the investee from his investment after expiry of certain period of time as well as appreciation in the value of capital. There are two components of return-i) **Periodical return** in the form of interest and dividend and ii)

Capital gain/loss which arises due to the changes in the price of the investment.

Concept of Risk

Risk-Risk' is the probability that the actual returns on your investments are different compared to your expectations.

Types of Risk

- Systematic Risk
- Unsystematic Risk
- Business Risk-
- Financial risk-
- Credit risk

➤ Liquidity Risk

Measurement of Risk of a single security

The behavioural risk view is measured using:

1. Sensitivity analysis and
2. Probability distribution

The statistical risk view is measured using:

1. Standard deviation and
2. Coefficient of variation.

Portfolio risk and return

A portfolio is the total collection of all investments held by an individual or institution, including stock, bonds, real estate, option, future and alternative investments, such as gold.

Asset securitization- Securitization refers to the process of converting debt (assets, usually illiquid assets) into securities, which are then bought and sold in the financial markets. If you notice, the first line calls debt as an asset. This is because debt is a liability for the borrower, but for the lender, it is an asset. In simple words, securitization is a process where a financial company combines several of its assets into consolidated financial instrument or securities. Then, financial companies issue these securities to the investors, who earn interest.

Sub Unit: 7 International monetary system

International monetary system refers to the system and rules that govern the use and exchange of money around the world and between countries. Each country has its own currency as money and the international monetary system governs the rules for valuing and exchanging these currencies. International monetary system refers to a system that forms rules and standards for facilitating international trade among the nations.

Sub Unit: 8 Foreign exchange market; Exchange rate risk and hedging techniques

Concept of Foreign Exchange Market

The foreign exchange market is a global online network where traders buy and sell currencies. The buyers and sellers include individuals, firms, foreign exchange brokers, commercial banks and the central bank.

Foreign market has **two tiers**.

- Interbank market
- Over The Counter Market (OTC)

Functions of Foreign Exchange Market:

- Transfer Function
- Credit Function
- Hedging Function

Kinds of Foreign Exchange Market

- Spot Market
- Forward Market

Exchange-rate risk, also called currency risk, is the risk that changes in the relative value of certain currencies will reduce the value of investment denominated in a foreign currency. Exchange Rate Risk is defined as the risk of loss that the company bears when the transaction is denominated in a currency other than the currency in which the company operates.

Types of Foreign Exchange Risk

- Transaction Risk
- Translation Risk

- Economic Risk

Hedging Technique

A hedge is an investment that protects your finances from a risky situation. Hedging is done to minimize or offset the chance that your assets will lose value. It also limits your loss to a known amount if the asset does lose value. It's similar to home insurance. You pay a fixed amount each month. If a fire wipes out all the value of your home, your loss is the only the known amount of the deductible. Most investors who hedge use derivatives. These are financial contracts that derive their value from an underlying real asset, such as a stock.

Sub Unit: 9 International financial markets and instruments: Euro currency; GDRs; ADRs**International Financial Market**

The International Financial Market is the market place where financial wealth is traded worldwide between individuals (and between countries). It can be seen as a wide set of rules and institutions where assets i.e. stock, bonds, currencies, derivatives, commodities are traded between agents in surplus and agents in deficit and where institutions lay down the rules.

Motives for the Internationalisation of Financial Transactions

- Differences in interest rates
- International diversification
- Economic growth prospects
- Exchange rate fluctuations

Segments of International Financial market

- Foreign Exchange Market

Participants in foreign exchange market include; Importers, Exporters, Portfolio managers, Commercial banks and Brokers

- International Bond Market
- International Equity Market
- International Money market
- International Credit market

International Financial Market Instruments

- Euro Currency-
- Global Depositary Receipts (GDRs)
- American Depositary Receipts (ADRs)

Sub Unit: 10 International arbitrage; Multinational capital budgeting**Arbitrage**

Arbitrage is the process of simultaneously buying and selling a financial instrument on different markets, in order to make a profit from an imbalance in price.

International Arbitrage

Simultaneous buying and selling of foreign securities and ADRs to capture the profit potential created by time, currency, and settlement inconsistencies that vary across international borders.

Types of Arbitrage

- Triangular Arbitrage
- Locational Arbitrage:
- Covered Interest Arbitrage

Multinational Capital Budgeting

Multinational capital budgeting, like traditional domestic capital budgeting, focuses on the cash inflows and outflows associated with prospective long-term (foreign) investment projects. Multinational capital budgeting techniques are used in foreign direct investment analysis.

Complexities in Multinational Capital Budgeting

- Terminal values –
- Financing versus operating cash flows
- Foreign currency fluctuations-
- Long-term inflation rates-
- Subsidized financing
- Political risk must be evaluated
- Parent versus project cash flows-

Factors to be considered in Multinational Capital budgeting

- Initial Investment/Block Funds
- Exchange Rate Fluctuation
- Inflation
- Financing Arrangement
- Uncertain Salvage Value
- Impact of Project on Prevailing Cash flow
- Host Government Incentives should also be considered in the analysis.

SECTION – 2: KEY STATEMENTS

Every candidates appearing for NET/SET examination should follow these key (main) points those can help them a better understanding regarding this unit very quickly.

Basic Key Statements: Finance (4.1.1), Sources of finance (4.1.1.2), Venture capital (4.1.1.3), Factoring(4.1.1.3), Lease Financing (4.1.2), Sale and lease back (4.1.2), Leveraged leasing (4.1.2), Types of Cost of capital (2.2.1.1), Floatation cost (2.2.1.2), Time Value of Money (2.2.2), Future Value (2.2.2.2), Present value (2.2.2.2), Discounted Pay Back Period(4.4.1.4), Operating Cycle (4.5.1.3), Capital structure (2.3.1), Optimum Capital Structure (2.3.1.3), Simple and Complex capital structure (2.3.1.4).

Standard Key Statements: Net Operating Income (NOI) Approach (2.3.2), Net Income (NI) Approach (2.3.2), Types of working capital (4.5.1.1), Types of Dividend (4.5.2.1), Types of dividend policy (4.5.2.2), Concept of return (4.6.1), International Financial Market(4.9.1), Segments of International Financial market (4.9.1.2), International Financial Market Instruments (4.9.2), Arbitrage (4.10.1), International Arbitrage (4.10.1.1), Types of Arbitrage (4.10.1.2), Multinational Capital Budgeting (4.10.2).

Advanced Key Statements: Capital rationing (4.4.1.2), Traditional technique of capital budgeting (4.4.1.4), Scientific technique of capital budgeting (4.4.1.5), Financing of Working Capital (4.5.1.2), Relevance theory of dividend (4.5.2.3), Irrelevance theory of dividend (4.5.2.3), Irrelevance theory of dividend (4.5.2.3), Types of Risk (4.6.2.1), Measurement of Risk (4.6.2.2), Portfolio risk and return (4.6.2.3), Asset securitization (4.6.3), International Monetary system(4.7.1), Foreign Exchange Market (4.8.1), Exchange rate risk (4.8.2), Types of Foreign Exchange Risk (4.8.2.1), Hedging Technique (**4.8.2.2**).

[N.B. – Values in parenthesis are the reference number]

SECTION – 3: KEY FACTS AND FIGURES**Sub Unit: 1 Scope and sources of finance; Lease financing**

Sl. No.	Topics
1	4.1.1 What is finance?
2	4.1.1.1 Scope of business finance
3	4.1.1.2 What is Sources of finance?
4	4.1.1.3 Different sources of finance
5	4.1.2 Lease Financing

4.1.1 What is finance?

Finance is the art and science of managing money. It can also be defined as the art of collection of funds and investment of funds.

4.1.1.1 Scope of business finance

No doubt, the scope of finance function is wide because this function affects almost all the aspects of a firm's operations. The finance function includes judgments about whether a company should make more investment in fixed assets or not.

It is largely concerned with the allocation of a firm's capital expenditure over time as also related decisions such as financing investment and dividend distribution. Most of these decisions taken by the finance department affect the size and timing of future cash flow or flow of funds.

At the present state, the academic discipline of finance includes the following specialized areas in its scope.

1. Public Finance

Like business organizations, governments (local, state or federal) raise and spend large sum of money, but unlike business organizations, they pursue non-profit goals. To deal with governmental financial matters, a separate and specialized field of finance has emerged as public finance.

2. Securities and Investment Analysis

This area is of interest to individuals and institutional investors. It covers mainly measurement of risk and return on investment in securities.

3. Institutional Finance

Institutional finance deals with issues of capital formation and the organizations that perform the financing function of the economy. Therefore, it mainly studies saving and capital formation and institutions involved in this process such as banks, insurance companies, provident and pension funds, etc.

4. International Finance

International finance studies economic transactions among nations, corporations and individually internationally. It is concerned with flows of money across international boundaries.

5. Financial Management

Business firms face problems dealing with acquisition of funds and optimum methods of

employing the funds. Thus, financial management studies financial problems in individual firms, seeks low-cost funds and seeks profitable business activities.

The popularity of finance is increasing day by day. It is because the study of finance offers rewarding careers opportunities mainly in above areas.

4.1.1.2 What is Sources of finance?

Sources of finance mean the sources from which capital or fund of the business enterprises are collected.

4.1.1.3 Different sources of finance

Sources of finance can be classified on the basis of repayment period of the funds. It can be classified as long term sources, middle term sources and short term sources. Again on the basis of ownership of sources of finance it may be classified as owned capital and loan capital or borrowed capital. Owned capital is sourced from promoters of the company or from the general public by issuing new equity shares and borrowed capital is sourced from outside sourced. On the basis of generation of funds it can be classified as internal sources of funds and external sources of funds. When the owners generated the funds within the organization is called internal sources of funds. The example of internal sources of funds is retained earnings, etc. The fund which is arranged from outside the business is called external sources of funds. For instance, issuance of equity shares to public, debentures, commercial banks loan, etc.

a) Long term sources of funds

Long term sources of funds means capital requirements for a period of more than 5 years to 10, 15, 20 years or maybe more depending on other factors. Capital expenditures in fixed assets like plant and machinery, land and building, etc of business are funded using long-term sources of finance. Part of working capital which permanently stays with the business is also financed with long-term sources of funds.

i) Equity share capital

Equity shares are the main source of finance of a firm. It is issued to the general public. Equity shareholders do not enjoy any preferential rights with regard to repayment of capital and dividend. They are entitled to residual income of the company, but they enjoy the right to control the affairs of the business by enjoying voting rights and all the shareholders collectively are the owners of the company. There are basically four types of equity issues namely new issue, bonus issue, right issue and sweat issue.

ii) Preference share capital

Preference shares are one of the special types of share capital having fixed rate of dividend and they carry preferential rights over ordinary equity shares in sharing of profits and also claims over assets of the firm. It is ranked between equity and debt as far as priority of repayment of capital is concerned.

