PREFACE TO THIS EDITION

Through the medium of this book, we present to you the **Financial Management** concepts in a refined and simplified manner. Each chapter has been covered through detailed questions to help in learning by practising. Effort has been done to write this book in a way which makes it easy to understand and remember.

I am thankful to God, my family, my friends and most importantly my students for always loving me and having faith in my hard work.

Also, the sincere effort, persistence and determination of our associated teachers, staff members, well Wishers and students are highly appreciated.

Every effort has been taken to avoid any errors / omissions, but errors are inevitable. Any mistake may kindly be brought to our notice and it shall be dealt with suitably.

We welcome your valuable suggestions and feedback in developing this book further.

As per ICAI

Under the Revised Scheme of Education and Training, at the **Intermediate Level**, **students are expected** not only to acquire professional knowledge but also to develop the ability to apply the knowledge in real-life business situations. The process of learning should also help the students in imbibing professional skills, i.e., the intellectual skills and communication skills, necessary for achieving the desired professional competence.

In our book

Every effort has been taken to present this subject in a manner that students are able to acquire the skill set as prescribed by ICAI.

The entire syllabus has been covered in two books.

Book 1 - Presents practical questions.

The concepts shall be covered in class and students will be able to acquire knowledge to solve questions.

We shall be doing about 55% of all the questions in class and the rest shall be given as homework.

The solution set for homework questions will be provided in soft copy in your batch.

Book 2 - Presents theory questions.

We will discuss these questions in separate theory classes.

You must read theory well to be able to write theoretical answers and solve MCQs

Multiple Choice Questions (MCQs) will be presented on our EDU91 CBME (Case Based MCQ Engine)

Thank You !!

CA. Nitin Guru

ABOUT THE AUTHOR

CA Nitin Guru is a Post Graduate in Commerce & a Member of The Institute of Chartered Accountants of India.

- He is the lead trainer for various courses for Costing and Financial management at **Edu91** and **Learn91**.
- He is a First Class Graduate from Delhi College of Arts and Commerce.
- He is a College Topper & a Gold Medallist.
- His areas of specialisation are Cost & Management Accounting, Financial Management, Economics for Finance and Strategic Financial Management.
- At a young age, he has amassed vast experience of teaching over 25,000 students.
- His style of teaching, techniques and guidelines for preparing for examination are well accepted & acknowledged by all the students. His friendly and interactive approach makes him popular amongst the students.
- He has maintained a very high passing rate. He has been a Visiting Faculty to various Professional Institutes & MBA Colleges in the past.

CLASS ATTRACTIONS

- Start the topic from the base.
- Explains reasons and logic inbuilt behind concepts and has a unique method of making students understand them.
- Real life examples make classes interesting & lively.

CLASSES AVAILABLE ON WWW.EDU91.ORG

- CA Inter - Cost & Management Accounting (Regular & Fast Track)
- CA Inter - Financial Management (Regular & Fast Track)
- CA Final - Advanced Financial Management (Regular & Fast Track)

Thank You !!
CA Nitin Guru

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Chapter 1
Scope & Objective of Financial Management

Entrepreneur goes through the following stages of decision making:-

Stage 1: Asset Selection
- Identify and **choose** the necessary assets like premises, machinery, and equipment.

Stage 2: Total Investment Determination
- Calculate the **overall investment** required for acquiring assets, considering market prices and associated costs.

Stage 3: Working Capital Requirement
- Determine the **daily operational cash needed** for expenses such as raw materials, salaries, and wages.

Stage 4: Source of Finance Decision
- Identify **funding sources** for the total investment, including options like Share Capital, Borrowing from Banks, or Investment from Financial Institutions.

Meaning of Financial Management:

Financial management **involves** planning and controlling a firm's resources to maximize shareholder wealth. It encompasses:

Acquiring Resources:
Obtaining necessary assets for effective business operation.

Financing:
Balancing equity and debt to optimize the capital structure.

Asset Management:
Efficiently utilizing assets for business success.

In **today's context**, financial management is seen as **proactive planning** for future positive cash flow. It's succinctly defined as the **science of money management**, covering forecasting, planning, organizing, directing, coordinating, and controlling activities related to financial resource acquisition and application in line with business objectives.

Another very elaborate definition given **by Phillippatus** is:
“Financial Management is concerned with the managerial decisions that result in the acquisition and financing of short term and long term credits for the firm.”

Aspects of Financial Management

1. **Procurement of Funds**
2. **Effective Utilisation of Funds**

1. Procurement of Funds

Sources of funds are -

(a) Equity:
- Best from a risk perspective, but often the **most expensive** due to high dividend expectations and potential dilution of control.

(b) Debentures:
- Comparatively **cheaper** with **tax advantages**, but involves repayment and interest payment regardless of profits.

(c) Funding from Banks:
- Commercial Banks play a crucial role in meeting **both short-term and long-term** financial needs of business enterprises.

(d) International Funding:
- Liberalization and globalization provide opportunities for businesses to raise capital from international markets through **FDI, FII, ADRs, and GDRs**.

(e) Angel Financing:
- Involves wealthy individuals providing capital in exchange for ownership/equity, **often a last resort for startups** not qualifying for bank funding or venture capital.

2. Effective Utilisation of Funds

The finance manager ensures funds are used efficiently. Key aspects include:

(a) Utilization for Fixed Assets:

- Invest funds strategically for **optimal** operations.
- Requires **expertise** in capital budgeting.

(b) Utilization for Working Capital:

- Balance adequate working capital **without excessive** tied-up funds.
- Efficient working capital management **ensures liquidity** and supports daily operations.

Evolution of Financial Management:

Financial management has evolved over the past 50 years in three distinct phases:

Traditional Phase:

- Initially treated as necessary **only during specific events** like takeovers and expansions.
- Considered outsiders' needs in financial decisions.

Transitional Phase:

- Shifted focus to **day-to-day issues** faced by financial managers.
- Emphasized problems related to funds analysis, planning, and control.

Modern Phase:

- Ongoing evolution with a significantly **expanded scope**.
- Emphasis on financial analysis for decision-making.
- Development of theories in areas like efficient markets, capital budgeting, option pricing, and valuation models.

FINANCE FUNCTIONS/ FINANCE DECISION

Value of a firm will depend on various finance functions/decisions. It can be expressed as :

V = f (I,F,D).

The finance functions are divided into long term and short term functions/decisions

Long-Term Finance Function Decisions:

(a) Investment decisions (I):

- **Selection** of assets for fund investment, considering fixed and current assets.
- Involves careful assessment through **capital budgeting**.
- Asset management policies for current assets, with **collaboration** between production and finance managers.

(b) Financing decisions (F):

- Acquiring **optimal finance** for financial objectives.
- Ensuring **effective** management of fixed and working capital.
- Requires **knowledge** of funding sources, costs, and maintaining a balanced capital structure.
- Understanding the distinction between **profit and cash flow** is crucial.
- Involves **risk evaluation**, especially in overseas trading, requiring awareness of protective measures like hedging.

(c) Dividend decisions (D):

- Determine **cash payouts** from profits to shareholders.
- Balancing cash distributions with **retained earnings** for organizational growth.
- Significant for determining a profit-making company's **market value**.

These **decisions are interrelated**, with investment and financing decisions applicable to all organizations, while dividend decisions specifically pertain to profit-making organizations. Financial management's importance spans from sole traders to multinational corporations.

Short-Term Finance Decisions/Function - Working Capital Management (WCM):

- Focus on **managing current** assets and liabilities.
- Involves efficient management of working capital to **ensure liquidity** and support day-to-day operations.

Importance of Financial Management

It is the **key to successful business operations**.

Some of the **tasks** that it involves:-

- Taking care **not to over-invest** in fixed assets
- **Balancing** cash-outflow with cash-inflows
- Ensuring that there is a **sufficient** level of short-term working capital
- **Setting** sales revenue **targets** that will deliver growth
- Increasing gross profit by setting the **correct pricing** for products or services
- **Controlling** the level of general and administrative **expenses** by finding more cost-efficient ways of running the day-to-day business operations, and
- Tax planning that will **minimize the taxes** a business has to pay.

Scope of Financial Management:

Financial management, integral to **overall management**, focuses on acquiring and utilizing funds. Under **Ezra Solomon's** concept, it includes:

(a) Determining Enterprise Size and Growth Rate:

- Decisions on organization **size and growth rate** for strategic planning.

(b) Composition of Assets:

- Decisions on types and structure of assets for operational **efficiency**.

(c) Financing Mix:

- Balancing debt and equity for financial **stability** and **risk management**.

(d) Analysis, Planning, and Control:

- In-depth analysis, planning, and control of financial affairs for **achieving objectives**.

Role of Financial Controller:

Historical Focus:

- Limited to **fund procurement** during major events (promotion, expansion) until the mid-20th century.

Modern Evolution:

- Expanded role to include **investment, financing, and dividend** decisions.
- Involves a **comprehensive** approach to financial management.

Key Decisions:

a. Investment Decisions:

- Strategic allocation of funds for optimal returns.

b. Financing Decisions:

- Balancing debt and equity for financial stability.
- Considering risk and return trade-offs.

Contemporary Responsibilities:

- **Monitoring funds** inflow and outflow for safeguarding and optimal utilization.
- Striving to **maximize returns** in relation to risk.
- **Avoiding** unnecessary **risks** and ensuring prudent financial actions.

Wealth Maximization:

- Focused on **maximizing** shareholders' **wealth**.
- Pursues actions that **balance risk and return** effectively.

Objectives of Financial Management

1. **Profit Maximisation**
2. **Wealth Maximisation/ Value Creation**

1. Profit Maximisation

Traditional View:

- **Primary** company **objective** is profit earning.
- Financial management **aligns** with profit maximisation.

Limited Objective:

- Profit maximisation **alone** is insufficient.

Issues with Profit Maximisation:

a. Vagueness of Profit:

- Profit interpretation varies; short-term, long-term, total, rate, etc.

b. Risk-Return Relationship:

- High profits often linked to high risks.
- Profit maximisation may neglect the crucial aspect of risk.

c. Time Pattern of Returns:

- Ignores timing of returns; quick returns vs. delayed higher profits.

d. Narrow Scope:

- Fails to consider social, ethical, and moral aspects.
- Neglects obligations to workers, consumers, and society.

e. Social and Ethical Considerations:

- Profit maximisation at the expense of social and moral obligations is short-sighted.
- Long-term survival requires a balance between profit and ethical trade practices.

2. Wealth Maximisation/ Value Creation

Definition:

- Shareholders' **wealth results from cost-benefit analysis adjusted for timing and risk**, incorporating the time value of money.

Why Wealth Maximization?

Cost-Benefit Analysis:

- Wealth maximization model **involves** assessing costs and benefits, considering timing and risk.

Time Value of Money:

- Recognizes the **importance of time** in financial decisions, adjusting for the value of money over time.

Other Business Goals:

Achieving Higher Growth Rate:

- Important, but secondary to wealth maximization.

Market Share, Leadership, and Technology:

- Valuable, yet subservient to the primary goal.

Employee Welfare, Customer Satisfaction, and Social Responsibilities:

- Significant, but contingent on wealth maximization.

Critical Role of Wealth Maximization:

Public/Institutional Confidence:

- Essential for business existence.
- Confidence loss impedes further investment and growth.

Balancing Other Goals:

- Restriction on organizational growth affects community welfare and societal contributions.

Goal	Profit Maximization	Shareholders Wealth Maximisation
Objective	Large amount of profits	Highest market value of shares.
Advantages	(i) Easy to calculate profits (ii)Easy to determine the link between financial decisions and profits.	(i) Emphasizes the long term gains (ii) Recognises risk or uncertainty (iii)Recognises the timing of returns (iv) Considers shareholders' return.
Disadvantages	(i) Emphasizes the short term gains (ii) Ignores risk or uncertainty (iii)Ignores the timing of returns Requires immediate resources.	(i) Offers no clear relationship between financial decisions and share price. Can lead to management anxiety and frustration.

Chief Financial Officer (CFO)role beyond traditional financial management -

Strategic Financial Planning:

- **Aligning** financial strategies with overall business objectives.
- **Analyzing** financial **data** to guide executive decision-making.

Risk Management:

- Identifying, assessing, and **mitigating** financial **risks**.
- Implementing strategies **to safeguard** the organization.

Capital Structure Management:

- Determining the **optimal mix** of debt and equity for funding.

Financial Reporting and Compliance:

- **Ensuring** accurate and timely **reporting** in compliance with regulations.

Technology Integration:

- Embracing technology for enhanced **efficiency and accuracy**.

Strategic Cost Management:
- Overseeing cost management for optimization **without compromising quality**.

Globalization and International Finance:
- Managing international financial operations and **navigating global challenges**.

Collaboration and Business Integration:
- **Integrating** financial considerations into various business processes.

Catalyst for Change:
- Driving organizational change and **leading innovations**.

Trusted Business Advisor:
- Serving as a consultant and advisor to executives **for informed decision-making**.

Finance executive's responsibilities include:

(a) Financial analysis and planning: Determining the proper amount of funds to employ in the firm, i.e. designating the size of the firm and its rate of growth.
(b) Investment decisions: The efficient allocation of funds to specific assets.
(c) Financing and capital structure decisions: Raising funds on favourable terms as possible i.e. determining the composition of liabilities.
(d) Management of financial resources (such as working capital).
(e) Risk management: Protecting assets.

What a CFO used to do?	What a CFO now does?
Budgeting	Budgeting
Forecasting	Forecasting
Accounting	Managing M&As
Treasury (cash management)	Profitability analysis (for example, by customer or product)
Preparing internal financial reports for management	Pricing analysis
Preparing quarterly, annual filings for investors	Decisions about outsourcing
Tax filing	Overseeing the IT function
Tracking accounts payable and accounts receivable	Overseeing the HR function
Travel and entertainment expense management	Strategic planning (sometimes overseeing this function)
	Regulatory compliance
	Risk management

Financial Distress and Insolvency:

Financial Distress:
- **Causes:** Factors like pricing, demand fluctuations, and input costs need continuous management.
- **Debt Challenges:** Balancing debt is vital; high debt can strain the organization if cash flow is inadequate.
- **Creditor Pressure:** Mismanagement can lead to pressure from both short-term and long-term creditors.
- **Definition:** Financial distress occurs when cash inflows are insufficient for current obligations.

Insolvency:
- **Prolonged Distress Impact:** Persistent distress may force asset sales at reduced prices.
- **Revenue Challenges:** Insolvency results from prolonged financial distress, hindering the ability to meet obligations.
- **Definition:** Insolvency is the inability to repay debts, stemming from extended financial distress.

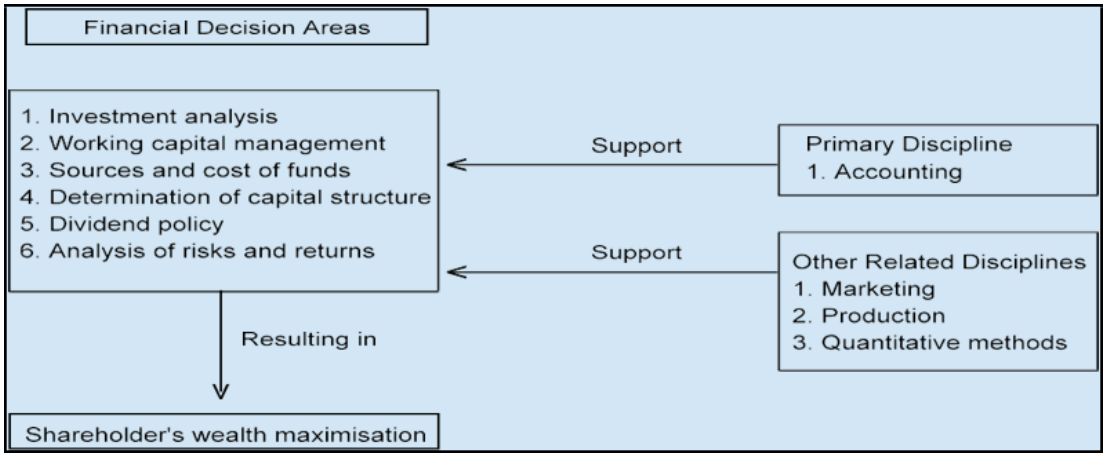
Relationship of Financial Management with Related Disciplines:

Financial Management and Accounting:
- **Close Link:** Accounting is a crucial input for financial decision-making.
- **Information Source:** Financial accounting provides data for financial statements.
- **Differences:**
  - **Treatment of Funds:** Accounting uses the accrual principle; financial management relies on cash flows.

- **Decision-Making Focus:** Accountants collect data; financial managers prioritize planning and decision-making.

Financial Management and Other Disciplines:

- **Integration with Marketing/Production:**
  - Financial managers consider marketing plans' impact on cash flows and evaluate production-related expenditures.
- **Quantitative Methods:**
  - Techniques aid in analyzing complex financial issues for effective decision-making.



Agency Problem and Agency cost

Corporate Management Dynamics: Separation of Owners and Managers

- In corporations, **owners' lack of active management** involvement leads to a separation from managers.

The Agency Problem: Principal-Agent Relationship

- The principal-agent relationship in corporations creates the Agency Problem, where **managers may prioritize personal goals** over shareholder interests.

Agency Costs: Monitoring, Bonding, Opportunity, Structuring

- Agency Problem **results in Agency Costs**, which are extra expenses incurred by shareholders **to monitor and control managers.**
- Agency Costs include monitoring, bonding, opportunity, and structuring expenses.

Addressing the Agency Problem: Aligning Interests

- **Aligning manager interests** with debt lenders and equity investors is crucial for addressing the agency problem.
- **Negative covenants** restrict managers' borrowing, a crucial concept in Credit Risk Management, Fund Raising, and Valuation.
- Aligning interests between managers and shareholders is challenging but **critical** for resolving the agency problem.

Mitigation Strategies: Compensation, Employee Ownership, Monitoring

- Efforts to address these issues include **linking managerial compensation to company profit** and long-term objectives.
- **Employee stock ownership plans** are designed to align employee interests with shareholder wealth maximization.
- Effective **monitoring** is an ongoing strategy to ensure managerial accountability.

Chapter 2
Types of financing

Financial Needs of a Business:

Long-Term Financial Needs:

- Funds required for periods exceeding **5-10 years**.
- **Includes** investments in plant, machinery, land, buildings, and permanent working capital.

Medium-Term Financial Needs:

- Funds required for a period **exceeding one year** but **not exceeding 5 years**.
- **Covers** needs for stores, critical spares, tools, dies, and moulds.

Short-Term Financial Needs:

- Funds required **for current assets** such as stock, debtors, and cash.
- Meets the working capital requirements, typically for a short period **not exceeding one year**.

Stage	Nature of Business	Sources of Fund
Early stage	High Uncertainty	Equity; mainly Angel fund
	High to moderate Uncertainty	Equity; Venture capital; Debt
Growth Stage	Moderate to Low Uncertainty	Debt; Venture Capital; Private Equity
Stable stage	Low Uncertainty	Debt

Classification of Financial sources

1. **Sources of Finance based on Basic Sources -**

- **External Sources**
  - Share Capital- Equity Shares , Preference Shares
  - Debt - Debentures, Loan, Others
- **Internal Sources**
  - Retained Earning

2. **Sources of Finance based on Maturity of Payment**

A. Long-term

1. Share capital or Equity shares
2. Preference shares
3. Retained earnings
4. Debentures/Bonds of different types
5. Loans from financial institutions
6. Loans from State Financial Corporations
7. Loans from commercial banks
8. Venture capital funding
9. Asset securitisation
10. International financing like Euro- issues, Foreign currency loans

B. Medium-term

1. Preference shares
2. Debentures/Bonds
3. Public deposits/fixed deposits for duration of three years
4. Medium term loans from Commercial banks, Financial Institutions, State Financial Corporations
5. Lease financing/Hire- Purchase financing
6. External commercial borrowings
7. Euro-issues
8. Foreign Currency bonds

C. Short-term

1. Trade credit
2. Accrued expenses and deferred income
3. Short term loans like Working Capital Loans from Commercial banks
4. Advances received from customers
6. Various short-term provisions

Owners Capital or Equity Capital:

Characteristics of Equity Capital:

Permanent Source:
- Equity capital is permanent, not subject to redemption.

Equity Shareholders:
- Equity shareholders, or ordinary shareholders, are practically owners and bear the highest risk.

Dividend Entitlement:
- Entitled to dividends after satisfying other stakeholders' claims; not a charge against profits.

Winding Up Claims:
- In winding up, equity shareholders claim assets after meeting other capital suppliers' claims.

Cost of Ordinary Shares:
- Usually has the highest cost due to higher expected returns reflecting the highest risk.

Security Provision:
- Provides security to other fund suppliers; debt-equity ratio considerations apply.

Types of Equity Shares:
- New issue, Rights issue, Bonus Shares, Sweat Equity.

Advantages of Equity Capital:

Permanent Source:
- Equity shares are tradable, offering a permanent source without cash outflows for redemption.

Financial Base Increase:
- Enhances the company's financial base, strengthening borrowing powers and aiding capital expenditure.

Flexibility in Dividends:
- No legal obligation to pay dividends; flexibility during uncertainties or poor performance.

Right Issue Option:
- Allows the company to increase share capital through a right issue.

Disadvantages of Equity Capital:

Perceived Risk:
- Investors find ordinary shares riskier due to uncertain dividends and capital gains.

Earnings Per Share Impact:
- Issue of new equity shares reduces earnings per share for existing shareholders unless profits increase proportionately.

Ownership and Control Impact:
- Reduces ownership and control of existing shareholders when new equity shares are issued.

Preference Share Capital:

Characteristics of Preference Share Capital:

Long-Term Fund Source:
- Raised through a public issue, providing long-term funds.

Cumulative Nature:
- Dividends are usually cumulative, carrying over to future years in case of losses until adequate profits are available.

Higher Dividend Rate:
- Typically offers a higher dividend rate compared to interest on debentures or loans.

Stipulated Repayment Period:
- Often comes with a stipulated repayment period, where funds are repaid at the designated time.

Hybrid Financing:
- Combines equity and debt characteristics; preference dividends are not tax-deductible, yet the rate is fixed like debt.

Cumulative Convertible Preference Shares (CCPs):
- Allows cumulative dividends for a specified period before converting into equity; suitable for projects with extended gestation.

Redemption Flexibility:
- Can be redeemed at a pre-decided future date or earlier out of company profits, facilitating capital withdrawal for reinvestment.

Type of Preference Shares	Salient Features
Cumulative	Arrear Dividend will accumulate.
Non-cumulative	No right to arrear dividend.
Redeemable	Redemption should be done.
Participating	Can participate in the surplus which remains after payment to equity shareholders.
Non-Participating	Cannot participate in the surplus after payment of fixed rate of Dividend.
Convertible	Option of converting into equity Shares.

Advantages of Preference Shares Issuance:

No Dilution in EPS:

- Preference shares issuance avoids dilution in Earnings Per Share (EPS), preserving market perception compared to equity shares.

Leverage Advantage:

- Enjoys leverage with a fixed charge, providing flexibility as non-payment of preference dividends doesn't force immediate liquidity concerns.

Limited Takeover Risk:

- Limited takeover risk as preference shareholders usually lack voting rights unless dividend payments are in arrears.

Fixed Dividends:

- Fixed and pre-decided preference dividends, preventing participation in surplus profits compared to ordinary shareholders.

Redemption Flexibility:

- Preference capital can be redeemed after a specified period.

Disadvantages of Preference Shares Issuance:

Non-Tax Deductible:

- Preference dividends are not tax-deductible, making them costlier compared to debt instruments like debentures.

Cumulative Dividends:

- Cumulative nature of preference dividends may lead to accumulated payments if not made in a particular year, impacting ordinary shareholders and the company's reputation.

Basis of Distinction	Equity Share	Preference Share
Dividend payment	Equity Dividend is paid after preference dividend.	Payment of preference dividend is preferred over equity dividend.
Rate of dividend	Fluctuating	Fixed
Convertibility	Not convertible	Convertible
Voting rights	Equity shareholders enjoy full voting rights.	They have very limited voting rights.

Retained Earnings:

Characteristics of Retained Earnings:

Source of Long-Term Funds:

- Accumulating company profits and reinvesting them back into the business.

Belongs to Ordinary Shareholders:

- Retained earnings belong to ordinary shareholders, increasing the company's net worth.

Legal Requirements and Expansion:

- Public limited companies must retain a reasonable amount of profit annually, meeting legal requirements and supporting expansion plans.

Low Risk Involvement:

- Retained earnings entail minimal risk for the company.

Control Preservation:

- The retention of profits preserves the control of present owners without dilution.

Plough Back Decision:

- The decision to plough back depends on the rate of return generated by the company compared to the expected cost of equity.

Link to Dividend Decision:
- Further discussed in the dividend decision chapter.

Debentures:

Characteristics of Debentures:

Denominations and Interest Rates:
- Issued in various denominations with different interest rates.

Debenture Trust Deed:
- Issued based on a debenture trust deed outlining terms and conditions.

Long-Term Debt Capital:
- Instruments for raising long-term debt capital.

Maturity Period:
- Maturity period varies from 3 to 10 years, extending for projects with high gestation periods.

Secured or Unsecured:
- Debentures can be secured or unsecured.

Listing on Stock Exchange:
- May or may not be listed on the stock exchange.

Low Cost of Capital:
- Low cost as interest is tax-deductible before tax calculation.

Investor Perspective:
- Attractive to investors as interest is payable regardless of company profits.

Categories of Debentures:

Non-Convertible Debentures:
- No conversion feature; repayable on maturity.

Fully Convertible Debentures:
- Convert into equity shares as per specified terms, offering a lower interest rate.

Partly Convertible Debentures:
- Carry features of both convertible and non-convertible debentures.

Advantages of Debenture Financing:

Lower Cost:
- Cost is lower than preference or equity capital, with tax-deductible interest.

Control Preservation:
- No dilution of control through debenture financing.

Advantage in Inflationary Periods:
- Advantageous in rising prices; fixed interest outgo decreases in real terms.