Types of preference share

Preference share can be classified as cumulative preference share, non- cumulative preference share, convertible preference share, non- convertible preference share, redeemable preference share, irredeemable preference share, participating preference share and non- participating preference share.

iii) Retained earnings

Retained earnings are the portion of profits which is not distributed among the shareholders but retained and used in business is called retained earnings. It is also referred to as ploughing back of profit. This is one of the important sources of internal financing used for fixed as well as working capital. Retained earnings increase the value of shareholders in case of a growing firm.

Retained profits have several major advantages:

They are cheap (though not free) – effectively the "cost of capital" of retained profits is the opportunity cost for shareholders of leaving profits in the business (i.e. the return they could have obtained elsewhere)

They are very flexible – management have complete control over how they are reinvested and what proportion is kept rather than paid as dividends

They do not dilute the ownership of the company

iv) Debenture

A debenture is a type of debt instrument that is not secured by collateral and usually has a term greater than 10 years. Debentures are backed only by the creditworthiness and reputation of the issuer. Both corporations and governments frequently issue debentures to raise capital or funds. Debenture is considered as the sources of loan or borrowed capital. For collecting funds through debenture institution need to pay interest periodically at certain predetermined rate of interest.

Types of Debenture

Debenture can be classified as redeemable, irredeemable, convertible, non-convertible, mortgage, naked and first and second debenture.

v) Venture capital funding

Venture capital funding is a source of private equity for Start-up, small expanding companies, and private companies that are planning to go public. The start-up business is usually at the earliest stages of development. In addition, it may be little more than an idea and a business plan. Because the start-up enterprise has no record of success, the venture capital investment is considered risky. In return for the venture capital funding, the venture capitalist typically wants high returns on the loan as well as a stake in the equity of the start-up company. A venture capitalist is an investor who invests in risky start-up businesses. The venture capital investor provides funding to an entrepreneur who may not have access to substantial bank loans or other sources of capital. Venture capitalists also invest in small companies that are expanding. They also invest in private companies planning to go public. They will often want to participate in the decision-making of the business in which they invest. Share capital issued by a company for the first time is also known as venture capital.

Venture capital financing involves following stages-

Seed capital

Venture capital financing starts with the seed-stage when the company is often little more than an idea for a product or service that has the potential to develop into a successful business down the road.

Start-up Capital

In the start-up stage, companies have typically completed research and development and devised a business plan, and are now ready to begin advertising and marketing their product or service to potential customers.

First stage or Emerging stage

First stage financing typically coincides with the company's market launch, when the company is finally about to start seeing a profit.

Expansion stage

In this stage the company is seeing exponential growth and needs additional funding to keep up with the demands.

Bridge stage

The final stage of venture capital financing, the bridge stage is when companies have reached maturity. Funding obtained here is typically used to support activities like mergers, acquisitions, or IPOs.

b) Short –term sources

Short term fund is required for funding day- to-day operations of a business and its repayment period must be less than 1 year. The need for short-term finance arises to finance the current assets of a business like an inventory of raw material and finished goods, debtors, minimum cash and bank balance etc. Short-term financing is also named as working capital financing.

i) Trade credit

Trade credit is an important external source of working capital financing. It is a short-term credit extended by suppliers of goods and services in the normal course of business, to a buyer in order to enhance sales. Trade credit arises when a supplier of goods or services allows customers to pay for goods and services at a later date. Cash is not immediately paid and deferral of payment represents a source of finance.

ii) Public deposit

Public deposits refer to the unsecured deposits invited by companies from the public mainly to finance working capital needs. A company wishing to invite public deposits makes an advertisement in the newspapers. Any member of the public can fill up the prescribed form and deposit the money with the company. The company in return issues a deposit receipt. This receipt is an acknowledgement of debt by the company. The terms and conditions of the deposit are printed on the back of the receipt. The rate of interest on public deposits depends on the period of deposit and reputation of the company.

A company can invite public deposits for a period of six months to three years. Therefore, public deposits are primarily a source of short-term finance. However, the deposits can be renewed from time-to-time. Renewal facility enables companies to use public deposits as medium-term finance.

iii) Factoring

Factoring is a source of finance for small businesses. Factoring is a financial transaction between a business owner and a third party that provides instant cash to the former in exchange for the account receivables of the business. In other words, a cash-strapped business, unable to get desperately needed funds, sells off its invoices, that are called account receivables, to a third party and in exchange, gets the much needed cash.

4.1.2 Lease Financing

Lease financing is a method of financing through agreement between the owner and user of assets for a specified period of time. Under this type of financing ,the lessor i.e. the leasing company purchases the assets from the manufacturers or dealers or produces the assets and gives lease to the lessee i.e., the user and the lessee pays the instalments at periodical intervals.

The instalments are treated as rent of the asset until the last payment is made. Lease financing is an alternative to the purchase of an asset out of own or borrowed funds.

Lease financing is made through the following form of leasing:

- i) **Sale and lease back**-A sale and lease-back agreement generally occurs in a situation where the lessee has already acquired a property but needs to free up capital in order to maintain operational cash flows. In such a case, the lessee sells their property to the lessor and then leases it back from the lessor and makes monthly payments. This allows the lessee to free up cash to make other investments or use the money to manage day-to-day operational expenses. So this kind of lease is suitable for the situation where liquidity crisis exist.
- ii) **Direct leasing**-Direct sale refers to the situation where the lessor directly leases the property to the lessee. The lessor either owns the property already or buys it from the manufacturer.
- iii) **Leveraged leasing**-A leveraged lease is a tax-advantaged lease arrangement in which a lessor borrows funds to acquire an asset that is then leased to a lessee. In this situation, the **lender holds title to the leased asset**, while all lessee payments are collected by the lessor and passed to the lender. The lender can repossess the asset in the event of a lessee payment default in this arrangement; the lessor can recognize depreciation expenses on the asset for tax purposes, while the lessee can deduct its lease payments from taxable income.
- iv) **Financial lease**-Finance lease refers to the lease where the finance company owns the asset legally during the tenure of the lease but all the risk and reward associated with the asset are transferred to the lessee by the lessor and at the end of the lease term lessee also gets the ownership of the asset.
- v) **Operating lease**-Operating lease is a contract wherein the owner, called the Lessor, permits the user, called the Lessee, to use of an asset for a particular period which is shorter than the economic life of the asset without any transfer of ownership rights. The Lessor gives the right to the Lessee in return for regular payments for an agreed period of time.

Sub Unit: 2 Cost of capital and time value of money

Sl. No.	Topics
6	2.2.1 What is Cost of Capital?
7	2.2.1.1 Types of Cost of capital
8	2.2.1.2 What is Floatation cost?
9	2.2.1.3 Calculation of specific cost of capital
10	2.2.2 Time Value of Money
11	2.2.2.1 Importance of Time Value of Money
12	2.2.2.2 Some important concept relating to Time Value of Money:

2.2.1 What is Cost of Capital?

Cost of capital may be defined as the ‘minimum rate of return that a firm must earn on its investment for the market value of the firm to remain unchanged’. So, it is nothing but the cost that has to be incurred by an organization for collecting funds from different sources.

2.2.1.1 Types of Cost of capital

i) Explicit cost of capital: It is the rate that the firm pays to procure financing. It is paid for financing from equity shares, preference share, debenture etc. It is arising when funds are raised.

ii) Implicit cost of capital: It is the rate of return associated with the best investment opportunity foregone. It is paid for reserve & surplus. It arises when funds are used.

iii) Specific cost of capital: The cost of each source or component is known as specific cost of capital.

iv) Composite cost of capital: It is the overall cost of capital and determined after combining the cost of capital of all sources. It is also known as weighted cost of capital, combined cost of capital and overall cost of capital.

Weighted cost of capital can be calculated using –

Book value weights- In this method proportion of book value of each sources of capital in the capital structure are used as weight.

Market Value Weights- In this method proportion of market value of each sources of capital in the capital structure are used as weight.

Book value is more convenient and simpler but market value is more representative and consistent.

2.2.1.2 What is Floatation cost?

It is the cost associated with the issuing and selling of securities.

2.2.1.3 Calculation of specific cost of capital

a) Cost of Debt

i) Cost of Debt (Perpetual)

$K_d (\text{Before tax}) = \frac{I}{S_v}$ Where I= Interest and S_v =Net sale proceeds ((Face value-Discout on issue of shares-Issue expenses)

$K_d (\text{After tax}) = \frac{I(1-T)}{S_v}$ Where T=Tax rate

ii) Cost of Debt (Redeemable)

$$K_d = \frac{I(1-T) + (f + d + Pr - Pt) \div Nm}{(Rv + S_v) \div 2}$$

Where, I= Interest, T= Tax rate, f= flotation cost, N_m = Term of Debt, d= Discount on issue, P_r =Premium on redemption, P_i = Premium on Issue, R_v = Redeemable value, S_v = Net sale proceeds (Face value-Discout on issue of shares-Issue expenses)

b) Cost of Preference share

i) Cost of preference share (Perpetual)

$$K_p = \frac{D_p}{P_0(1-f)} \text{ (When preference dividend tax is not given)}$$

$$K_p = \frac{D_p(1+D_t)}{P_0(1-f)} \text{ (When preference dividend tax is given)}$$

Where, D_p = Annual Preference dividend, P_0 =Expected sale price of preference share, f=flotation cost, D_t = Tax on preference dividend

ii) Cost of preference share (Redeemable)

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

Where, P= face value of pref. share, I=Issue price, n= period of pref. share D_p =Divedend on pref. share.

c) Cost of Equity

1. Dividend price approach

According to dividend price approach, we can calculate cost of capital just dividing dividend per share with market value of per share. This cost shows direct relationship between price of equity shares and price of dividend.

$$K_e = \frac{\text{Dividend Per Share}}{\text{Market Price Per share}}$$

2. Earning Price Approach

This approach tells that we should not co-relate dividend per share with market value per share but we should use total earning and try to co-relate it with market value of shares. We have to just write earning per share of company instead writing dividend per share. It will be helpful to void the effect of dividend policy on calculation of working capital.

$$K_e = \frac{\text{Earning Per Share}}{\text{Market Price per share}}$$

3. Growth Approach

$$K_e = \frac{D_1}{P_0} + g$$

$$\text{Again, } P_0 = \frac{D_1}{K_e - g}$$

$$P_1 = \frac{D_2}{K_e - g}$$

Where, K_e = Cost of equity, D_1 = expected dividend at the end of the first year, g = rate of growth, P_0 = Current market price per share, D_2 = expected dividend at the end of the 2nd year.