Disadvantages of Debenture Financing:

Obligatory Payments:
- Debenture interest and principal repayment are obligatory payments.

Restrictive Covenants:
- Protective covenants may be restrictive.

Financial Risk Enhancement:
- Increases financial risk due to obligatory payments.

Cash Outflow at Maturity:
- Large cash outflow required at maturity.

Credit Rating Requirement:

- Public debenture issues and private placements require **credit rating by agencies** like CRISIL, evaluating factors like company **track record**, **profitability**, **debt servicing** capacity, **creditworthiness**, and **perceived risk**.

Type of Debenture	Salient Feature
Bearer	Transferable like negotiable instruments
Registered	Interest payable to registered person
Mortgage	Secured by a charge on Asset(s)
Naked or simple	Unsecured
Redeemable	Repaid after a certain period
Non-Redeemable	Not repayable

Basis of difference	Preference shares	Debentures
Ownership	Preference Share Capital is a special kind of share	Debenture is a type of loan which can be raised from the public
Payment of Dividend/ Interest	The preference shareholders enjoy priority both as regard to the payment of a fixed amount of dividend and also towards repayment of capital in case of winding up of a company	It carries fixed percentage of interest.
Nature	Preference shares are a hybrid form of financing with some characteristic of equity shares and some attributes of Debt Capital.	Debentures are instrument for raising long term capital with a fixed period of maturity.

Bond

Bond is fixed income security created to raise fund. Bonds can be raised through Public Issue and through Private Placement.

Types of Bonds

Based on call, Bonds can be categorized as:

(i) Callable bonds, (ii) Puttable bonds

(i) Callable bonds:

A callable bond has a call option which gives the issuer the right to redeem the bond before maturity at a predetermined price known as the call price (Generally at a premium).

(ii) Puttable bonds:

Puttable bonds give the investor a put option (i.e. the right to sell the bond) back to the company before maturity.

Sl. No.	Name of Bond	Salient Features
1.	Foreign Currency Convertible Bond (FCCB)	• This bond comes at a very low rate of interest. • The advantage to the issuer is that the issuer can get foreign currency at a very low cost. • The risk is that in case the bond has to be redeemed on the date of maturity, the issuer has to make the payment and at that time the issuer may not have the money.
2.	Plain Vanilla Bond	• The issuer would pay the principal amount along with the interest rate. • This type of bond would not have any options. • This bond can be issued in the form of discounted bond or can be issued in the form of coupon bearing bond.
3.	Convertible Floating Rate Notes (FRN)	• A convertible FRN is issued by giving its holder an option to convert it into a longer term debt security with a specified coupon • It protects an investor against falling interest rate • The long- term debt security can be sold in the market and the investor can earn profit • Capital gain is not applicable to FRN
4.	Drop Lock Bond	• It is a Floating Rate Note with a normal floating rate • The floating rate bond would be automatically converted into fixed rate bond if interest rate falls below a predetermined level • The new fixed rate stays till the drop lock bond reaches its maturity • The difference between the convertible floating rate note and drop lock bond is that the former is a long option structure and the later one is a short option structure

5.	Variable Rate Demand Obligations	• A normal floating rate note with a nominal maturity • The holder of the floating rate note can sell the obligation back to the trustee at par plus accrued interest • It gives the investor an option to exit, so it is more liquid than the normal FRN
6.	Yield Curve Note (YCN)	• It is a structured debt security • Yield increases when prevailing interest rate declines • Yield decreases when prevailing interest rate increases • This is used to hedge the interest rate • This works like inverse floater
7.	Euro Bond	• Euro bonds are issued or traded in a country using a currency other than the one in which the bond is denominated. This means that the bond uses a certain currency, but operates outside the jurisdiction of the Central Bank that issues that currency.
		• Eurobonds are issued by multinational corporations, for example, a British company may issue a Eurobond in Germany, denominating it in U.S. dollars • It is important to note that the term has nothing to do with the euro, and the prefix "euro-" is used more generally to refer to deposit outside the jurisdiction of the domestic central bank

(i) Indian Bonds

Sl. No.	Name of Bond	Salient Feature
1.	Masala Bond	• Masala (means spice) bond is an Indian name used for Rupee denominated bond that Indian corporate borrowers can sell to investors in overseas markets. • These bonds are issued outside India but denominated in Indian Rupees. • NTPC raised ` 2,000 crore via masala bonds for its capital expenditure in the year 2016.
2.	Municipal Bonds	• Municipal bonds are used to finance urban infrastructure are increasingly evident in India. • Ahmedabad Municipal Corporation issued a first historical Municipal Bond in Asia to raise • `100 crore from the capital market for part financing a water supply project.
3.	Government or Treasury Bonds	• Government or Treasury bonds are bonds issued by Government of India, Reserve Bank of India, any state Government or any other Government department.

Loans from Financial Institutions

Financial Institution: National

Sl. No.	Name of the Financial Institution	Year of Establishment	Remarks
1	Industrial Finance Corporation of India (IFCI)	1918	Converted into a public company
2	State Financial Corporations (SFCs)	1951	-
3	Industrial Development Bank of India (IDBI)	1954	Converted into Bank
4	National Industrial Development Corporation (NIDC)	1954	-
5	Industrial Credit and Investment Corporation of India (ICICI)	1955	Converted into Bank and Privatised
6	Life Insurance Corporation of India (LIC)	1956	-
7.	Unit Trust of India (UTI)	1964	-
8	Industrial Reconstruction Bank of India (IRBI)	1971	-

(ii)Financial Institution: International Institutions

Sl. No.	Name of the Financial Institution	Year of Establishment
1	The World Bank/International Bank for Reconstruction and Development (IBRD)	1944
2	The International Finance Corporation (IFC)	1956
3	Asian Development Bank (ADB)	1966

Loans from Commercial Banks:

Primary Role of Commercial Banks:

- Primarily cater to short-term industry requirements but increasingly involved in long-term financing.

Long-Term Loans for Expansion:

- Provide long-term loans for expansion or new unit setup, with scheduled repayments over an extended period.

Long-Term Working Capital (WCTL):

- Fund long-term working capital requirements, known as Working Capital Term Loan (WCTL), addressing the minimum, non-seasonal needs.

Bridge Finance:

- Short-term loans from commercial banks to bridge the gap before disbursement of loans sanctioned by financial institutions.

Purpose of Bridge Finance:

- Facilitates project initiation while waiting for disbursement from financial institutions.

Secured Nature of Bridge Loans:

- Normally secured by movable assets, personal guarantees, and demand promissory notes.

Repayment of Bridge Loans:

- Repaid or adjusted from term loans disbursed by financial institutions.

Interest Rate Differential:

- Generally, higher interest rates on bridge finance compared to term loans.

Transition to Other Long-Term Sources:

- Discussion transitions from share capital and financial institutions to explore additional sources of long-term finance.

Meaning of Venture Capital Financing:

Definition:

- Financing high-risk ventures led by qualified entrepreneurs lacking experience and funds.

Investment Focus:

- Venture capitalists invest in equity or debt securities of ventures with high-risk potential.

Characteristics of Venture Capital Financing:

Equity Finance:

- Predominantly equity finance for new companies.

Long-Term Investment:

- Viewed as a long-term investment in growth-oriented small/medium firms.

Comprehensive Support:

- Beyond funds, venture capitalists offer sales strategy, business networking, and management expertise.

Methods of Venture Capital Financing:

Equity Financing:

- Venture capital provided as equity share capital, with the firm retaining at least 51% ownership.

Conditional Loan:

- Repayable as a royalty after generating sales, with no interest payment. Rates vary based on venture factors.

Income Note:

- Hybrid security with low-interest and royalty on sales, offering a balance between conventional and conditional loans.

Participating Debenture:

- Three-phase charges: no interest in the start-up phase, low-interest in the next stage, and high-interest thereafter.

Debt Securitisation:

Meaning:

Process:

- Involves pooling illiquid assets into marketable securities for sale to investors.

Financial Instruments:

- Creation of financial instruments representing ownership or security in income-producing assets.

Collateral:

- Assets can be secured by personal or real property, either secured or unsecured.

Example:

Finance Company Scenario:

A finance company has a substantial portfolio of car loans but needs more capital to extend further loans. Selling individual car loans in the absence of a liquid secondary market is impractical.

Debt Securitisation Solution:

The finance company opts for debt securitisation by selling existing car loans to a Special Purpose Vehicle (SPV).

SPV Role:

- SPV pays the finance company, which continues lending with the received funds.
- SPV pools the loans, transforming them into marketable securities.

Benefits to Finance Company:

- Raises funds, removes loans from the Balance Sheet, and facilitates further lending.

Benefits to Investors:

- Investors receive liquid investment in a diversified pool of car loans, an attractive option compared to other fixed-income instruments.

Transaction Transparency:

- The debtors (car loan borrowers) may remain unaware of the transaction.
- Payments continue as usual but are directed to the new investors resulting from the securitisation process.

Lease Financing Overview:

Definition:

Leasing is a **contractual arrangement** between the asset owner (lessor) and the user (lessee) **over a defined period**. The lessor purchases the asset and leases it to the lessee, who pays periodic rent.

Alternative to Asset Purchase:

Leasing serves as an alternative to buying an asset using either one's own funds or borrowed money. Lease financing offers a **quicker arrangement** compared to traditional term loans.

Types of Lease Contracts:

(a) Operating Lease

(b) Financial Lease

	Financial Lease	Operating Lease
1.	The **risk** and reward incident to ownership are **passed on to** the **lessee**. The lessor only remains the legal owner of the asset.	The lessee is only provided the use of the asset for a certain time. **Risk** incident to ownership **belong** wholly **to** the **lessor**.
2.	The **lessee bears** the risk of **obsolescence**	The **lessor bears** the risk of **obsolescence**.
3.	The lessor is **interested in** his **rentals** and not in the asset. He must get his principal back along with interest. Therefore, the **lease is non-cancellable** by either party.	As the lessor does not have difficulty in leasing the same asset to other willing lessee, the **lease is** kept **cancelable by** the **lessor**.
4.	The **lessor** enters into the transaction **only** as **financier**. He does not bear the cost of repairs, maintenance or operations.	Usually, the **lessor bears the cost** of repairs, maintenance or operations.
5.	The lease is usually **full payout**, that is, the **single** lease **repays** the cost of the asset together with the interest.	The lease is **usually non-payout**, since the lessor expects to lease the same asset over and over again **to several users**.

Other Types of Leases:

(a) Sales and Lease Back:

Process:

- Owner sells an asset to a buyer who leases it back.
- Asset doesn't physically exchange hands, only in records.

Advantage:

- Lessee ensures asset quality, converts sale into lease after possession.

Roles:

- Seller becomes lessee; buyer becomes lessor.
- Seller gets selling price; buyer receives lease rentals.

(b) Leveraged Lease:

Involvement:

- Involves a third party (lender) besides lessor and lessee.
- Lessor borrows part of asset purchase cost (e.g., 80%) from the lender.

Repayment:

- Lessee repays lender directly from lease rentals.
- Surplus after meeting lender's claims goes to the lessor.

Depreciation:

- Lessor can claim depreciation allowance.

(c) Sales-Aid Lease:

Arrangement:

- Lessor partners with a manufacturer to market the manufacturer's product.
- Manufacturer may grant credit or commission to the lessor.

Income Sources:

- Lessor earns from lessee and manufacturer.

(d) Close-ended and Open-ended Leases:

Close-ended Lease:

- Assets transfer to lessor at lease end.
- Less risk for the lessor (obsolescence, residual value).

Open-ended Lease:

- Lessee has the option to purchase the asset at the lease end.

Short-Term Sources of Finance:

(i) Trade Credit:

- **Nature:** Credit from suppliers as part of a sale.
- **Duration:** Typically 15 to 90 days.
- **Benefits:** No explicit cost, increases with business volume.

(ii) Accrued Expenses and Deferred Income:

- **Accrued Expenses:** Liabilities for received services (wages, taxes).
- **Deferred Income:** Funds received for future goods/services.
- **Benefits:** Spontaneous finance from day-to-day activities.

(iii) Advances from Customers:

- **Usage:** Manufacturers/contractors demand advance money from customers.
- **Benefits:** Cost-free source of finance, especially for lengthy projects.

(iv) Commercial Paper:

- **Definition:** Unsecured money market instrument (promissory note).
- **Introduced:** By RBI in 1989 for highly rated corporate borrowers.
- **Denomination:** Issued in `5 lakh multiples, linked to one-year government bond yield.

(v) Treasury Bills:

- **Nature:** Central Government Securities.
- **Purpose:** Issued by Government of India for short-term borrowing (14 to 364 days).

(vi) Certificates of Deposit (CD):

- **Definition:** Savings certificate with fixed maturity (15 days to one year).

(vii) Bank Advances:

- **Funding Source:** Banks invest and lend deposited funds.
- **Policy Considerations:** Beyond profit, banks consider socio-economic development.
- **Responsibility:** Lending supports various costs and ensures a reasonable profit.

Facilities Provided by Banks:

(a) Short-Term Loans:

- **Nature:** Entire advance disbursed at once.
- **Securities:** Shares, government securities, life insurance policies, fixed deposit receipts.
- **Repayment:** Full amount or scheduled repayments.

(b) Overdraft:

- **Nature:** Excess withdrawal beyond current account balance.
- **Limit:** Fixed limit granted to the borrower.
- **Renewal:** Annual renewals, repayable on demand.

(c) Clean Overdrafts:

- **Eligibility:** Granted to financially sound parties with a good reputation.
- **Security:** Relies on personal security, may require guarantees.
- **Duration:** Generally short-term, requires scrutiny.

(d) Cash Credits:

- **Arrangement:** Allows a customer an advance up to a set limit.
- **Usage:** Borrower can draw as per requirements, deposit surplus funds.
- **Interest:** Charged on the amount availed, not the full advance.

(e) Advances against Goods:

- **Security:** Tradables goods pledged or hypothecated.
- **Repayment:** Quick turnover, reliable source of repayment.
- **Goods:** Agricultural commodities, industrial raw materials, partly finished goods.

(f) Bills Purchased/Discounted:

- **Advance Type:** Against clean or documentary bills.
- **Approval:** Satisfies bank regarding drawer's creditworthiness.
- **Ownership:** Holds bills as security, exercises pledge's rights over goods.

Financing of Export Trade by Banks:

(i) Overview:

- **Role:** Crucial for economic growth, especially in developing countries like India.
- **Importance:** Facilitates efficient execution of export orders.
- **Types:** Pre-shipment and post-shipment credit.

(ii) RBI Initiatives:

- **Measures:** Interest rate rationalization, flexibility in repayment/prepayment, special financial packages.
- **Freedom:** Banks allowed to source funds abroad for foreign currency export credit.

(iii) Types of Export Finance:

(a) Pre-Shipment Finance:

- **Nature:** Short-term, includes packing credit facility.
- **Eligibility:** Exporters with firm export orders or irrevocable letters of credit.
- **Types:** Clean packing credit, packing credit against hypothecation, packing credit against pledge.
- **Requirements:** E.C.G.C. guarantee, forward exchange contract for foreign currency bills.

(b) Post-Shipment Finance:

- **Forms:** Purchase/discounting of export bills, E.C.G.C. guarantee, advance against export bills, advance against duty drawbacks, cash subsidies, etc.
- **Policies:** Comprehensive risk policies for political and commercial risks.

(iv) Other Facilities to Exporters:

- **Letters of Credit:** Established on behalf of approved exporters.
- **Guarantees:** Issued for waiver of excise duty, contract performance, bond in lieu of cash security deposit, advance payment guarantees.
- **Finance:** Provided for exporters undertaking exports on deferred payment terms.
- **Information:** Banks secure status reports, trade information, and economic intelligence for exporter clients.

(v) Inter Corporate Deposits:

- **Borrowing:** Short-term funds borrowed from other companies with surplus liquidity.
- **Interest:** Rate varies based on amount and time period.

(vi) Certificate of Deposit (CD):

- **Nature:** Document of title similar to a time deposit receipt.
- **Advantages:** No need to encash before maturity, assured liquidity through secondary market sale.

(vii) Public Deposits:

- **Source:** Important for short-term and medium-term finances.
- **Limits:** Governed by RBI stipulations, up to 35% of paid-up capital and reserves.
- **Usage:** Primarily for working capital, unsecured loans repayable within 3 years.

Pre-Shipment Finance:

Overview:

- **Purpose:** Facilitates buying, manufacturing, processing, packing, and shipping goods for export.
- **Eligibility:** Exporters with firm export orders or irrevocable letters of credit.
- **Duration:** Should be liquidated within 180 days from the commencement date.

Types of Packing Credit:

(a) Clean Packing Credit:

- **Nature:** Advance based on firm export order or letter of credit without control over raw material or finished goods.
- **Considerations:** Weighed based on trade requirements and exporter's creditworthiness.
- **Requirements:** Export Credit Guarantee Corporation (ECGC) cover recommended.

(b) Packing Credit Against Hypothecation of Goods:

- **Security:** Goods hypothecated to the bank with a stipulated margin.
- **Submission:** Requires submission of stock statements along with the firm export order or letter of credit.
- **Utilization:** Ongoing submission during stock movement.

(c) Packing Credit Against Pledge of Goods:

- **Security:** Exportable finished goods pledged to the bank, possession held by the bank.
- **Shipment:** Approved clearing agents handle shipping as per exporter's requirements.
- **Security:*** Kept under lock and key by the bank.

(d) E.C.G.C. Guarantee:

- **Qualification:** Loan for manufacturing, processing, purchasing, or packing goods for export against a firm order.
- **Guarantee:** Packing credit guarantee provided by Export Credit Guarantee Corporation.

(e) Forward Exchange Contract:

- **Requirement:** Necessary if the export bill is drawn in a foreign currency.
- **Purpose:** Mitigates risk associated with possible changes in the exchange rate.

Post-shipment Finance:

Post-shipment finance supports exporters after the shipment of goods. It involves various forms to meet financial requirements.

(a) Purchase/Discounting of Documentary Export Bills:

- **Nature:** Finance provided by purchasing export bills payable at sight or discounting usance export bills.
- **Backing:** Supported by documents such as bill of lading, post parcel receipts, or air consignment notes.

(b) E.C.G.C. Guarantee:

- **Qualification:** Post-shipment finance through purchase, negotiation, or discount of an export bill against an order.
- **Requirement:** Exporters need a shipment or contracts risk policy from Export Credit Guarantee Corporation (E.C.G.C).
- **Credit Limits:** E.C.G.C fixes credit limits for individual exporters, limiting liability irrespective of the policy amount.

(c) Advance Against Export Bills Sent for Collection:

- **Purpose:** Finance provided against export bills sent through banks for collection.
- **Considerations:** Based on creditworthiness, nature of goods, usance, and standing of the drawee.

(d) Advance Against Duty Drawbacks, Cash Subsidy, etc.:

- **Objective:** Financing export losses through advances against duty draw-back, cash subsidy, etc.
- **Nature:** Advances of a clean nature, requiring careful precautions to be exercised.

OTHER SOURCES OF FINANCING

(i) Seed Capital Assistance:

- **Purpose:** IDBI's scheme for entrepreneurs lacking financial resources.

- **Eligibility:** Qualified entrepreneurs or those with relevant experience.
- **Financial Terms:** Interest-free with a 1% service charge for the first five years, adjustable based on company profitability.
- **Repayment:** Schedule based on the unit's repaying capacity, with an initial moratorium of up to five years.

(ii) Internal Cash Accruals:

- **Applicability:** Profitable companies for expansion/diversification.
- **Utilization:** Part of accumulated reserves or cash profits invested for capital assets creation.
- **Source:** Surplus generated from operations after meeting contractual, statutory, and working fund requirements.

(iii) Unsecured Loans:

- **Purpose:** Meets promoters' contribution norm.
- **Characteristics:** Subordinate to institutional loans, interest rate ≤ institutional loan rate.
- **Restrictions:** Repayment requires prior approval, considered part of equity for debt-equity ratio calculation.

(iv) Deferred Payment Guarantee:

- **Supplier Credit:** Machinery suppliers provide deferred credit.
- **Guarantee Requirement:** Buyer to furnish bank guarantee.
- **Eligibility:** Advisable for existing profit-making companies, no moratorium period.

(v) Capital Incentives:

- **Location Influence:** Backward area development incentives impact unit location.
- **Components:** Lump sum subsidy, sales tax, and octroi duty exemptions.
- **Assessment:** Project viability assessed independently of incentives' impact on cash flows and profitability.

(vi) Deep Discount Bonds:

- **Nature:** Zero-interest bonds.
- **Sale Mechanism:** Sold at a discounted value, face value paid on maturity.
- **Interest Payout:** None during the lock-in period.

(vii) Secured Premium Notes:

- **Structure:** Issued with a detachable warrant.
- **Redemption:** Redeemable after a specified period.
- **Conversion:** Detachable warrant converts into equity shares within a notified time frame.

(viii) Zero Interest Fully Convertible Debentures:

- **Conversion:** Compulsory and automatic conversion.
- **Interest Payment:** No interest payout.
- **Benefits:** No interest payment obligation, advantageous if market share price is high.

(ix) Zero Coupon Bonds:

- **Interest Feature:** Does not carry any interest.
- **Sale Process:** Issued at a discount, difference represents the investor's interest.

(x) Option Bonds:

- **Interest Payment:** Cumulative or non-cumulative, payable on maturity or periodically.
- **Redemption Premium:** Offered to attract investors.

(xi) Inflation Bonds:

- **Interest Adjustment:** Interest rate adjusted for inflation.
- **Investor Protection:** Provides interest free from the effects of inflation.

(xii) Floating Rate Bonds:

- **Interest Flexibility:** Interest rate not fixed, allowed to float based on market conditions.
- **Issuer Strategy:** Used to hedge against interest rate volatility.
- **Issuers:** Popularly issued by financial institutions like IDBI, ICICI, etc.

International Financing:

(i) Commercial Banks:

- **Global Operations:** Commercial banks worldwide extend Foreign Currency (FC) loans for international operations.
- **Overdrafts:** Overdraft facilities are also available, allowing overdrawing beyond the loan amount.

(ii) Development Banks:
- **Long & Medium Term:** Offer long and medium-term loans, including FC loans.
- **Concessions:** Provide concessions to foreign companies investing or exporting from their countries.
- **Example:** EXIM Bank of USA.

(iii) Discounting of Trade Bills:
- **Short-term Financing:** Widely used for short-term financing in Europe and Asian countries.
- **Applicability:** Used for financing both domestic and international business.

(iv) International Agencies:
- **Prominent Agencies:** Include The International Finance Corporation (IFC), The International Bank for Reconstruction and Development (IBRD), The Asian Development Bank (ADB), The International Monetary Fund (IMF), etc.
- **Focus:** Finance international trade and business.

(v) International Capital Markets:
- **Modern Organizations' Dependency:** Modern organizations, including MNCs, heavily borrow in both Rupees and Foreign Currency (FC).
- **Global Presence:** International capital markets exist globally, with significant hubs like London.
- **Key Systems:**
  - Euro-currency market
  - Export credit facilities
  - Bonds issues
  - Financial Institutions

(vi) Euro-Currency Market:
- **Origin:** Emerged with dollar-denominated bank deposits and loans in Europe, especially in London.
- **Key Component:** Euro-dollar deposits, dollar-denominated time deposits at foreign branches of US and some foreign banks.
- **Functions:** Banks in Europe accept and make dollar-denominated deposits, forming the backbone of the global Euro-currency market.
- **Funds Availability:** Loans facilitated through syndicated Euro-credit, instruments like FRN's, FR certificates of deposits.

Financial Instruments:

(a) External Commercial Borrowings (ECB):
- **Definition:** Commercial loans from non-resident lenders with a minimum average maturity of 3 years.
- **Sources:** International banks, capital markets, multilateral financial institutions (IFC, ADB), export credit agencies, foreign collaborators, and equity holders.
- **Approval Routes:** Automatic route (no RBI/Government approval) and Approval route (approval required).
- **Eligibility:** Automatic for Companies under the Companies Act and NGOs in micro finance; Approval for Financial Institutions, Banks in infrastructure/export finance, and those in government-approved restructuring packages.

(b) Euro Bonds:
- **Characteristics:** Debt instruments not denominated in the issuing country's currency.
- **Bearer Form:** Generally issued in bearer form, offering privacy to investors.
- **Example:** A Yen note floated in Germany.

(c) Foreign Bonds:
- **Definition:** Debt instruments issued by foreign corporations or governments.
- **Risk:** Exposed to default risk, especially corporate bonds.
- **Denomination:** In the currency of the issuing country; exposed to exchange rate risks if in a different currency.
- **Example:** British firm placing Dollar-denominated bonds in the USA.

(d) Fully Hedged Bonds:
- **Purpose:** Eliminate currency fluctuation risk.
- **Strategy:** Sell entire principal and interest payments in forward markets.

(e) Medium Term Notes (MTN):
- **Programme:** Issuers with frequent financing needs.
- **Features:** Different lots with varied features issued under a single programme.
- **Flexibility:** Timing of each lot based on market opportunities.

(f) Floating Rate Notes (FRN):

- **Maturity:** Up to seven years.
- **Interest Rates:** Adjusted based on prevailing exchange rates.
- **Advantage:** Provides cheaper money than foreign loans.

(g) Euro Commercial Papers (ECP):

- **Nature:** Short-term money market instruments.
- **Maturity:** Less than one year.
- **Currency:** Usually designated in US Dollars.

(h) Foreign Currency Option (FC):

- **Definition:** Right (not obligation) to buy or sell foreign currency at a specified price before a specified date.
- **Purpose:** Hedge against financial and economic risks.

(i) Foreign Currency Futures:

- **Obligation:** Not the right but an obligation to buy or sell specified foreign currency in the present for settlement at a future date.

(j) Foreign Euro Bonds:

- **Names:** Known by different names in domestic capital markets (e.g., Yankee Bonds, Swiss Francs, Samurai Bonds, Bulldogs).