4. Cost of Equity using the Capital Assets Pricing Model (CAPM)

$$E(R_i) = R(f) + \beta[E(m) - R(f)]$$

Where,

- $R(f)$ = Risk-Free Rate of Return
- β = Beta of the stock
- $E(m)$ = Market Rate of Return
- $[E(m) - R(f)]$ = equity risk premium

Beta

Beta is used to measure the systematic risk (the volatility) of the asset relative to the market. Beta can be found by dividing the covariance of the asset and market's returns by the variance of the market.

$\beta_i < 1$: Asset i is less volatile (relative to the market)

$\beta_i = 1$: Asset i's volatility is the same rate as the market

$\beta_i > 1$: Asset i is more volatile (relative to the market)

5. Realised Yield Approach

This approach is improvement in dividend price approach for calculating cost of capital. In this approach, we calculate cost of capital after analysis past payments of dividends. After this, we add some rate of growth % in basic formula of cost of equity capital. In realised yield approach, dividend on per share will be real value not expected value.

$$Y_t = \frac{D_t + P_t}{P_{t-1}}$$

Where, Y_t = Yield for the year t

D_t = Dividend per share at the end of the year t

P_t = Price per share at the end of the year t

P_{t-1} = Price per share at the beginning

d) Cost of Retained Earnings

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

Where, K_r = Cost of retained earnings, K_e = cost of equity, t = marginal tax rate applicable to shareholders, c = brokerage, commission

2.2.2 Time Value of Money

The time value of money (TVM) is the concept that money available at the present time is worth more than the identical sum in the future due to its potential earning capacity. This core principle of finance holds that provided money can earn interest, any amount of money is worth more the sooner it is received. TVM is also sometimes referred to as present discounted value. The time value of money draws from the idea that rational investors prefer to receive money today rather than the same amount of money in the future because of money's potential to grow in value over a given period of time. Value of money decline in future due to inflation in the economy and the risk involved in delayed receipts of cash flows from the projects.

2.2.2.1 Importance of Time Value of Money:

- It helps to take investment decision in rational way.
- Helps to identify misconceptions about real cost and benefits of project.
- To make a budget decision because it allow business owner to adjust cash flow for the passage of time.

2.2.2.2 Some important concept relating to Time Value of Money:

Present value-It is the current value of the amount to be received from investment in future.

Future Value- It is the value of a deposit at some future point of time based on certain predetermined growth rate.

Simple interest- It is the interest rate charged on principal amount on daily/monthly/quarterly/annual basis.

Compound interest- It is the interest earned on a given deposit that has become a part of the principal at the end of a specified period.

Sub Unit: 3 Capital structure

Sl. No.	Topics
13	2.3.1 What is capital structure?
14	2.3.1.1 Importance of capital structure
15	2.3.1.2 Capital structure and Financial Structure
16	2.3.1.3 Optimum Capital Structure
17	2.3.1.4 Simple and Complex capital structure
18	2.3.2 Theories of capital structure
19	2.3.3 Concept of Leverage

2.3.1 What is capital structure?

Capital is the amount contributed by the owner to run the business and structure is nothing but the arrangement of the different parts in an organized manner. Capital structure implies the proportion of long-term debt capital and equity capital.

2.3.1.1 Importance of capital structure:

Capital structure implies that the mix of long-term debt capital and equity capital in the capital structure of the firm has an impact on cost of capital of the firm and the value of the firm as well. Use of more debt capital in the capital structure generates the financial leverage and which result in reduction of cost of capital and maximizing the value of the firm. Debt capital is assumed to be the cheaper source of capital in comparison to equity capital due to availability of the tax advantages on interest component of the debt capital.

2.3.1.2 Capital structure and Financial Structure:

Capital structure implies the proportion between only long-term debt capital and equity capital on the other hand financial structure implies the proportion between long term, short term debt and equity. So capital structure covers only long-term sources of funds whereas financial structure covers both long term as well as short term sources.

2.3.1.3 Optimum Capital Structure:

An optimum capital structure is that proportion of debt and equity at which firms cost of capital become minimum and firms value become maximum.

2.3.1.4 Simple and Complex capital structure:

When a firm capital includes only equity and retained earnings it is called **Simple capital structure**. On the other hand, when the firm's capital structure includes different sources of capital it is called **complex capital structure**.

2.3.2 Theories of capital structure:**i) Net Income (NI) Approach**

This theory was proposed by **Durand, D.** As per this approach capital structure decision of a firm has direct relationship with the cost of capital and the value of the firm. A firm can increase its value by lowering the cost of capital and a firm can reduce its cost of capital by using more

debt capital in the capital structure. This theory is based on the following assumption-there is no tax, cost of debt is less than equity capitalization rate and use of debt does not change the risk perception of investors.

ii) Net Operating Income (NOI) Approach

This theory was also proposed by **Durand, D.** As per this approach capital structure decision of a firm has no relationship with the cost of capital and the value of the firm i.e. the value of the firm remains unaffected by its capital structure. According to this theory use of more debt capital in the capital structure does not result in reduction of overall cost of capital as use of more debt increases the riskiness of the firm and equity shareholders demand more return for facing more risk. So, decreases in cost of capital due use of debt capital is off set by the increase cost of equity and the firm value remains unaltered.

iii) Traditional approach

According to this approach there exist an optimal debt- equity mix where the overall cost of capital is the minimum and market value of the firm is the maximum. Before this point the marginal cost of debt is less than a cost of equity and after this point vice-versa. As per this theory use of debt in the capital structure up to specific point results in increase in the value of the firm, beyond which, any increase debt in the capital structure result in the reduction in the value of the firm.

iv) The Modigliani-Miller (M-M) Approach

Modigliani and Miller advocate capital structure irrelevancy theory, which suggests that the valuation of a firm is irrelevant to the capital structure of a company. Whether a firm is highly leveraged or has a lower debt component in the financing mix has no bearing on the value of a firm. The Modigliani and Miller Approach further states that the market value of a firm is affected by its operating income, apart from the risk involved in the investment. The theory stated that the value of the firm is not dependent on the choice of capital structure or financing decisions of the firm.

Assumption

- There are no taxes.
- Transaction cost for buying and selling securities, as well as the bankruptcy cost, is nil.
- There is a symmetry of information. This means that an investor will have access to the same information that a corporation would and investors will thus behave rationally.
- The cost of borrowing is the same for investors and companies.
- There is no floatation cost, such as an underwriting commission, payment to merchant bankers, advertisement expenses, etc.
- There is no corporate dividend tax.

2.3.3 Concept of Leverage

Leverage is an ability of financial management to magnify the effect of certain change in sales over the percentage change in earnings available for distribution among the equity shareholders by using the fixed cost in the cost structure and fixed cost bearing capital in the capital structure.

There are three types of leverage i) Operating leverage ii) Financial leverage and iii) Combined Leverage

i) Operating leverage

Operating leverage is an ability of financial management to magnify the effect of certain change in sales over the percentage change in sales over percentage change in EBIT by using fixed operating cost in the cost structure. This leverage is measured with the help of **Degree of Operating Leverage (DOL)**

$$DOL = \frac{\% \text{ Change in EBIT}}{1\% \text{ Change in sales}}$$

$$\text{Or, } DOL = \frac{\text{Total Contribution}}{EBIT}$$

ii) Financial leverage:

Financial leverage is an ability of financial management to magnify the effect of certain change in EBIT over the percentage change in sales over percentage change in EPS by using fixed cost bearing capital in the capital structure. This leverage is measured with the help of **Degree of Financial leverage (DFL)**.

$$DFL = \frac{\% \text{ Change in EPS}}{1\% \text{ Change in EBIT}} \text{ or, } \frac{EBIT(1-t)}{(EBIT-I)(1-t)-P} \text{ (When preference dividend is there)}$$

$$DOL = \frac{EBIT}{EBT} \text{ (When no preference dividend is there)}$$

iii) Combined Leverage/ Total leverage

Combined or Total leverage is an ability of financial management to magnify the effect of certain change in sales over the percentage change in earnings available for distribution among the equity shareholders by using the fixed cost in the cost structure and fixed cost bearing capital in the capital structure. This leverage is measured with the help of **Degree of Combined leverage (DCL)**.

$$\text{Degree of Combined leverage (DCL)} = \frac{\% \text{ Change in EPS}}{1\% \text{ Change in Sales}} \text{ or, } DOL * DFL \text{ or, } \frac{\text{Contribution}(1-t)}{(EBIT-I)(1-t)-P}$$

Indifference Point

Indifferent point/level is that EBIT level at which the Earnings Per Share (EPS) is the same for two alternative financial plans. The indifferent point can be defined as "the level of EBIT beyond which the benefits of financial leverage begin to operate with respect to Earnings Per share (EPS)". If the EBIT exceeds the indifference point level of EBIT, the use of fixed-cost source of funds would be beneficial from the EPS viewpoint. In this case, financial leverage would be favourable. In the reverse scenario, if the expected level of EBIT is less than the indifference point, the advantage of EPS would be available from the use of equity capital and not debt capital.

The point of indifference can be calculated using the following formula:

$$\frac{(X-I_1)(1-T)-Pd}{N_1} = \frac{(X-I_2)(1-T)-Pd}{N_2}$$

Where:

X = EBIT indifference level

I_1 = Fixed interest costs under alternative 1.

I_2 = Fixed interest costs under alternative 2.

PD = Preference dividend, if any.

T = Tax rate

N_1 = Number of equities shares outstanding under alternative 1.

N_2 = Number of equities shares outstanding under alternative 2.

Sub Unit: 4 Capital budgeting decisions: Conventional and scientific techniques of capital budgeting analysis

Sl. No.	Topics
20	4.4.1 Concept of capital Budgeting
21	4.4.1.1 Importance of Capital Budgeting
22	4.4.1.2 Different types of Investment Decision
23	4.4.1.3 Process of capital Budgeting
24	4.4.1.4 Traditional technique of capital budgeting
25	4.4.1.5 Scientific technique of capital budgeting

4.4.1 Concept of capital Budgeting

The **Capital Budgeting** is one of the crucial decisions of the financial management that relates to the selection of investments and course of actions that will yield returns in the future over the lifetime of the project. Capital budgeting is a process of taking decision relating to investment in fixed assets. It can also be defined as the process of evaluating and selecting long- term investments that are consistent with the goal of shareholders (owner) wealth maximisation. Capital budgeting is the decision about capital expenditure of a particular firm. Capital expenditure is an outlay of funds that is expected to produce benefits over a period of time exceeding one year.

4.4.1.1 Importance of Capital Budgeting

Importance of capital budgeting can be understood on the basis of the following points-

- As capital budgeting decision involves **huge outlay of amount** decision of investment should be taken very carefully.
- Once investment decision is made it cannot be changed easily without much financial loss. So decision should be taken carefully for its **irreversibility** nature.
- Capital investment decision has its effect over a **long time span** and inevitably affects the company's future cost structure.

4.4.1.2 Different types of Investment Decision

The firm may be confronted with three types of capital budgeting decisions –

- i) **Accept-reject decision**- It is the evaluation of capital expenditure proposal to determine whether they meet the minimum acceptance criterion. In general all those proposals which yield a rate of return greater than a certain required rate of return or cost of capital are accepted and rest are rejected.
- ii) **Mutually exclusive choice decision**- Mutually exclusive projects decisions are projects that compete with one another; the acceptance of one eliminates the others from further consideration.
- iii) **Capital rationing decision**-It is the financial situation in which a firm has only fixed amount to allocate among competing capital expenditures.

4.4.1.3 Process of capital Budgeting

Capital budgeting process includes mainly four distinct but interrelated steps used to evaluate and select long term proposal-proposal generation, evaluation, selection and follow up. These main four distinct processes can be segregated into the following-

Identification of Potential Investment Opportunities→ Assembling of Investment Proposals→ Decision Making→ Preparation of Capital Budget and Appropriations→ Implementation→ Performance Review Techniques of Capital Budgeting Decision→

4.4.1.4 Traditional technique of capital budgeting

Average Rate of Return (ARR)

The **Average Rate of Return or ARR**, measures the profitability of the investments on the basis of the information taken from the financial statements rather than the cash flows. It is also called as **Accounting Rate of Return**. The formula for calculating the average rate of return is:

Average Rate of Return = Average Income / Average Investment over the life of the project

Where, Average Income = Average of post-tax operating profit

Average Investment = (Book value of investment in the beginning + book value of investments at the end) / 2

The projects having the rate of return higher than the minimum desired returns are accepted.

Pay Back Period (PBP)

Payback period is the time in which the initial outlay of an investment is expected to be recovered through the cash inflows generated by the investment. It is one of the simplest investment appraisal techniques.

The formula to calculate the payback period of an investment depends on whether the periodic cash inflows from the project are even or uneven.

If the cash inflows are even, the formula to calculate payback period is:

$$\text{Payback Period} = \frac{\text{Initial Investment}}{\text{Net Cash Flow per Period}}$$

When cash inflows are uneven, we need to calculate the *cumulative net cash flow* for each period and then use the following formula:

$$\text{Payback Period} = A + \frac{B}{C}$$

Where,

A is the last period number with a negative cumulative cash flow;

B is the absolute value (i.e. value without negative sign) of cumulative net cash flow at the end of the period A; and

C is the total cash inflow during the period following period A

Cumulative net cash flow is the sum of inflows to date, minus the initial outflow.

Discounted Pay Back Period

Discounted payback period is a variation of payback period which uses discounted cash flows while calculating the time an investment takes to pay back its initial cash outflow. One of the major disadvantages of payback period is that it ignores the time value of money. To counter this limitation, discounted payback period was devised, and it accounts for the time value of money by discounting the cash inflows of the project for each period at a suitable discount rate.

Formula for calculating Discounted payback period:

In discounted payback period we have to calculate the present value of each cash inflow. For this purpose the management has to set a suitable discount rate which is usually the company's cost of capital. The discounted cash inflow for each period is then calculated using the formula:

$$\text{Discounted Cash Inflow} = \frac{\text{Actual Cash Inflow}}{(1 + i)^n}$$

Where,

i is the discount rate; and

n is the period to which the cash inflow relates.

The rest of the procedure is similar to the calculation of payback period except that we have to use the discounted cash flows as calculated above instead of nominal cash flows. Also, the cumulative cash flow is replaced by cumulative discounted cash flow.

$$\text{Discounted Payback Period} = A + \frac{B}{C}$$

Where,

A = Last period with a negative discounted cumulative cash flow;

B = Absolute value of discounted cumulative cash flow at the end of the period A ; and

C = Discounted cash flow during the period after A .

** Cash Flow = Net Profit after tax + Depreciation

4.4.1.5 Scientific technique of capital budgeting

Net Present Value (NPV) method

This is one of the widely used methods for evaluating capital investment proposals. In this technique the cash inflow that is expected at different periods of time is discounted at a particular rate. The present values of the cash inflow are compared to the original investment. If the difference between them is positive (+) then it is accepted or otherwise rejected. This method considers the time value of money and is consistent with the objective of maximizing profits for the owners.

The equation for the net present value, assuming that all cash outflows are made in the initial year, will be:

$$\begin{aligned} \text{NPV} &= \left[\frac{A_1}{(1+k)^1} + \frac{A_2}{(1+k)^2} + \frac{A_3}{(1+k)^3} + \dots + \frac{A_n}{(1+k)^n} \right] - C \\ &= \sum_{t=1}^n \frac{A_t}{(1+k)^t} - C \end{aligned}$$

Where A_1, A_2, \dots represent cash inflows, K is the firm's cost of capital, C is the cost of the investment proposal and n is the expected life of the proposal. It should be noted that the cost of capital, K , is assumed to be known, otherwise the net present, value cannot be known.

$$\text{NPV} = \text{PVB} - \text{PVC}$$

Where,

PVB = Present value of benefits

PVC = Present value of Costs

Internal Rate of Return (IRR) method

This is defined as the rate at which the net present value of the investment is zero. The discounted cash inflow is equal to the discounted cash outflow. This method also considers time value of money. It tries to arrive to a rate of interest at which funds invested in the project could be repaid out of the cash inflows. However, computation of IRR is a tedious task. It is called internal rate because it depends solely on the outlay and proceeds associated with the project and not any rate determined outside the investment. In this methods it is assumes that cash-inflows are reinvested at the project's rate of return.

It can be determined by solving the following equation:

$$C = \frac{A_1}{(1+r)^1} + \frac{A_2}{(1+r)^2} + \frac{A_3}{(1+r)^3} + \dots + \frac{A_n}{(1+r)^n}$$

$$C = \sum_{i=1}^n \frac{A_i}{(1+r)^i} \neq C$$

$$0 = \sum_{i=1}^n \frac{A_i}{(1+r)^i} - C$$

If $IRR > WACC$ then the project is profitable.

If $IRR > k = \text{accept}$

If $IR < k = \text{reject}$

Profitability Index (PI) method

It is the ratio of the present value of future cash benefits, at the required rate of return to the present value of initial cash outflow of the investment.

PI = Present value of cash inflow / Present value of cash outflow

Sub Unit: 5 Working capital management; Dividend decision: Theories and policies

Sl. No.	Topics
26	4.5.1 Concept of Working Capital
27	4.5.1.1 Types of working capital
28	4.5.1.2 Financing of Working Capital
29	4.5.1.3 Operating Cycle
30	4.5.1.4 Dangers of too little working capital
31	4.5.1.5 Dangers of too much working capital
32	4.5.1.6 Determinants of working capital
33	4.5.2 Concept of dividend
34	4.5.2.1 Types of Dividend
35	4.5.2.2 Types of dividend policy
36	4.5.2.3 Theories of Dividend
37	4.5.2.4 Determinants of dividend policy

4.5.1 Concept of Working Capital: Working capital can be defined as the amount which is required to meet the day to day requirement of an enterprise. Again, it can be defined as the excess amount of long term sources of fund which is invested in the current assets. Working capital management deals with the decision of investing of funds in current assets. As we know that investment in fixed assets helps to generates income but investment in current assets do not generates any income but provide short term liquidity only. So, decision for investing in working capital should be taken very carefully after considering profitability and liquidity of an enterprise.

4.5.1.1 Types of working capital:

i) Gross working capital: It is the total amount of current assets. It refers to the amount of funds which is invested in current assets.

ii) Net working capital: It is the amount which is excess of current assets over current liabilities. So, it is the excess of long-term sources of funds which is invested in current assets.

iii) Positive Working capital: If the amount of current assets exceeds the amount of current liabilities, the difference is treated as positive working capital.

iv) Negative working capital: If the amount of current assets is less than the current liabilities, the difference is treated as negative working capital.

v) Zero working capital: If the amount of current assets is equal with the current liabilities, it will be called as zero working capital. Again, it can be calculated as **ZWC= Inventories + Receivables-Payables**

vi) Permanent/fixed working capital

It is minimum amount of working capital which is required to be maintained on a continuous and uninterrupted basis.

vii) Variable/Fluctuating working capital: It is the amount over and above the permanent working capital and it is needed to meet seasonal as well as unforeseen requirements.