(k) Euro Convertible Bonds:

- **Conversion Option:** Holders can convert bonds into a predetermined number of equity shares.
- **Features:** Fixed interest rate, may include Call or Put Options.

(l) Euro Convertible Zero Bonds:

- **Structure:** Structured as a convertible bond; no interest payable; conversion at maturity at a predetermined price.

(m) Euro Bonds with Equity Warrants:

- **Coupon Rate:** Determined by market rates; detachable warrants; pure bonds traded at a discount.

(n) Environmental, Social, and Governance-linked bonds (ESG):

- **Responsibility:** Issuer commits to prioritize environmental, social, and governance factors.
- **Types:** Green bonds, social bonds, sustainability-linked bonds (SLBs).
- **Considered:** Socially responsible investing; aligns with ESG factors.

(a)Green Bonds:

- **Definition:** Popular ESG bonds financing "green projects" for positive environmental and climate impact.
- **Scope**: Issued by financial, non-financial, or public institutions.
- **Example:** Ghaziabad Municipal Corporation raised ₹150 crore from Green Bonds in 2021, marking India as the second-largest green bond market.

(b)Social Bonds:

- **Purpose:** Finance socially impactful projects addressing concerns like human rights, equality, and animal welfare.
- **Example:** "Vaccine bonds" fund vaccination for vulnerable children and protect people in lower-income countries.

(c)Sustainability-Linked Bonds (SLBs):

- **Nature:** Combines features of green and social bonds.
- **Utilization:** Proceeds not earmarked for specific projects but for general corporate purposes to achieve Key Performance Indicators (KPIs).
- **Example**: UltraTech Cement raised US$400 million through India's first sustainability-linked bonds in 2021, focusing on reducing carbon emissions over a 10-year bond life.

Euro Issues by Indian Companies:

Permissible Routes:

Indian companies allowed to raise foreign currency resources through:

- Global Depository Receipts (**GDRs**)
- American Depository Receipts (**ADRs**)
- Foreign Currency Convertible Bonds (**FCCB**)

Treatment as FDI:

- Such investments treated as Foreign Direct Investment (**FDI**).

American Depository Receipts (ADRs):

Definition:

- Securities offered by non-US companies for listing on US exchanges.
- Each ADR represents a specific number of a company's regular shares.

Advantages and Preferences:

- Allows US investors to buy shares without investing directly in a foreign stock exchange.
- Indian companies often prefer GDRs over ADRs due to regulatory and disclosure considerations in the US market.

Global Depository Receipts (GDRs):

Nature:

- Negotiable certificates in a foreign bank representing shares traded on another country's exchange.
- Used by companies to raise capital in dollars or Euros.
- Predominantly traded in European countries, especially in London.

Indian Companies in GDR/ADR:

- Infosys Technologies, Reliance Industries Limited, Wipro, MTNL, State Bank of India, Tata Motors, Dr. Reddy's Lab, etc.

Indian Depository Receipts (IDRs):

Mechanism:

- Mirrors ADRs/GDRs in allowing foreign companies to raise funds from the Indian Capital Market.
- Listed and traded in India similar to other Indian securities.

Application:

- IDRs provide a means for foreign companies to raise capital domestically.

Contemporary Sources of Funding:

(i) Crowdfunding:

Definition:

- Raising funds for individuals or organizations from a group of people, often through online platforms.

Variants:

- Equity Funding: Investors receive securities in return for their investment.
- P2P Lending: Unsecured loans provided through online platforms.
- Donation: Funds collected without offering equity or loans.

Purpose:

- Supports startups in validating product demand before production.

Participants:

- Fundraiser, mediator (platform), and fund investors.

Fees:

- Platforms may charge processing or transaction fees.

(ii) Equity Funding:

Mechanism:

- Investors invest money and receive securities, owning a stake in the organization.
- Digital nature attracts numerous investors with small contributions.

Adoption:

- Commonly chosen by startups.

Platforms:

- StartEngine, EquityNet, SeedInvest, etc.

(iii) Peer-to-Peer (P2P) Lending:

Definition:

- Online platform connecting lenders with borrowers for unsecured loans.

Repayment:

- Borrowers repay the funds with interest.

Risk:

- Involves risks of defaults, similar to conventional bank lending.

Platforms:

- i2iFunding, Lendbox, Faircent, RupeeCircle, etc.

(iv) Start-up Funding:

Purpose:

- Acquiring funds for newly formed start-up companies.

Challenge:

- Difficult to secure traditional bank loans.
- Crowdfunding becomes a viable alternative.

(v) Donation-based Crowdfunding:

Nature:

- Large groups donate money for charitable causes without expecting ownership or debt.

Platforms:

- GoFundMe (for medical needs, education), Ketto (medical needs), FuelADream (charity projects, new ideas), etc.

Chapter 3
Financial Analysis -Ratios

Definition of Ratio:
A ratio is the **mathematical relationship** between two accounting figures, indicating the connection between them.

Ratio Analysis:
a. Calculation Basis:
- Mathematical relationship between figures
- Involves individual or grouped figures
- Logically connected
- Derived from financial statements

b. Objectives:
- **Evaluate** performance, strengths, and weaknesses
- **Aid decision-making** for stakeholders

Sources of Financial Data for Analysis
The **sources of information for financial statement** analysis are:
1. Annual Reports
2. Interim financial statements
3. Notes to Accounts
4. Statement of cash flows
5. Business periodicals.
6. Credit and investment advisory services

Return on Equity (ROE) using Du Pont Model:
- Developed by E.I. Du Pont de Nemours and Co. **in 1919, the DuPont system** is a global financial analysis model.
- Components **include net profit margin, asset turnover, and equity multiplier**.
- Analyzing each component individually reveals the sources of a company's ROE, **enabling comparisons** with competitors.

Calculation of Return on Equity
To calculate the return on equity using the DuPont model, simply **multiply** the **three components** (net profit margin, assets turnover, and equity multiplier.

Return on Equity = (Profitability/Net profit margin) (Investment Turnover / Asset Turnover / Capital Turnover) Equity Multiplier)

Users and Objectives of Financial Analysis:
1. Shareholders:
- **Objective:** Interested in profitability and organizational growth.
- **Key Ratios:**
  - Earnings per Share (EPS)
  - Dividend per Share (DPS)
  - Price Earnings (P/E)
  - Dividend Payout Ratio (DP)

2. Investors:
- **Objective:** Assess overall financial health and future prospects.
- **Key Ratios:**
- Profitability Ratios
- Capital Structure Ratios
- Solvency Ratios
- Turnover Ratios

3. Lenders:
- **Objective:** Ensure safety of lent money.
- **Key Ratios:**

- Coverage Ratios
- Solvency Ratios
- Turnover Ratios
- Profitability Ratios

4. Creditors:

- **Objective:** Assess liability position, especially in the short term.
- **Key Ratios:**
  - Liquidity Ratios
  - Short-term Solvency Ratios

5. Employees:

- **Objective:** Understand overall financial health and make comparisons with competitors.
- **Key Ratios:**
  - Liquidity Ratios
  - Long-term Solvency Ratios
  - Profitability Ratios
  - Return on Investment

6. Regulator/Government:

- **Objective:** Analyze financial statements for taxation and other government-related details.
- **Key Ratios:** Profitability Ratios

7. Managers:

- **Production Managers:**
  - **Interest:** Input-output data, production quantities.
  - **Key Ratios:**
    - Input-Output Ratio
    - Raw Material Consumption Ratio
- **Sales Managers:**
  - **Interest:** Units sold, associated figures, and future sales predictions.
  - **Key Ratios:**
    - Turnover Ratios (especially receivable turnover ratio)
    - Expenses Ratios
- **Financial Managers:**
  - **Interest:** Various ratios for financial predictions.
  - **Key Ratios:**
    - Profitability Ratios (especially related to Return on Investment)
    - Turnover Ratios
    - Capital Structure Ratios
- **Chief Executive/General Manager:**
  - **Interest:** Comprehensive assessment from sales to finance, inventory, human resources, and production.
  - **Key Ratios:** All Ratios

Different Industry

(a) Telecom -

- Ratio related to 'call'
- Revenue and expenses per customer

(b) Bank

- Loan to deposit Ratios
- Operating expenses and income ratios

(c) Hotel

- Room occupancy ratio
- Bed occupancy Ratios

(d) Transport

- Passenger-kilometre
- Operating cost-per passenger kilometre

Application of Ratio Analysis in Financial Decision Making:

Financial ratio analysis is a vital tool in business performance evaluation, offering comparative insights crucial for decision-making.

Financial Ratios for Evaluating Performance:

Liquidity Position:
- **Objective:** Assess liquidity to meet obligations.
- **Ratios:** Liquidity ratios, essential for credit analysis.

Long-term Solvency:
- **Objective:** Evaluate long-term financial viability.
- **Ratios:** Leverage/capital structure and profitability ratios.
- **Importance:** Indicates if the firm can meet long-term obligations and provide adequate returns to owners.

Operating Efficiency:
- **Objective:** Assess management and asset utilization efficiency.
- **Ratios:** Activity ratios measuring operational efficiency.Overall Profitability:
- **Objective:** Ensure short-term and long-term obligations, reasonable returns, and optimal asset utilization.
- **Importance:** Integrated view considering all ratios collectively.

Inter-firm Comparison:
- **Objective:** Compare with industry averages for corrective measures.
- **Method:** Industry benchmarking to identify variances and take remedial actions.

Predictive Value:
- **Importance:** Ratios not only analyze past operations but serve as predictors for the future.
- **Application:** Useful in forecasting and planning business activities.

Financial Ratios for Budgeting:
- **Assistance:** Ratios aid in budget estimation based on past experience.
- **Utilization:** Measure actual performance against budgeted estimates, guiding necessary adjustments.

Limitations of Financial Ratios:

Diversified Product Lines:
- **Challenge:** Businesses with diverse product lines in different industries hinder meaningful inter-firm comparisons using aggregate data.

Inflationary Distortions:
- **Issue:** Inflation can distort historical cost values, affecting the accuracy of financial ratios.

Seasonal Factors:
- **Example:** Seasonal inventory fluctuations, like in the textile industry, can bias liquidity and inventory ratios, providing a skewed picture.

Year-end Adjustments and Window Dressing:
- **Concern:** Year-end adjustments made for popular financial ratios can mask the true financial position due to intentional window dressing.

Differences in Accounting Policies and Periods:
- **Challenge:** Varied accounting policies and reporting periods make comparisons between firms difficult and non-comparable.

Lack of Standard Ratios:
- **Issue:** No universally accepted standard ratios for comparison; industry averages may be inadequate benchmarks.

Difficulty in Generalization:
- **Challenge:** Determining whether a ratio is good or bad is complex; a low current ratio may indicate low liquidity, but a high ratio may result from inefficient working capital management.

Inter-related Ratios:
- **Observation:** Financial ratios are interconnected; their interpretation requires multivariate analysis considering the relationships between multiple variables.

Clues, Not Conclusions:
- **Caution:** Financial ratios provide indications but lack standardized interpretations; expertise is needed for meaningful analysis and decision-making.

Significance of ratio analysis in decision making

Ratio Analysis is a useful tool in the following aspects-

1.Inter-Firm & Intra comparison:

Firm's vis-a-vis the indusstry can be evaluated by comparing the firm's ratios with the industry average. Direction of the firm's financial policies can be indicated by Trend Analysis of ratios over period of years.

2. Budgeting:
Ratios are helpful in planning and forecasting the business activities of a firm for future periods, e.g. estimation of working capital requirements.

3.(a) Evaluation of Liquidity:
The ability of a firm to meet its short-term payment commitments is called liquidity. Current Ratio and Quick Ratio help to assess the short-term solvency (liquidity) of the firm.

(b) Evaluation of profitability:
Profitability Ratio, i.e. Gross profit Ratio, Operating profit Ratio, Net profit Ratio are basic indicators of the profitability of the Firm. In addition, various profitability indicators like Return on Capital Employed (ROCE), Earnings per share (EPS), Return on Assets (ROA), etc. are used to assess the financial performance.

Financial Statement Analysis may be of following types-

Internal and External Analysis:

Internal Analysis
(a)It is done within the company, i.e. by the corporate Finance Department.
(b) It is more extensive and detailed. It looks into all aspects of functioning and performance, viz. profitability, Liquidity, Solvency, Coverage, Leverage, Turnover, and Overall Return.

External Analysis
(a) It is done by outside parties e.g. Bankers, Investors, Suppliers, etc.
(b) It is restricted according to the requirements of the user. For example, a Trade Creditor may be interested in the general profitability and financial standing. A Lender may be interested and financial standing. A Lender may be interested in Debt-Service Coverage, Interest Coverage, etc.

Inter – Firm and Intra-Firm analysis:

Inter-Firm Analysis
It involves comparison of Financial Statements of one Firm, with other Firms in the same industry.

Intra-Firm Analysis
it involves comparison of Financial Statements of one Firm for different time periods or different divisions of the same year.

Financial Analysis: Horizontal vs. Vertical

Horizontal Analysis:

- **Definition:** Compares financial statements from different years.
- **Focus:** Analyzing trends and changes over time.
- **Ratios:** Derived from financial information over the same time span.
- **Application:** Assessing performance and identifying growth or decline patterns.