4.5.1.2 Financing of Working Capital:

Working capital can be finance from short term source (current liabilities) as well as from long term source (equity share capital, long term borrowing etc.). Decision has to take how much of working capital should be financed from long term source and short-term source. So, the decision about the choice of funding current assets is popularly known as **financing mix**. There are three basic approaches for financing working capital viz.

i) Hedging/Matching approach

According to this approach, the maturity of the source of funds should match the nature of the assets to be financed. According to this approach, the permanent portion of funds required should be financed with long-term funds and the seasonal portion with short-term funds. This approach is riskier than the conservative approach.

ii) Conservative approach

According to this approach estimated requirement of total funds should be finance from long term funds and short-term funds will be used only to meet contingencies.

Heading approach is associated with high profit as well as high risk, while conservative approach is associated with low profit as well as low risk.

iii) Trade-off between Hedging and Conservative approach

This approach deals with trade-off between two extreme matching approach and conservative approach. According to this approach average of the minimum and maximum monthly requirements of funds during a given point of time can be financed from long term sources of funds and for any additional financing need, can be financed from short term sources.

4.5.1.3 Operating Cycle

It is a cyclical process of continuing flow from cash to suppliers, to inventory, to accounts receivable and back into cash. The requirement of working capital of a firm depends on the length of the operating cycle and consecutive time gap between two stages of operating cycle. Longer operating capital cycle denotes the larger requirement of working capital and vice versa. Operating cycle generally denotes in term of days, weeks or months. Length of the operating capital cycle varies from business to business.

4.5.1.4 Dangers of too little working capital

- ✓ Fails to honor its short-term obligations in time and lose its reputation.
- ✓ Inability to buy its requirements at bulk and can not avail the facility of discount.
- ✓ It will not be able to undertake the profitable projects due to lack of working capital
- ✓ Unable to effective utilization of fixed assets due to lack of liquid funds
- ✓ Unable to pay day-to-day expenses of its operation.

4.5.1.5 Dangers of too much working capital

- ✓ Excessive working capital will result in reduction in rate of return on investment as higher working capital implies lower investment in fixed assets.
- ✓ Excessive working capital implies excessive debtors which again implies higher amount of bad debt
- ✓ Excessive working capital will result in higher cost of maintenance of stock.
- ✓ It may result into overall inefficiency in the organization.

4.5.1.6 Determinants of working capital

- ✓ Nature of business
- ✓ Size of the business
- ✓ Scale of operations
- ✓ Production cycle
- ✓ Business cycle
- ✓ Seasonality and production policy
- ✓ Credit policy of the business
- ✓ Growth and expansion of business
- ✓ Depreciation policy

Inventory Management

Inventory is an idle stock of physical goods that contain economic value, and are held in various forms by an organization in its custody awaiting packing, processing, transformation, use or sale in a future point of time.

Any organization which is into production, trading, sale and service of a product will necessarily hold stock of various physical resources to aid in future consumption and sale. While inventory is a necessary evil of any such business, it may be noted that the organizations hold inventories for various reasons, which include **speculative purposes, functional purposes, physical necessities etc.** Inventory of materials occurs at various stages and departments of an organization. A manufacturing organization holds inventory of raw materials and consumables required for production. It also holds inventory of semi-finished goods at various stages in the plant with various departments. Finished goods inventory is held at plant, FG Stores, distribution centers etc. Further both raw materials and finished goods those that are in transit at various locations also form a part of inventory depending upon who owns the inventory at the particular juncture. Finished goods inventory is held by the organization at various stocking points or with dealers and stockiest until it reaches the market and end customers. Besides Raw materials and finished goods, organizations also hold inventories of spare parts to service the products. Defective products, defective parts and scrap also forms a part of inventory as long as these items are inventoried in the books of the company and have economic value.

The main objective of inventory management would be to determine and maintain optimum level of investment in inventories so that there is continuous supply of raw materials to production on one hand and minimization of carrying costs on the other.

From the above definition the following points stand out with reference to inventory:

- All organizations engaged in production or sale of products hold inventory in one form or other.
- Inventory can be in complete state or incomplete state.
- Inventory is held to facilitate future consumption, sale or further processing/value addition.
- All inventoried resources have economic value and can be considered as assets of the organization.

Optimum level of single quantity order in which carrying cost and ordering cost becomes minimum is known as Economic Ordering Quantity (EOQ).

$$\text{Economic Order Quantity (EOQ)} = \sqrt{\frac{2 \cdot A \cdot O}{C_c}}$$

Where, A= annual consumption

O= Ordering cost per order

Cc= Carrying cost or storage cost per unit

Cash Management

Cash Management refers to the collection, handling, control and investment of the organizational cash and cash equivalents, to ensure optimum utilization of the firm's liquid resources. Money is the lifeline of the business, and therefore it is essential to maintain a sound cash flow position in the organization.

Cash management includes receivable cash management and payables cash management.

Cash Management Models

Cash management requires a practical approach and a strong base to determine the requirement of cash by the organization to meet its daily expenses. For this purpose, some models were designed to determine the level of money on different parameters.

The two most important models are

The Baumol's EOQ Model

Based on the Economic Order Quantity (EOQ), in the year 1952, William J. Baumol gave the Baumol's EOQ model, which influences the cash management of the company. According to this model, optimum cash level is that level of cash where carrying costs and transactions costs are minimum.

The Miller – Orr' Model

This model helps to determine the level of cash when the demand for cash is not steady and cannot be known in advance.

4.5.2 Concept of dividend:

Dividend is that part of the net profit which is distributed among the shareholders by the company. It is received by the shareholders for investing their money and paid by the company for collecting funds from the shareholders. It is a periodical distribution made by the company considering its earning. The portion of earnings which is distributed among shareholders in the form of dividend is called pay- out ratio.

4.5.2.1 Types of Dividend:

i) Final dividend

It is the amount of dividend which is paid after one year at annual interval. It is generally paid out of current year's profit as per the resolution adopted in the annual general meeting of the company

ii) Interim Dividend

It is the amount of dividend which is paid during the year before finalisation of dividend payable to the shareholders. For declaration of interim dividend, interim accounts are prepared.

iii) Cash Dividend

Cash dividend is the dividend which is paid in cash. Cash dividend may be of different types viz., i) regular cash dividend ii) extra cash dividend iii) special cash dividend and iv) liquidating cash dividend. Dividend payable in cash may be paid by cheques or dividend warrants.

iv) Bonus Dividend

It is also known as share dividend. Bonus dividend means the bonus shares issued to the existing fully paid up shareholders in some specified ratio. In that case additional shares are issued at free of cost.

v) Current profit dividend

When dividend is declared and paid out of current year's profit is known as current profit dividend.

vi) Retained earnings dividend

When dividend is declared and paid out of retained earnings such as reserve, accumulated profits etc. is known as retained earnings dividend. Dividend can be declared and paid out of retained earnings if there inadequacy of profit or in the absence of profit in any year.

vii) Scrip dividend

It is the amount of dividend paid to the members of the company in the form of scrips or promissory notes.

4.5.2.2 Types of dividend policy**i) Constant dividend per share**

As per this dividend policy dividend is given on the basis of number of shares held by the shareholders at a amount of dividend per share. In this policy dividend per share is indifferent to net earnings of the company.

ii) Constant percentage of earnings

As per this dividend policy dividend is given at a constant percentage of net earnings earned by the company during the year. So dividend per share varies year to year as per this policy.

iii) Constant dividend per share plus extra dividend

As per this dividend policy dividend is given on the basis of number of shares held by the shareholders at a constant amount of dividend per share along with certain pre-determined amount of extra dividend.

4.5.2.3 Theories of Dividend**i) Relevance theory of dividend**

According to this theory payment of dividend has direct impact on the value of the firm and value of the firm is determined by the dividend decision of the firm.

There are two sets of theories under this approach- i) Gordon's Model ii) Walter's Model

According to **Walter's model** firm's value will be maximum in the following cases

i) if the firm retain the entire earnings and pays no dividend when cost of capital (k) is lower than the rate of return on investment (r) ($r > k$). In this case firms will be considering as growth firm.

ii) if the firm pays the entire earnings in the form of dividend when cost of capital (k) is higher than the rate of return on investment (r) ($r < k$). In this case firms will be considering as declining firm.

ii) When cost of capital (k) is equal to the rate of return on investment (r) firms will remain indifferent whether earnings are retained or distributed. In this case firms will be considering as normal firm.

As per Walters model,

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

Where, D= Dividend per share, r= rate of return on investment, k_e = Cost of capital, E= earnings per share, P= Market price per share

Assumptions of Walter model:

- All the financing is done through the retained earnings; no external financing is used.
- The rate of return (r) and the cost of capital (K) remain constant irrespective of any changes in the investments.
- All the earnings are either retained or distributed completely among the shareholders.
- The earnings per share (EPS) and Dividend per share (DPS) remain constant.
- The firm has a perpetual life.

According to **Gordon's model**

i) When the rate of return is greater than the cost of capital i.e. $r > k$, the price per share increases as the dividend pay-out ratio decreases.

ii) When the rate of return is lower than the cost of capital i.e. $r < k$, the price per share increases as the dividend pay-out ratio increases.

iii) When the rate of return is equal to the cost of capital i.e. $r = k$, the price per share does not vary with the changes in the dividend pay-out ratio.

$$P = \frac{E(1-b)}{k - b.r}$$

Where, P= Market price per share, E =earnings per share, b=Retention ratio, r= rate of return on investment.

Assumptions of Gordon's model:

- The firm is an all-equity firm; only the retained earnings are used to finance the investments, no external source of financing is used.
- The rate of return (r) and cost of capital (K) are constant.
- The life of a firm is indefinite.
- Retention ratio once decided remains constant.
- Growth rate is constant ($g = br$)
- Cost of Capital is greater than br

ii) Irrelevance theory of dividend

According to this theory payment of dividend has no impact on the value of the firm and value of the firm is solely determined by the earning power and risk of its assets. According to the Modigliani and Miller value of the firm is determined by its ability to generate earnings from its investments and by its level of business and financial risk.

$$V_0 = \frac{P_1(n + \Delta n) - I + E}{1 + Ke}$$

Where, V_0 = Value of the firm, P_1 = Market price per share at the end of the 1st year, n = no. of existing equity share, Δn = Additional no. of equity shares, I = Investment, E = Earnings, K_e = Cost of capital.

In this theory we can calculate Current market price per share by using the following formula,
$$P_0 = \frac{D_1 + P_1}{1 + k_e}$$

Where, P_0 = current market price per share, D_1 = Dividend per share at the end of 1st year, P_1 = Price per share at the end of the 1st year, k_e = cost of capital.

4.5.2.4 Determinants of dividend policy

- i) Needs and desires of shareholders
- ii) Cost of capital
- iii) Plan for expansion
- iv) Alternative use of the funds by the shareholders
- v) Capital requirements of the company
- vi) Taxation policy of the Government
- vii) Legal restrictions
- viii) Cash position of the firms.

Sub Unit: 6 Risk and return analysis; Asset securitization

Sl. No.	Topics
38	4.6.1 Concept of return
39	4.6.1.1 Measurement of return of a single security
40	4.6.2 Concept of Risk
41	4.6.2.1 Types of Risk
42	4.6.2.2 Measurement of Risk of a single security
43	4.6.2.3 Portfolio risk and return
44	4.6.3 Asset securitization
45	4.6.3.1 Securitization Process
46	4.6.3.2 Merits of Securitisation
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4.6.1 Concept of return

Return and risk is associated with the investment in securities market. There is a very common proverb in English “No risk, no gain”. So if any investors want return he/she has to face risk as well.

Return can be defined as the actual income received by the investee from his investment after expiry of certain period of time as well as appreciation in the value of capital. There are **two components of return**-i) Periodical return in the form of interest and dividend and ii) Capital gain/loss which arises due to the changes in the price of the investment.

4.6.1.1 Measurement of return of a single security:

Return can be measured with the help of the following formula-

$R_t = \frac{P_t - P_0 + D_t}{P_0}$ Where, R_t =Return for t time period, P_t = Price of the security at the end of t time period, D_t = Dividend declared for t time period and P_0 =Price of the security at the beginning of t time period.

4.6.2 Concept of Risk

Risk-'Risk' is the probability that the actual returns on your investments are different compared to your expectations.

4.6.2.1 Types of Risk

Risk can be classified as

- i) **Systematic Risk** – It can be defined as the risk that affects all the market equally not just a particular firm or stock and which is unpredictable and cannot completely be avoided and it can be only reduced to some extent through proper assets allocation strategy. Systematic risk consists of market risk, Purchasing power risk and interest risk. This risk is also known as un-diversifiable risk.
- ii) **Unsystematic Risk**- It can be defined as the risk which is firm or company specific and not equally affects all the firm or industry in a similar way. This risk can be reduced proper diversification strategy. This risk is also known non-systematic risk, diversifiable risk or residual risk.

iii) **Business Risk**-Business risk is the exposure a company or organization has to factor(s) that will lower its profits or lead it to fail. Anything that threatens a company's ability to meet its target or achieve its financial goals is called business risk.

iv) **Financial risk**- The risk which arises due to use of debt capital in the capital structure of the firm is known as financial risk. When debt is used in the capital structure of a firm, financial risk is added because the use of debt increases the volatility of return to the shareholders and probability of insolvency.

iv) **Credit risk**

Credit risk is a measure of the creditworthiness of a borrower. In calculating credit risk, lenders are gauging the likelihood they will recover all of their principal and interest when making a loan. Borrowers considered to be a low credit risk are charged lower interest rates. Lenders, investors, and other counterparties consult ratings agencies to assess the credit risk of doing business with companies.

v) **Liquidity Risk**

Liquidity risk is the risk that a company or bank may be unable to meet short term financial demands. This usually occurs due to the inability to convert a security or hard asset to cash without a loss of capital and/or income in the process.

4.6.2.2 Measurement of Risk of a single security:

The risk associated with a single asset is measured from both a behavioural and a statistical (quantitative) point of view.

The behavioural risk view is measured using:

1. Sensitivity analysis and
2. Probability distribution

The statistical risk view is measured using:

1. Standard deviation and
2. Coefficient of variation.

The behavioural risk view:

1. Sensitivity analysis

Sensitivity analysis is one of the simplest ways of handling risk. It consists of examining the magnitude of change in the rate of return for the project, for a small change in each of its components which are uncertain. The best possible way is to select these variables whose estimated value may contain significant errors or element of uncertainty and then to calculate the effect of errors of different sizes on the present value of the project. Some of the key variables are cost, price, project life, market share etc. Sensitivity analysis takes into account a number of possible outcome estimates while evaluating an asset risk. In order to have a sense of the variability among return estimates, a possible approach is to estimate the worst(pessimistic), the expected(most likely) and the best(optimistic) returns associated with the asset. The difference between the optimistic and the pessimistic outcomes is the range, which according to the sensitivity analysis is the basic measure of risk. The greater the range, the more is the risk and vice versa.

2. Probability distribution

Probability may be described as the measure of likelihood of an event's occurrence. The risk associated with an asset can be assessed more accurately by the use of probability distribution

than sensitivity analysis. For example, if the expectation is that a given outcome or return will occur six out of ten times, it can be said to have sixty percent chance of happening; if it is certain to happen, the probability of happening is 100%. An outcome which has a probability of zero will never occur. So, on the basis of the probability distributed or assigned to the rate of return, the expected value of the return can be computed. The expected rate of return is the weighted average of all possible returns multiplied by their respective probabilities and those probabilities of the various outcomes are used as weights. The expected return(R),

$$R = \sum_{i=1}^n R_i \times Pr_i$$

Where:

R_i = Return for the i^{th} possible outcome

Pr_i = Probability of its outcome / return

n = Number of outcomes considered

The statistical risk view

1. Standard Deviation:

The most common statistical measure of risk of an asset is the standard deviation from the mean or expected value of return. It represents the square root of the average squared deviations of the individual returns from the expected returns. The standard deviation can be represented as thus:

$$\sigma = \sqrt{\sum_{i=1}^n (R_i - R)^2 \times Pr_i}$$

Where:

R_i = Return for the i^{th} possible outcome

R = mean of the returns (Pr_i and n as given above)

2. Coefficient of variation:

It is a measure of relative dispersion or a measure of risk per unit of expected return. It converts standard deviation of expected values into relative units and thus facilitates comparison of risks associated with assets having different expected values. It is calculated by dividing the standard deviation of an asset by its expected value.

$$CV = \frac{\sigma}{R}$$

The larger the CV , the larger the relative risk of the asset.

4.6.2.3 Portfolio risk and return

A **portfolio** is the total collection of all investments held by an individual or institution, including stock, bonds, real estate, option, future and alternative investments, such as gold.

Most portfolios are diversified to protect against the risk of single securities or class of securities. Hence, **portfolio analysis** consists of analysing the portfolio as a whole rather than relying exclusively on **security analysis**, which is the analysis of specific types of securities. While the risk return profile of a security depends mostly on the security itself, the risk-return profile of a portfolio depends not only on the component securities, but also on their mixture or allocation, and on their degree of correlation.

i) Portfolio of Risk

Let's now look at how to calculate the risk of the portfolio. The risk of a portfolio is measured using the standard deviation of the portfolio. However, the standard deviation of the portfolio will not be simply the weighted average of the standard deviation of the two assets. We also need to consider the covariance/correlation between the assets. The covariance reflects the co-movement of the returns of the two assets. Unless the two assets are perfectly correlated, the covariance will have the impact of reduction in the overall risk of the portfolio. Thus when the **correlation coefficient between asset returns is negative unity, it is possible to combine them in a manner will eliminate all risk.**

The portfolio standard deviation can be calculated as follows:

$$\sigma_p = \sqrt{w_1^2 \sigma_1^2 + w_2^2 \sigma_2^2 + 2 w_1 w_2 \rho_{1,2} \sigma_1 \sigma_2}$$

$$\sigma_p = \sqrt{w_1^2 \sigma_1^2 + w_2^2 \sigma_2^2 + 2 w_1 w_2 Cov_{1,2}}$$

Systematic risk **Beta (β)** of a security can be calculated by applying the below formula

$$\beta_s = \frac{\sigma_m \times \sigma_s \times r_{sm}}{\sigma_{sm}^2}$$

ii) Portfolio Return

Let's say the returns from the two assets in the portfolio are R_1 and R_2 . Also, assume the weights of the two assets in the portfolio are w_1 and w_2 . Note that the sum of the weights of the assets in the portfolio should be 1. The returns from the portfolio will simply be the weighted average of the returns from the two assets, as shown below: **$R_P = w_1 R_1 + w_2 R_2$**

Where, R_P = Return of the portfolio

w_1 = Weight of security 1

w_2 = Weight of security 2

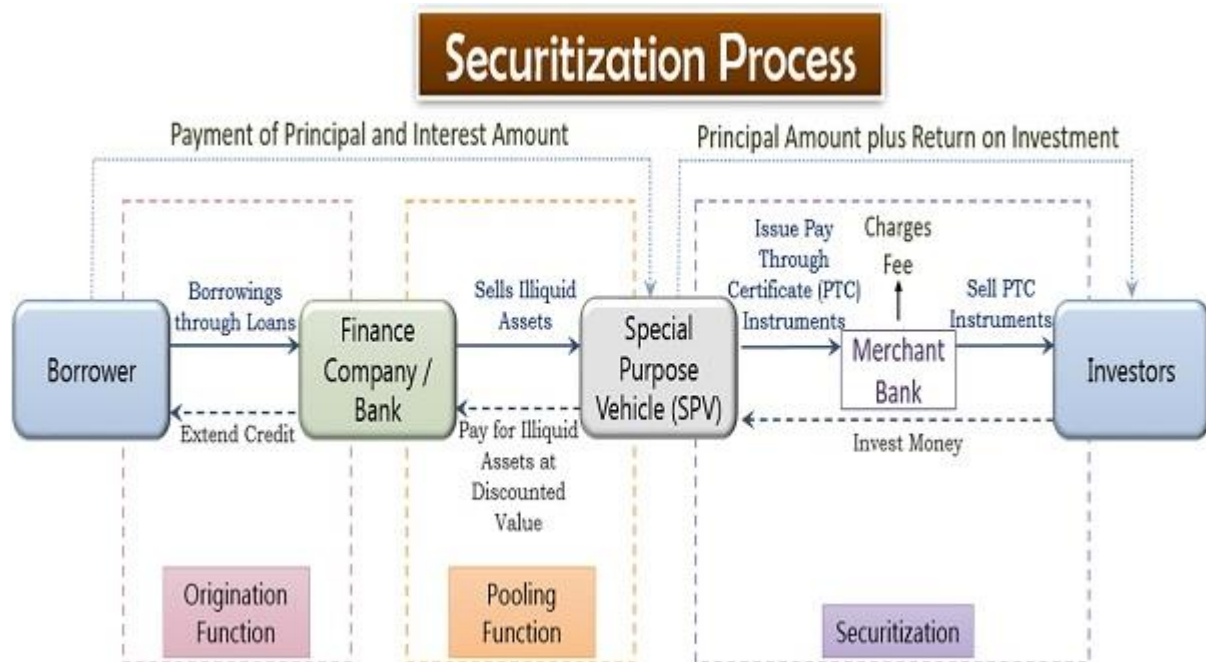
4.6.3 Asset securitization- Securitization refers to the process of converting debt (assets, usually illiquid assets) into securities, which are then bought and sold in the financial markets. If you notice, the first line calls debt as an asset. This is because debt is a liability for the borrower, but for the lender, it is an asset. In simple words, securitization is a process where a

financial company combines several of its assets into consolidated financial instrument or securities. Then, financial companies issue these securities to the investors, who earn interest.