Vertical Analysis:

- **Definition:** Examines a single year's financial statement.
- **Focus:** Inter-firm comparison and internal assessment.
- **Expression:** Items on Profit and Loss expressed as a percentage of gross sales; Balance Sheet items as a percentage of total assets.
- **Application:** Evaluating the composition and structure of financial statements for a specific period.

Chapter 4
Cost of Capital

Cost of Capital

Definition:

Cost of capital is the **expected return** for capital providers (shareholders, lenders, and debt-holders) as compensation for their contribution to the total capital of a business.

Payment Nature:

When an entity obtains finances, it pays additional amounts beyond the principal, either as **one-time or regular payments** at specified intervals.

Purpose:

The additional payment for capital usage is termed the cost of capital, **expressed as** a **rate**. It serves as a **benchmark for discounting** or compounding cash flows.

Alternative Terms:

Also known as the **'cut-off' rate, 'hurdle rate,' or 'minimum rate of return.'**

Application:

- **Guides** the framing of **debt policies** within a firm.
- Informs capital budgeting decisions, helping in **evaluating investment opportunities**.

Significance of Cost of Capital:

Decision Making:

- Essential for accurate **management and** investment **decisions**.

Investment Evaluation:

- Helps **assess** investment **opportunities** by converting future cash flows into present values through discounting. Ensures relevance to specific options.

Financing Decision:

- Facilitates the **choice** between two **finance** sources by comparing costs, considering financial risk and control.

Credit Policy Design:

- **Guides** the determination of credit periods by evaluating costs against benefits. Cost of capital aids in calculating present values for optimal credit policy design.

Features of Debentures or Bonds

(i) Face Value:

- Defined **denominated value**, known as the face value.
- Interest calculated on the face value.
- Example: 9% non-convertible debentures of 100, where face value is 100.

(ii) Interest (Coupon) Rate:

- Each debenture has a **fixed interest** (coupon) **rate**.
- **Applied to face value** for interest calculation.
- Payment made periodically (annually, semi-annually, etc.).

(iii) Maturity Period:

- Debentures or bonds have a **fixed maturity** period for redemption.
- Irredeemable debentures have an undefined maturity period, considered infinite.

(iv) Redemption Value:

- Redeemable debentures are redeemed on a **specified maturity date**.
- Redemption value determined based on debt covenants, **may differ from the face value**.

(v) Benefit of Tax Shield:

- Interest payment to debenture holders is considered **expenses for corporate tax**.
- Interest payment provides a tax shield, reducing the company's tax liability.

Capital Asset Pricing Model (CAPM):

Risk-Return Trade-Off:

- Describes the relationship **between risk and return** for securities.
- Highlights a **linear correlation** between the two factors.

Types of Risk:

Unsystematic Risk:

- Also known as **company-specific** risk.
- Relates to a company's performance.
- Can be **mitigated through diversification**, termed diversifiable risk.

Systematic Risk:

- Macro-economic or **market-specific risk**.
- **Inherent** to the overall market conditions.
- **Non-diversifiable** and includes factors like inflation, government policy, interest rates.

CAPM Perspective:

- Emphasizes that a **business** should primarily **concern** itself with **non-diversifiable risk**, as diversifiable risk can be eliminated through investor diversification.

Assessment of Non-diversifiable Risk:

- **Evaluated** using the **beta** coefficient (b or β).
- Involves fitting a regression equation between the return of a security and the return on a market portfolio.

Shortcomings of CAPM:

Estimation of Beta with Historical Data:

- **Issue:** Utilizing historical data to estimate beta is criticized as unrealistic.
- **Concern:** Historical performance may not accurately reflect future market dynamics.

Market Imperfections and Unsystematic Risk:

- **Challenge:** Market imperfections can lead to unsystematic risk for investors.
- **Consideration:** Factors beyond systematic risk, like market imperfections, may affect investment outcomes.

Despite Shortcomings:

- **Utilization:** CAPM remains valuable for calculating the cost of equity.
- **Applicability:** Useful even in situations where a firm is experiencing losses.

Choice of Weights:

Book Value Weights:

The Weights are said to be Book value if the proportions of different sources are ascertained on the basis of the face values i.e. the accounting values based on the value proportion in the company's balance sheet.

MERITS:

- Information **readily available** from the Company's Balance sheet.
- Does **not Fluctuate** unless Company changes its Capital structure.
- Reflects **Actual Cost**/Outflow from the company.

DEMERITS:

- Does **not** reflect **market trends**.
- **Not suitable** for evaluation of new investments.

Market Value Weights:

The weights may also be calculated on the basis of the market value of different sources i.e. the proportion of each source at its market value.

MERITS:

- **Reflects** Value of a firm **better** than Book value weights.
- **More relevant** for new Projects requiring fresh inflow of Capital.
- Reflects **relative cost** of different sources of finance.

DEMERITS:

- Data may **not** be **readily available** in all cases.
- **Fluctuating** in nature.

Marginal Cost of Capital:

Definition:

- Cost of obtaining **new funds**, specifically the cost of raising an additional rupee of capital.

Calculation:

- Derived by calculating the **average** cost of capital using **marginal weights**, representing the intended fund utilization proportion.

Weight Choice:

- No need to choose between book value and market value weights for marginal cost of capital computation.

Dynamic Component Costs:

- Component costs may remain **constant up** to a **certain fund level**, then increase, affecting both average and marginal cost of capital.

Example:

- Debt cost may stay at 7% up to 10 lakhs, rise to 8% between 10 lakhs and `15 lakhs.
- Cost of equity may increase due to flotation costs when external equity is used.

Rate Dynamics:

- As component costs rise, average cost of capital increases, but marginal cost of capital rises at a faster rate.

	Explicit Cost of Capital	Implicit Cost of Capital
Meaning	It is the Discount Rate that equals the Present Value of Cash Inflows, that are incremental to the taking of financing opportunity, with the Present Value of its incremental Cash Outflows.	It is the rate of return associated with the best investment opportunity for the firm and its shareholders, that will be foregone, if the project presently under consideration by the firm were accepted.
Measure	It can be measured on a comparatively realistic and quantifiable basis.	It is based on the opportunity cost concept, and arises only when there are alternatives.
Decision Making	Useful for making Capital Budgeting Decisions.	Generally not considered in making capital Budgeting decisions.

Chapter 5
Capital Structure

Capital Structure: Balancing Control, Risk, and Cost

Definition:

- Mix of capital from various sources: equity, preference shares, and long-term debts.

Composition:

- Includes equity shareholders' funds, preference share capital, and long-term external debts.

Influencing Factors:

- **Control:** Preserve majority stake for existing shareholders.
- **Risk:** Avoid exceeding tolerable financial risk.
- **Cost:** Minimize overall cost of capital.

Balancing Act:

- Achieving all three goals is challenging; requires a balance among control, risk, and cost.

Company Objective:

- Primarily aims to **maximize** company **value**.
- **Optimal capital structure** involves choosing financing sources, determining amounts, and defining their relative proportions in total capitalization.

Capital Structure

Capital Structure refers to the **mix of** a firm's **long term sources** of funds such as debentures, preference share capital, equity share capital and retained earnings for meeting total capital requirement.

Major consideration in Capital Structure

1. Risk:

As a firm raises more debt, its risk of cash insolvency increases. The risk is not there in the case of equity shares. There is risk of variations in the expected earnings available to equity shareholders.

2. Cost of Capital:

A business should be at least capable of earning enough revenues to meet its cost of capital and finance its growth.

3. Control:

When a company issues further equity and preference shares, it automatically dilutes the controlling interest of the present owners.

4. Trading on Equity:

The effect of each proposed method of new finance on the earnings per share has to be carefully analysed.

5. Tax Consideration:

The provisions corporate taxation plays an important role in determining the choice between different sources of financing.

Besides the above, the **following factors are also relevant** in determining capital structure.
(1) Government Policy (7) Size of the Company
(2) Legal Requirements (8) Purpose of financing
(3) Marketability (9) Period of finance
(4) Manoeuvrability (10) Cash flow ability of the company and nature of enterprise
(5) Flexibility (11) Requirement of investors
(6) Timing (12) Provision for future

Optimum Capital Structure

Definition:

- Focuses on determining the optimal **blend** of debt and equity in a firm's long-term capital makeup.

Value Dynamics:

- Initial **increase** in **firm value** with the **introduction** of **debt**, reaching a maximum threshold.

Threshold Effect:

- **Beyond** the **threshold**, continuous debt accumulation leads to a **decline** in **firm value**.

Debt Repayment Impact:

- **Inability** to repay debt within the specified period can **harm** the company's market **goodwill**.

Consideration Factors:

- The company should carefully choose its capital structure, weighing **all** relevant **factors**.

Ultimate Goal:

- Aims to strike the **right balance** that maximizes firm value while prudently managing debt levels.

Over capitalization

Over capitalization is a situation where a firm has **more capital** than **what it needs**, i.e. **Assets** are **worth less than** its **Issued Share capital**, and earnings are insufficient to pay interest and dividend.
Over capitalization mainly arises when the existing capital is **not effectively utilized** on account of fall in earning capacity of the company, while the company has raised funds more than its requirements. It is mainly identified by the fall in payment of Interest and dividend, leading to fall in value of the shares of the company.

Causes of Over Capitalization:

1. Raising **more money** through issue of shares or debentures, than what the company can employ profitably.
2. **Wrong estimation** of earnings and capitalization.
3. **Excessive payment** for the acquisition of fictitious assets like **Goodwill** etc.
4. **Borrowing huge amounts** at a rate higher than what the company can earn.
5. **Improper Provision** for depreciation and replacement of assets and distribution of dividends at a higher rate.

Effects of Over Capitalization:

1. Considerable **reduction** in the rate of interest and **dividend** payments.
2. **Reduction** in **Market Price** of shares.
3. **Resorting** of **'Window-dressing'** and profit manipulation by book adjustments.
4. Need for re-organisation or re-construction, and **sometimes** even leading to **liquidation**.

The following remedies are suggested:

(i) Thorough **re-organisation**.
(ii) **Buy back** of shares.
(iii) **Reduction** in **claims** of debentures holders and creditors.
(iv) Value of **share** may also be **reduced**. This will result in sufficient funds for the company to carry out replacement of assets.

Under capitalization

Under capitalization is a situation, **when** company's **actual capitalization** is **lower** than its **proper capitalization** as warranted by its earning capacity.
Under capitalization normally occurs with firms which have **insufficient capital**, but **large secret reserves** in the form of considerable appreciation in the values of the fixed assets not brought into the books.

Causes of Under Capitalization:

1. **Raising less money** through issue of shares or debentures, than what is required for the firm's operations.
2. **Increase** in **sales** and activity levels, not adequately supported by increase in capital base (both fixed assets and net working capital).

Effects of Under Capitalization:

1. It **encourages acute competition**. High profitability encourages new entrepreneurs to come into same type of business.
2. Higher profits of the company are viewed as higher prices for the firm's product. So, **consumer** may **feel** that they are being **exploited**.
3. Real Value of shares is higher than the book value. Further, Management may resort to **manipulate** the **share values**.
4. **Higher market price** of shares than that of other similar companies, because this company's earning rate is considerably higher. **Dividend Rate** will be **higher** in comparison with other companies.
5. Higher market price of shares than that of other similar companies, because this company's earning rate is considerably higher. This invites **more government control** and regulation on the company, and higher taxation also.

The following remedies are suggested:

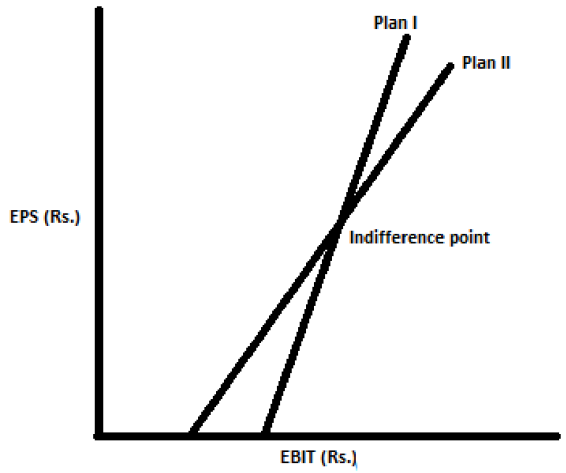
1. The shares of the company should be split up. This will reduce the Dividend per share, though EPS shall remain unchanged.
2. By revising upward the par value of shares in exchange of the existing shares held by them.
3. Issue of Bonus shares will reduce both Dividend per share and the Average Rate of earning.

Major features of capital structure:

1. **Profitability:**
   Capital is borrowed at minimum cost.
2. **Flexibility:**
   Structure should be flexible so that company may be able to raise fund or reduce fund whenever it is required.
3. **Solvency:**
   Excessive debt may threat the solvency of the company, as it is fixed commitment.
4. **Control:**
   It should reduce the risk of dilution of control. The decisions relating to capital structure are taken after keeping the control factor in mind. For e.g. when equity shares are issued the company automatically dilutes its controlling.

EPS Indifference Point

Indifference point is that level of EBIT at which EPS of different capital structures remains unchanged. While designing a capital structure, a firm may evaluate the effect of different financial plans on the level of EPS, for a given level of EBIT.



Financial Break-even point

Financial break-even point denotes the level of earnings at which a Firm's EBIT is just sufficient to cover Interest, tax and preference dividend. In other words, there are no Residual Earnings available to equity shareholders.
If the firm has employed debt only (and no preference shares), the financial break-even EBIT level is:
Financial break-even EBIT= Interest Charge + Preference Dividend/(1-t).

CAPITAL STRUCTURE THEORIES

(a) Net Income (NI) approach
(b) Traditional approach.
(c) Net Operating Income (NOI) approach
(d) Modigliani-Miller (MM) approach with tax & without tax

However, the following assumptions are made to understand this relationship:

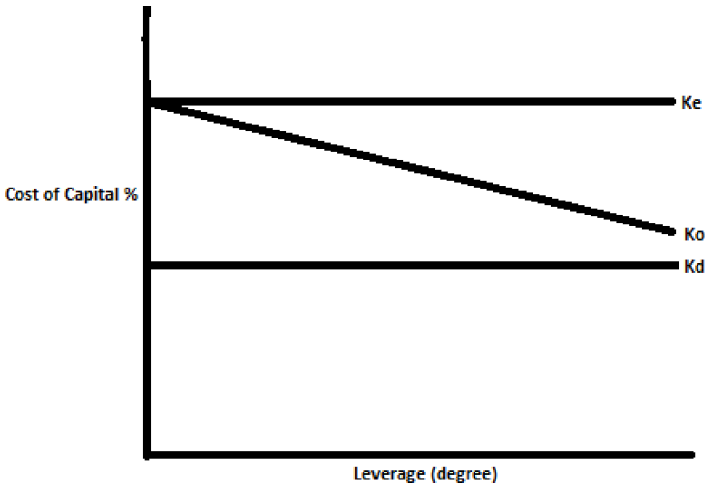
- There are only two kinds of funds used by a firm i.e. debt and equity.
- The total assets of the firm are given. The degree of leverage can be changed by selling debt to purchase shares or selling shares to retire debt.
- Taxes are not considered.
- The dividend payout ratio is 100%.
- The firm's total financing remains constant.

- Business **risk** is **constant** over time.
- The **firm** has **perpetual** life.

Net Income Approach

According to this approach, a firm can increase its value, i.e., it can lower its overall cost of capital by increasing the proportion of debt in the capital structure. **Higher debt** content in the capital structure will result in **decline** in overall or **weighted** average **cost** of capital. This will cause increase in the value of firm. Reverse will happen in the converse situation.

The value of the firm on the basis of NI Approach can be ascertained as follows:
Where, Vf = VE + VD
Vf = Value of Firm
VE = Market Value of equity
VE = Market Value of Debt.
Market value of equity can be ascertained as follows:
VE = NI/Ke
Where
VE = Market Value of equity
NI = Earnings available for equity shareholders.
Ke = Equity Capitalisation Rate.



Net Operating Income Approach

According to this approach the market **value** of the **firm** is **not** at all affected by the **capital structure changes**. The market value of the firm is ascertained by capitalizing the net operating income at the overall cost of capital (KO), which is considered to be constant. The market value of equity is ascertained by deducting the market value of the debt from the market value of the firm. According to the NOI Approach, the value of a firm is:
VF = EBIT/Ko
Where: VF = Value of firm;
KO = Overall cost of capital
EBIT = Earnings before interest and tax.
The value of equity VE is a residual value, which is determined by deducting the total value of debt VD from the total value of the firm VF Thus, the value of equity VE can be determined by the following equation:
VE = VF – VD
Where: VE = Value of equity;
VF = Value of firm;
VD = Value of debt.

The NOI approach makes the following **assumptions:**

1. The investors see the firm as a whole and thus **capitalises** the **total earnings** of the firm to find value of the **firm** as a **whole**.
2. The **overall** cost of capital, **Ko** , of the firm is **constant** and depends upon the business risk which also is assumed to be unchanged.

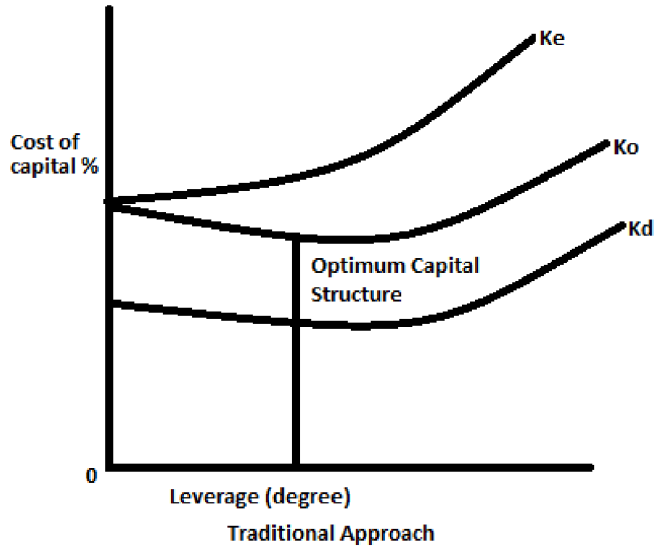
3. The cost of debt, **Kd** , is also taken as **constant**.
4. The use of more and more debt in the capital structure increases the risk of the shareholders and thus results in the increase in the cost of equity capital i.e., Ke . The **increase** in **Ke** is such as to completely **offset** the benefits of employing **cheaper** **debt**, and
5. There is **no** **tax**.

Traditional Approach of Capital Structure

It is also called an intermediate approach as it takes a **midway** between NI approach and NOI approach. According to this approach the firm should **strive** to **reach** the **optimal** **capital** structure and its total valuation through a judicious use of the both debt and equity in capital structure.

At the optimal capital structure the **overall** **cost** of **capital** will be **minimum** and the **value** of the **firm** is **maximum**. It further states that the value of the firm increases with financial leverage upto a certain point. Beyond this point the increase in financial leverage will increase its overall cost of capital and hence the value of firm will decline.

This is because the benefits of use of debt may be so large that even after offsetting the effect of increase in cost of equity, the overall cost of capital may still go down. However, if financial leverage increases beyond an acceptable limit the risk of debt investor may also increase, consequently cost of debt also starts increasing. The increasing cost of equity owing to increased financial risk and increasing cost of debt makes the overall cost of capital to increase



Traditional Approach

Main Highlight of Traditional Approach

The firm should strive to reach the optimal capital structure and its total valuation through a judicious use of both the debt and equity in capital structure. At the optimal capital structure, the overall cost of capital will be minimum and the value of the firm will be maximum.

Modigliani and Miller Approach (1958)

It is **similar** **to** the Net Operating Income (**NOI**) approach. However, there is a basic difference between the two. The NOI approach is **purely** **definitional** or conceptual. It does not provide operational justification for irrelevance of the capital structure in the valuation of the firm. While MM approach supports the NOI approach providing behavioural justification for the independence of the total valuation and the cost of capital of the firm from its capital structure.

Assumptions:

The MM approach is subject to the following **assumptions**:

1. Capital **markets** are **perfect**.
2. The **investors** are **well** **informed**; and behave rationally.
3. Investors are **free** **to** **buy** and **sell** securities.
4. The **firms** can be classified into **homogeneous** **risk** **classes**. All firms within the same class will have the same degree of business risk.

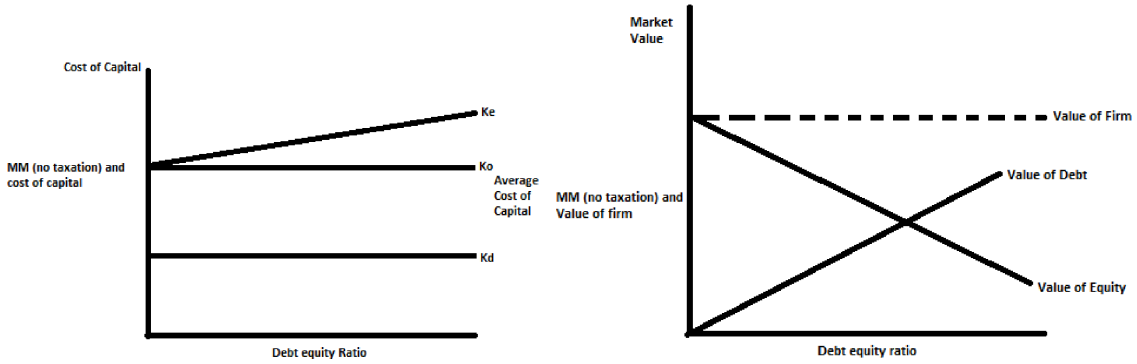
5. The investors can **borrow without restriction** on the same terms on which the firm can borrow; and there is no borrowing cost.
6. **All investors** have the **same** expectation of a firm's net operating income (EBIT) with which to evaluate the value of any firm.
7. There are **no retained earnings**.
8. **No** Corporate income **tax**.

Propositions:

- **Constant WACC:** The Total Market Value of a firm and its Cost of capital are independent of its Capital structure. The Total Market Value of the firm is given by capitalising the expected stream of operating earnings (i.e. Net Operating Income) at a discount rate considered appropriate for its risk class.
- **Ke = Ko + Premium for Risk:** The cost of equity (Ke) is equal to Capitalisation Rate of pure Equity Stream Plus a Premium for Financial Risk. The financial risk increases with more debt content in the capital structure. As a result, Ke increases in such a manner as to off-set exactly the use of less expensive source of debt funds.

Cost of Equity = WACC + Risk Premium So, Ke = Ko + Debt / Equity (Ko – Kd)

- **Investment-Financing Decisions:**
  The **cut off rate** for investment purposes is completely **independent** of the mode **of financing**. Hence every investment proposal can be evaluated at the rate applicable for such type of firms. Debt-Equity mix is not relevant for capital budgeting decisions.
- **Leverage Adjustment:**
  Financial **Leverage** has **no impact** on market values, which remain constant for all firms in the same risk class. In case such firms had different market values, investors will buy and sell shares and set aside the leverage effect. Hence, Arbitrage will substitute personal leverage for corporate leverage.



Effect of Taxation on the value of the firm under MM Approach (1963)

Tax Saving:

When **taxes** are paid on Corporate Income, **use of debt Funds** is **advantageous** due to the tax-saving effect of Interest Payment. Equity Dividends and Retained Earnings are not "deductible" as an expense for taxation purposes.

Effects of Tax saving:

When Corporate Taxation is included in the analysis:

(a) Value of Firm will increase, and (b) Overall Cost of Capital will decrease.

Tax Shield:

The effect of Tax Saving can be identified from the following relationships:

Total Earnings in Levered Firm = Total Earnings in Unlevered Firm + Interest on Debt × Tax rate.

[Here Total Earnings = EAT + Interest i.e. the earnings available for equity and debt holders].

Value of the Levered Firm will be greater than that of the Unlevered Firm, to the extent of the tax shield. Hence, **value of Levered Firm = Value of unlevered firm + Debt × tax rate.**

Chapter 6
Leverages

Business Risk:
This pertains to the uncertainties associated with a firm's operations, specifically the predictability of future operating income (EBIT). Effective management of business risk involves strategies to enhance the predictability of operating income.

Financial Risk:
Arises from the use of debt in a company's capital structure. Shareholders face additional risk when a company utilizes debt alongside equity financing. Companies with higher debt ratios carry higher financial risk.

Residual Earnings: A Firm can raise funds through a combination of – (a) Debt, (b) Preference Capital, and (c) Equity Capital. Of the three sources, Equity Shareholders are entitled to Residual Earnings, i.e. after paying Interest on Debt, and Preference Dividend.

Basis	Business	Financial
Meaning	It refers to the risk associated with the firm's operations. It is the uncertainty about future net operating income (EBIT).	If refer to the additional risk placed on the firm's equity shareholders as a result of debt use.
Nature	It is unavoidable i.e. it cannot be controlled.	It is avoidable i.e. it can be controlled.
Measurement	It can be measured by standard deviation of the Basic Earning power i.e. (ROCE).	It can be measured with the help of ratios like, Debt to assets, etc.
Related To	It is related to economic environment.	It is related to use of debt in capital structure.
Formula	DOL = Contribution/ EBIT	DFL = EBIT/ EBT

Leverage

- The term Leverage in general, refers to advantage gained for any purpose.
- In financial analysis, Leverage is used by business firms to quantify the risk-return relationship of different alternative capital structures.
- Leverage magnifies the effect of changes in Sales, on EBIT and EPS.

There are three commonly used measures of leverage in financial analysis. These are:

(a) Operating Leverage –

- It is the relationship between Sales and EBIT and indicates **business risk.**
- For measuring the impact of Fixed Operating Costs,

(b) Financial Leverage –

- It is the relationship between EBIT and EPS and indicates **financial risk.**
- For measuring the impact of Interest Expenses,

(c) Combined Leverage –

- It is the relationship between Sales and EPS and indicates total risk i.e., **both business risk and financial risk.**
- For measuring the impact of both Fixed Operating Costs and Interest Costs

Meaning of Operating Leverage -

- Operating Leverage is defined as the **Firm's ability** to use fixed operating costs to magnify effects of changes in sales on its EBIT.
- When sales changes, variable costs will change in proportion to sales while fixed costs will remain constant. So, a **change** in **sales** will **lead to** a **more than proportional change** in **EBIT**. The effect of change in sales on EBIT is measured by Operating Leverage.
- When Sales increases, Fixed Costs will remain the same irrespective of level of output, and so, the percentage increase in EBIT will be higher than increase in sales. This is the favourable effect of Operating Leverage.