4.6.3.1 Securitization Process

Securitization is a complex and lengthy process since it is the conversion of the receivables into bonds; it involves multiple parties.

The steps involved in the process of securitization are as follows:



4.6.3.2 Merits of Securitisation

- i) **Unblocks Capital:** Through securitization, the originator can recover the amount lent, much earlier than the prescribed period.
- ii) **Provides Liquidity:** The illiquid assets, such as the receivables on loans sanctioned by the bank, are converted into liquid assets.
- iii) **Lowens Funding Cost:** With the help of securitization, even the BB grade companies can benefit by availing AAA rates if it has an AAA-rated cash flow.
- iv) **Risk Management:** The financial institution lending the funds can transfer the risk of bad debts by securitizing its receivables.
- v) **Overcoming Profit Uncertainty:** When the recovery of debts is uncertain, its profitability, in the long run, is equally doubtful. Thus, securitization of such obligations is a suitable option to avoid loss.
- vi) **Reduces Need for Financial Leverage:** Securitization releases the blocked capital to maintain liquidity; therefore, the originator need not seek to financial leverage in case of any immediate requirement.
- vii) **Quality Investment:** The purchase of MBS and ABS are considered to be a wise investment option due to their feasibility and reliability.

viii) Less Credit Risk: The securitized assets have higher creditworthiness since these are ix) treated separately from their parent entity.

ix) Better Returns: Securitization is a means of making a superior return on their investment; however, it depends more on the investor's risk-taking ability.

x) Diversified Portfolio: The investor can attain a well-diversified portfolio on including the securitized bonds; since these are very different from other instruments.

xi) Benefit Small Investors: The investors having minimal capital for investment can also make a profit out of securitized bonds.

4.6.3.3 Demerits of Securitisation

i) Lack of Transparency: The SPV may not disclose the complete information about the assets included in a securitized bond to the investors.

ii) Complex to Handle: The whole process of securitization is quite complicated involving multiple parties; also, the assets need to be blended wisely.

iii) Quite Expensive: When compared to share flotation, the cost of a securitized bond is usually high, including underwriting, legal, administration and rating charges.

iv) Investor Bears Risk: The non-repayment of debts by the borrower would ultimately end up as a loss to the investors. Therefore, the investor is the sole risk-bearer in the process.

v) Inaccurate Risk Assessment: Sometimes, even the originator fails to identify the value of underlying assets or the associated credit risk.

vi) Loss from Prepayment: If the borrower pays off the sum earlier than the defined period, the investors will not make superior gains on their investment value.

Sub Unit: 7 International monetary system

Sl. No.	Topics
48	4.7.1 Concept of International Monetary system

4.7.1 Concept of International Monetary system

International monetary system refers to the system and rules that govern the use and exchange of money around the world and between countries. Each country has its own currency as money and the international monetary system governs the rules for valuing and exchanging these currencies. International monetary system refers to a system that forms rules and standards for facilitating international trade among the nations.

It helps in reallocating the capital and investment from one nation to another.

It is the global network of the government and financial institutions that determine the exchange rate of different currencies for international trade. It is a governing body that sets rules and regulations by which different nations exchange currencies with each other.

Sub Unit: 8 Foreign exchange market; Exchange rate risk and hedging techniques

49	4.8.1 Concept of Foreign Exchange Market
50	4.8.1.1 Functions of Foreign Exchange Market
51	4.8.1.2 Kinds of Foreign Exchange Market
52	4.8.2.2 Hedging Technique

4.8.1 Concept of Foreign Exchange Market

The foreign exchange market is a global online network where traders buy and sell currencies. The buyers and sellers include individuals, firms, foreign exchange brokers, commercial banks and the central bank. It has no physical location and operates 24 hours a day from 5 p.m. EST on Sunday until 4 p.m. EST on Friday because currencies are in high demand. It sets the exchange rates for currencies with floating rates. It is the largest and most liquid financial market in the world. Demand and supply determine the differences in exchange rates, which in turn, determine traders' profits. So, the Forex market buys and sells currencies. By doing so, it determines one currency's value against another, on a daily basis foreign market has two tiers. **Interbank market**- It is a market where biggest banks exchange currencies with each other. This market dictates currency values.

Over The Counter Market (OTC)-It is the market where companies and individuals trade. Although central banks don't regularly trade currencies, they can significantly influence forex rates. These banks hold several billion in foreign exchange reserves.

4.8.1.1 Functions of Foreign Exchange Market:**i) Transfer Function:**

It transfers purchasing power between the countries involved in the transaction. This function is performed through credit instruments like bills of foreign exchange, bank drafts and telephonic transfers.

ii) Credit Function:

It provides credit for foreign trade. Bills of exchange, with maturity period of three months, are generally used for international payments. Credit is required for this period in order to enable the importer to take possession of goods, sell them and obtain money to pay off the bill.

iii) Hedging Function:

When exporters and importers enter into an agreement to sell and buy goods on some future date at the current prices and exchange rate, it is called hedging. The purpose of hedging is to avoid losses that might be caused due to exchange rate variations in the future.

4.8.1.2 Kinds of Foreign Exchange Market**i) Spot Market**

Spot market refers to the market in which the receipts and payments are made immediately. Generally, a time of two business days is permitted to settle the transaction. Spot market is of daily nature and deals only in spot transactions of foreign exchange (not in future transactions). The rate of exchange, which prevails in the spot market, is termed as spot exchange rate or current rate of exchange.

The term 'spot transaction' is a bit misleading. In fact, spot transaction should mean a transaction, which is carried out 'on the spot' (i.e., immediately). However, a two day margin is allowed as it takes two days for payments made through cheques to be cleared.

ii) Forward Market

Forward market refers to the market in which sale and purchase of foreign currency is settled on a specified future date at a rate agreed upon today. The exchange rate quoted in forward transactions is known as the forward exchange rate. Generally, most of the international transactions are signed on one date and completed on a later date. Forward exchange rate becomes useful for both the parties involved in the transaction.

4.8.2 Concept of Exchange rate risk

Exchange-rate risk, also called currency risk, is the risk that changes in the relative value of certain currencies will reduce the value of investments denominated in a foreign currency. Exchange Rate Risk is defined as the risk of loss that the company bears when the transaction is denominated in a currency other than the currency in which the company operates. It is a risk which occurs due to change in relative values of currencies. The risk which the company runs is that there may be an adverse currency fluctuation on the date when the transaction is completed and currencies are exchanged. Foreign exchange risk also occurs when a company has subsidiaries operating in different countries and the subsidiaries prepare their financial statements in the currency which is different from the currency in which the parent company reports its financial statements.

Import and export businesses involve a large number of foreign exchange risks as the import/export of goods and services involve transactions in different currencies and exchange of currencies at a later date and time. Exchange rate risk also affects international investors and institutions which make the overseas investment in international markets.

4.8.2.1 Types of Foreign Exchange Risk

i) Transaction Risk

It occurs when a company buys products or services in a different currency or has receivables in a different currency than their operating currency. Since the payables or receivables are denominated in a different currency, the exchange rate at the initiation of a transaction and on the date of settlement may have changed due to the volatile nature of the forex market. This can cause a gain or loss for the company depending on the direction of movement of exchange rates and thus poses risk to the company.

ii) Translation Risk

It occurs when a company's financial statement reporting is affected by the exchange rate volatility. A large multinational generally has a presence in many countries and each subsidiary reports their financial statements in the currency of the country in which they operate. The parent company generally reports the consolidated financials and this involves translating foreign currencies of different subsidiaries to the domestic currency. And this can have a huge impact on the company's balance sheet and income statement and can ultimately affect the stock price of the company.

iii) Economic Risk

A company faces economic risk when the volatility in the exchange rate market can cause changes in the market value of the company. It basically represents the effects of exchange rates movement on revenues and expenses of a company which ultimately affects the future operating cash flows of the company and its present value.

4.8.2.2 Hedging Technique

A hedge is an investment that protects your finances from a risky situation. Hedging is done to minimize or offset the chance that your assets will lose value. It also limits your loss to a known amount if the asset does lose value. It's similar to home insurance. You pay a fixed amount each month. If a fire wipes out all the value of your home, your loss is the only the known amount of the deductible. Most investors who hedge use derivatives. These are financial contracts that derive their value from an underlying real asset, such as a stock.

A foreign exchange hedging strategy is a concept referring to the rules and procedures followed by investors and international businesses to protect their profit margins from foreign exchange volatility when trading currencies. The most common method of hedging currency risk is through the use of hedging products, such as currency swaps, forward contracts and options. These products offset the chance of exchange rate fluctuation in different ways, therefore protecting a company's investment from the risk of losing value.

Sub Unit: 9 International financial markets and instruments: Euro currency; GDRs; ADRs

Sl. No.	Topics
53	4.9.1 Concept of International Financial Market
54	4.9.1.1 Motives for the Internationalisation of Financial Transactions
55	4.9.1.2 Segments of International Financial market
56	4.9.2 International Financial Market Instruments

4.9.1 Concept of International Financial Market

The International Financial Market is the market place where financial wealth is traded worldwide between individuals (and between countries). It can be seen as a wide set of rules and institutions where assets i.e. stock, bonds, currencies, derivatives, commodities are traded between agents in surplus and agents in deficit and where institutions lay down the rules. Global finance market mainly focuses on lending and borrowing in foreign currencies to finance the foreign trade transactions. Global finance market operates outside the domain, directive and legislature framework of a country. The numerous components of global finance market include euro currency market, export credit facility, International bond market, and institutional finance.

4.9.1.1 Motives for the Internationalization of Financial Transactions

- Differences in interest rates
- International diversification
- Economic growth prospects
- Exchange rate fluctuations

4.9.1.2 Segments of International Financial market

i) Foreign Exchange Market

Foreign exchange market is the market for the purchase and sale of foreign currencies. It is an important segment of the international financial markets. Borrowing or investing internationally requires the use of foreign exchange market for conversion of currencies. The foreign exchange market facilitates international trade and international transactions.

The Foreign Exchange Market is the world's largest financial market. The Foreign Exchange Market is an over-the-counter market. That means there is no physical location where traders get together to exchange currencies. Traders located in the offices of major commercial banks around the world and communicate using the computer terminals, telephones, telexes, and other communication channels.

Participants in foreign exchange market include;

Importers, Exporters, Portfolio managers, Commercial banks and Brokers

ii) International Bond Market

It is the segment of international financial market where international bonds are bought and sold. Companies may raise long term funds in foreign currencies through issue of international bonds. Foreign bonds and Euro bonds are the two types of international bonds. International

bond market also includes straight bonds, global bonds, convertible bonds, cocktail bonds, callable bonds, Puttable bonds and sinking fund bonds.

iii) International Equity Market

Equity capital for a company is raised through the issue of shares. These shares are then traded in the stock exchange of the country. A multinational company would often like to raise equity capital from different countries by issuing shares in those countries. This may be done to raise foreign currency funds required for specific projects or for enhancing the prestige of the company in the global market, or sometimes the domestic market may not be large enough to absorb a large stock offering.

iv) International money market

Money market is the market for transfer of short- term funds. In international money market, transactions take place in a variety of different currencies. International banks and financial institutions across the world are the major suppliers of funds in these markets, while MNCs and governments of different countries are the major users of these funds. The European money market is an important part of the international money market.

v) International Credit market

MNCs can obtain short-term funds in foreign currencies from the international money markets, and can obtain long term funds in foreign currencies from the international bond markets. The segments of the international financial market where medium term funds are exchanged between the suppliers and borrowers of such funds is sometimes referred to as international credit market.

4.9.2 International Financial Market Instruments

i) Euro Currency- Euro currency implies to any currency (not implies to currency traded in European countries) which is deposited by national governments or corporations of any country, outside of its home market. Commonly it is currency held in banks located outside of the country which issues the currency. Eurocurrency is when an institution uses money from another country, but not in the originating country's home market. Despite the name, euro currency can involve any currency. Deals made in euro currency are usually brokered to take advantage of discrepancies in lending practices or currency exchange rates.

ii) Global Depositary Receipts (GDRs)- A global depositary receipt (GDR) is a bank certificate issued in more than one country for shares in a foreign company. Global Depositary Receipt (GDR) is an instrument in which a company located in domestic country issues one or more of its shares or convertibles bonds outside the domestic country. In GDR, an overseas depository bank i.e. bank outside the domestic territory of a company, issues shares of the company to residents outside the domestic territory. Such shares are in the form of depository receipt or certificate created by overseas the depository bank. Issue of Global Depositary Receipt is one of the most popular ways to tap the global equity markets. A company can raise foreign currency funds by issuing equity shares in a foreign country. Each GDR represents a particular number of shares in a specific company.

iii) American Depositary Receipts (ADRs)-

American depositary receipt (ADR) is a negotiable certificate issued by a U.S. depository bank representing a specified number of shares or as little as one share investment in a foreign company's stock. The ADR trades on markets in the U.S. as any stock would trade. ADRs enable domestic investors of U.S. to buy securities of foreign companies without the accompanying risks or inconveniences of cross-border and cross-currency transactions. Foreign firms also benefit from ADRs, as they make it easier to attract American investors and capital without the hassle and expense of listing themselves on U.S. stock exchanges. An ADRs represent a feasible, liquid way for U.S. investors to purchase stock in companies abroad. The certificates also provide access to foreign listed companies that would not be open to U.S. investment otherwise.

Types of ADRs:

Sponsored ADRs-The Sponsored ADRs are issued by the bank on behalf of the foreign company where there exists the legal arrangement between the two parties. In the case of sponsored ADRs transactions with the investors will be handled by the bank while the cost of issuing ADRs and control of ADR will be of foreign company.

Un-sponsored ADRs-Un-sponsored ADRs are the shares that are traded on the over-the-counter market (OTC). A bank issues un-sponsored ADR according to the demand in the market where the foreign company under consideration has no participation or formal or legal agreement with the depository bank. The un-sponsored ADRs are never included for the voting rights.

Sub Unit: 10 International arbitrage; Multinational capital budgeting

Sl. No.	Topics
57	4.10.1 What is Arbitrage?
58	4.10.1.1 What is International Arbitrage?
59	4.10.1.2 Types of Arbitrage
60	4.10.2 Concept of Multinational Capital Budgeting
61	4.10.2.1 Basic steps of multinational capital budgeting
62	4.10.2.2 Complexities in Multinational Capital Budgeting
63	4.10.2.3 Factors to be considered in Multinational Capital budgeting

4.10.1 What is Arbitrage?

Arbitrage is the process of simultaneously buying and selling a financial instrument on different markets, in order to make a profit from an imbalance in price.

An arbitrageur would look for differences in price of the same financial instruments in different markets, buy the instrument on the market with the lower price, and simultaneously sell it on the other market which bids a higher price for the traded instrument.

Since arbitrage is a completely risk-free investment strategy, any imbalances in price are usually short-lived as they are quickly discovered by powerful computers and trading algorithms. The simplest form of arbitrage is purchasing an asset in the market where the price is lower and simultaneously selling the asset in the market where the asset's price is higher.

4.10.1.1 What is International Arbitrage?

Simultaneous buying and selling of foreign securities and ADRs to capture the profit potential created by time, currency, and settlement inconsistencies that vary across international borders.

4.10.1.2 Types of Arbitrage:**i) Triangular Arbitrage**

Triangular arbitrage is the result of a discrepancy between three foreign currencies that occurs when the currency's exchange rates do not exactly match up. This type of arbitrage is a riskless profit that occurs when a quoted exchange rate does not equal the market's cross-exchange rate.

Suppose you have \$1 million and you are provided with the following exchange rates: EUR/USD = 0.8631, EUR/GBP = 1.4600 and USD/GBP = 1.6939.

With these exchange rates there is an arbitrage opportunity:

1. Sell dollars for euros: \$1 million x 0.8631 = €863,100
2. Sell euros for pounds: €863,100/1.4600 = £591,164.40
3. Sell pounds for dollars: £591,164.40 x 1.6939 = \$1,001,373
4. Subtract the initial investment from the final amount: \$1,001,373 - \$1,000,000 = \$1,373

ii) Locational Arbitrage:

A strategy in which a trader seeks to profit from differences in the exchange rate offered by different banks on the same currency. These differences are small and short-lived.

iii) Covered Interest Arbitrage

Covered interest arbitrage is a strategy in which an investor uses a forward contract to hedge against exchange rate risk. Covered interest rate arbitrage is the practice of using favourable interest rate differentials to invest in a higher-yielding currency, and hedging the exchange risk through a forward currency contract. Covered interest arbitrage is only possible if the cost of hedging the exchange risk is less than the additional return generated by investing in a higher-yielding currency - hence the word, arbitrage.

4.10.2 Concept of Multinational Capital Budgeting

Multinational capital budgeting, like traditional domestic capital budgeting, focuses on the cash inflows and outflows associated with prospective long-term (foreign) investment projects. Multinational capital budgeting techniques are used in foreign direct investment analysis.

4.10.2.1 Basic steps of multinational capital budgeting are:

1. Identify the capital put at risk.
2. Estimate the future cash flows generated by the project.
3. Identify the appropriate discount rate.
4. Apply traditional capital budgeting decision criteria such as NPV and IRR to determine the acceptability or ranking of potential projects.

4.10.2.2 Complexities in Multinational Capital Budgeting

Multinational capital budgeting is considered more complex due to a number of additional factors that need to be considered. Some of these factors are as follows:

1. Terminal values - Terminal value may be hard to estimate because potential buyers may have different views about the value of the company's cash flows.
2. Financing versus operating cash flows
3. Foreign currency fluctuations-The possibility of unanticipated changes in foreign exchange rates must be kept in mind.
4. Long-term inflation rates- Differing rates of national inflation have to be anticipated.
5. Subsidized financing
6. Political risk must be evaluated
7. Parent versus project cash flows- Parent cash flows must be distinguished from project cash flows. Parent cash flows often depend on the form of financing which means that financing cash flows cannot be clearly separated.
8. Nonfinancial payments such as license fee and import payments can generate cash flows from subsidiaries, these items has to be considered properly.

4.10.2.3 Factors to be considered in Multinational Capital budgeting

- **Initial Investment/Block Funds-** Some countries may require that the earnings be reinvested locally for a certain period of time before they can be remitted to the parent.
- **Exchange Rate Fluctuation-** Different scenarios should be considered together with their probability of occurrence.
- **Inflation-** Although price/cost forecasting implicitly considers inflation, inflation can be quite volatile from year to year for some countries.
- **Financing Arrangement-** Financing costs are usually captured by the discount rate. However, many foreign projects are partially financed by foreign subsidiaries.
- **Uncertain Salvage Value-** The salvage value typically has a significant impact on the project's NPV, and the MNC may want to compute the break-even salvage value.
- **Impact of Project on Prevailing Cash flow-** The new investment may compete with the existing business for the same customers.
- Host Government Incentives should also be considered in the analysis.