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

- When there is an increase or decrease in sales level the EBIT also changes. The effect of change in sales on the level EBIT is measured by Operating Leverage. The Operating Leverage is also calculated as:

Operating Leverage = $\frac{\%\ Change\ in\ EBIT}{\%\ Change\ in\ Sales}$ **Or** $\frac{Increase\ in\ EBIT/EBIT}{Increase\ in\ Sales/Sales}$

Operating leverage is a function of three factors:

(i) Amount of fixed cost,
(ii) Variable contribution margin, and
(iii) Volume of sales.

Meaning of Financial Leverage.

- Financial Leverage is defined as the **ability of a Firm to use fixed financial charges** (interest) to magnify the effects of changes in EBIT (i.e. Operating Profits), on the Firm's Earning Per Share (EPS).
- Financial Leverage occurs when a company has debt content in its capital structure and fixed financial charges, e.g. interest on debentures. These fixed financial charges do not vary with the EBIT. They are fixed and are to be paid irrespective of level of EBIT.
- When EBIT increases, the interest payable on debt remains constant, and hence residual earnings available to equity shareholders will also increase more than proportionately.
- Hence an increase in EBIT will lead to a higher percentage increase in earnings per share (EPS). This is measured by financial leverage.

Financial Leverage = $\frac{EBIT}{EBT - \frac{Preference\ Dividend}{(1-t)}}$

- When there is an increase or decrease in the level of E.B.I.T. level of Earnings per share (EPS) also changes. The effect of changes in operating profit or EBIT on the level of Earning per share (EPS) is measured by financial leverage. The financial leverage is also calculated as:

Financial Leverage = $\frac{\%\ change\ in\ EPS}{\%\ change\ in\ EBIT}$ **Or** $\frac{Increase\ in\ EPS/EPS}{Increase\ in\ EBIT/EBIT}$

Positive and Negative Financial Leverage

Analysis and Interpretation of Financial leverage

S. No	Situation	Result
1	No Fixed Financial Cost	No Financial leverage
2	Higher Fixed Financial cost	Higher Financial Leverage
3	When EBIT is higher than Financial Break-even point	Positive Financial leverage
4	When EBIT is levy then Finance Break-even point	Negating Financial leverage

Financial Leverage as a 'Double edged Sword'

On one hand when cost of 'fixed cost fund' is less than the return on investment financial leverage will help to increase return on equity and EPS. The firm will also benefit from the saving of tax on interest on debts etc. However, when cost of debt will be more than the return it will affect return of equity and EPS unfavourably and as a result firm can be under financial distress. This is why financial leverage is known as "double edged sword".

Effect on EPS and ROE:

When, ROI > Interest – **Favourable – Advantage**
When, ROI < Interest – **Unfavourable – Disadvantage**
When, ROI = Interest – **Neutral – Neither advantage nor disadvantage.**

Note: DFL can never be between zero and one. It can be zero or less or it can be one or more.

*Financial BEP is the level of EBIT at which earning per share is zero. If a company has not issued preference shares then Financial BEP is simply equal to amount of Interest.

Break-even point.

Break-even analysis is a generally used to study the Cost Volume Profit analysis. It is concerned with computing the break-even point.
At this point of production level and sales there will be **no profit and loss** i.e. total cost is equal to total sales revenue.

	Product X (₹)	Product Y (₹)
Selling Price	40	20
Variable Cost	20	12
Contribution	20	8
Total Contribution of 1,000 units	20,000	8,000
Fixed Cost	15,000	5,000
Profit (EBIT)	5,000	3,000
Break- even point (Fixed Cost / Contribution	$\frac{15,000}{20}$ = 750 units	$\frac{5,000}{8}$ = 625 units
Operating Leverage $\frac{Contribution}{EBIT}$	$\frac{20,000}{5,000}$ = 4	$\frac{8,000}{3,000}$ = 2.67

There is a **relationship between leverage and Break-even point**. Both are used for profit planning. In brief the relationship between leverage, break-even point and fixed cost as under:

Leverage	**Break - even point**
1. Firm with high leverage	1. Higher Break-even point
2. Firm with low leverage	2 .Lower Break-even point
Fixed cost	**Operating leverage**
1. High fixed cost	1. High degree of operating leverage
2. Lower fixed cost	2. Lower degree of operating leverage

Margin of Safety and Operating Leverage.

In cost accounting, one studies that margin of safety (MOS) may be calculated as follows:

$$MOS = \frac{Sales - BEP\ Sales}{Sales} \times 100$$

Higher margin of safety indicates lower business risk and higher profit and vice versa. If we both multiply and divide above formula with profit volume (PV) ratio then:

$$MOS = \frac{Sales - BEP\ Sales}{Sales} \times \frac{PV\ Ratio}{PV\ Ratio} = \frac{Sales\ x\ PV - BEP\ x\ PV}{Sales\ x\ PV}$$

we know that:

$$PV\ ratio = \frac{Contribution}{Sales}$$ or Sales x PV ratio = Contribution

$$Further,\ BEP = \frac{Fixed\ Cost}{PV\ ratio}$$ or BEP × PV ratio = Fixed Cost

$$So,\ MOS = \frac{Contribution - Fixed\ Cost}{Contribution} = \frac{EBIT}{Contribution}$$

we know that:

$$DOL = \frac{Contribution}{EBIT}$$

hence:

$$\textbf{Degree of Operating Leverage} = \frac{1}{Margin\ of\ Safety}$$

If Margin of safety	Business Risk	DOL (= 1/MOS)

Rises	Falls	Falls
Falls	Rises	Rises

- When DOL is more than one (1), operating leverage exists.
- More is the DOL higher is operating leverage.
- A positive DOL/ OL means that the firm is operating at higher level than the break- even level and both sales and EBIT moves in the same direction. In case of negative DOL/ OL firm operates at lower than the break-even sales and EBIT is negative.

Situation 1: No. Fixed Cost

Particulars	20,000 units (₹)	30,000 units (₹)
Sales @ ₹10	2,00,000	3,00,000
Variable cost @ ₹ 5	1,00,000	1,50,000
EBIT	1,00,000	1,50,000

Degree of Operative leverage (DOL) = $\frac{Percentage\ change\ in\ EBIT}{Percentage\ change\ in\ sales} = \frac{50\%}{50\%} = 1$

Situation 2: Positive Leverage

Particulars	(₹)	(₹)
Sales @ ₹10	2,00,000	3,00,000
Variable cost @ ₹ 5	1,00,000	1,50,000
Contribution	1,00,000	1,50,000
Fixed Cost	50,000	50,000
EBIT	50,000	1,00,000

Degree of Operative leverage (DOL) = $\frac{Percentage\ change\ in\ EBIT}{Percentage\ change\ in\ sales} = \frac{100\%}{50\%} = 2$

Situation 3: When EBIT is Nil (contribution = fixed cost)

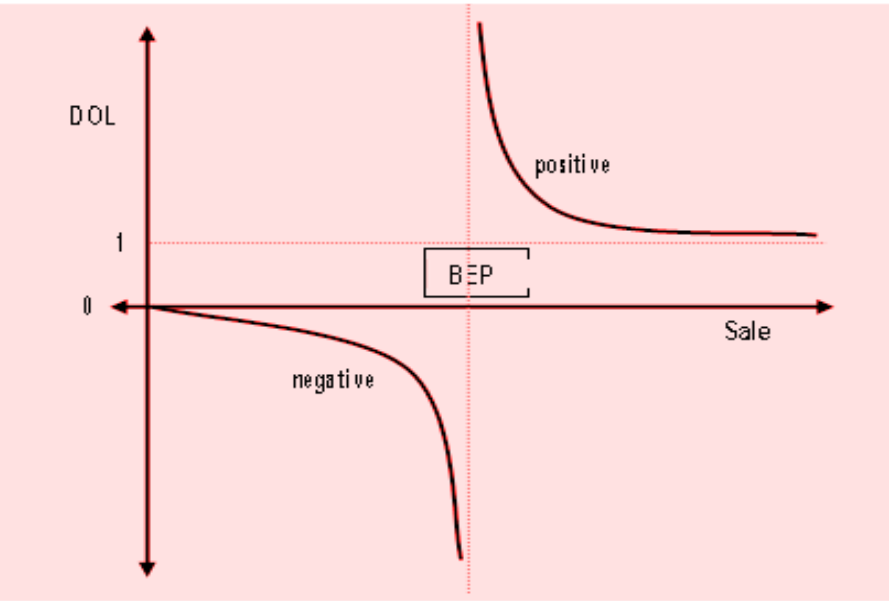
Degree of Operative leverage (DOL) = $\frac{Contribution}{0}$ = Undefined

Analysis and Interpretation of operating leverage

S.No	Situation	Result
1	No fixed cost	No operating leverage
2	Higher fixed cost	Higher break - even point
3	Higher than break - even level	Positive operating leverage
4	Lower than break - even level	Negating operating leverage

Note: DOL can never be between zero and one. It can be zero or less or it can be one or more.

- When **Sales is much higher than BEP** sales, DOL will be slightly more than one. With decrease in sales DOL will increase. At BEP, DOL will be infinite.
- When **sales is slightly less than BEP**, DOL will be negative infinite. With further reduction in sale, DOL will move towards zero. At zero sales, DOL will also be zero.



Combined Leverage

- Combined leverage is used to **measure** the **total risk** of a firm i.e. Operating Risk and Financial Risk.
- Effect of fixed operating costs (i.e. Operating Risk) is measured by Operating Leverage (DOL). Effect of fixed interest charges (i.e. Financial Risk) is measured by Financial Leverage (DFL). The combined effect of these is measured by Combined Leverage (DCL).

$$\text{DCL} = [\text{DOL} \times \text{DFL}] = \frac{Contribution}{EBIT} \times \frac{EBIT}{EBIT - Pref.Div/(1-t)} = \frac{Contribution}{EBIT - Pref.Div/(1-t)}$$

- Degree of combined Leverage (DOL) measures the sensitivity of EPS to changes in sales. The combined Leverage is also calculation as:

$$\text{DCL} = [\text{DOL} \times \text{DFL}] = \frac{\%\ Change\ in\ EBIT}{\%\ Change\ in\ sales} \times \frac{\%\ Change\ in\ EPS}{\%\ Change\ in\ EBIT} = \frac{\%\ Change\ in\ EPS}{\%\ Change\ in\ sales}$$

Analysis of Combined Leverage

DOL	DFL	Comments
Low	Low	Lower total risk. Cannot take advantage of trading on equity.
High	High	Higher total risk. Very risky combination.
High	Low	Moderate total risk. Not a good combination. Lower EBIT due to higher DOL and lower advantage of trading on equity due to low DFL.
Low	High	Moderate total risk. **Best combination.** Higher financial risk is balanced by lower total business risk.

DOL	DFL	DCL
Shows level of **business** risk.	Shows level of **financial** risk.	Shows level of total or **combined** risk.
It is dependent upon **fixed cost**.	It is dependent upon **interest** and **preference dividend**	It is dependent upon fixed cost, interest & preference dividend.
Measures % **change** in **EBIT** which results **from** a 1% **change** in **Sales**.	Measures % **change** in **EPS** which results **from** a 1% **change** in **EBIT**.	Measures % **change** in **EPS** which results **from** a 1% **change** in **Sales**.
For example, if DOL is 3 and there is 8% increase in output then EBIT will increase by 24% & if there is a 8% decrease in output then EBIT will decrease by 24%.	For example, if DFL is 2 and there is 5% increase in EBIT then EPS will increase by 10% and if there is a 5% decrease in EBIT then EPS will decrease by 10%.	For example, if DCL is 6 and there is a 8% increase in sales then EPS will increase by 48% and if there is a 8% decrease in sales then EPS will decrease by 48%.

There is a unique DOL for each level of output.	There is a unique DFL for each level of EBIT.	There is a unique DCL for each level of sales.
It is undefined at Operating B.E.P.	It is undefined at Financial B.E.P.	It is undefined at Financial B.E.P.

Trading on Equity or Gearing Effect

- When **ROCE > Interest Rate on Debt**, the company earns at a higher rate of return on its investment and pays a lower rate of return to the suppliers of long term debt funds.
- The **difference** between **EBIT** and the **cost of debt** funds would enhance the earning of Equity Shareholders. This will maximize ROE and EPS, creating a **gain to** the **Equity** Shareholders.
- Hence, gain from DFL, arises due to –

(i) Excess of return on investment over effective cost (cost after considering taxation effect, since the interest cost on debt is tax – deductible expenses) of Debt Funds.

(ii) Reduction in the number of Equity Share issued due to the use of Debt Funds.

- The **use of low – cost Debt Funds** when Basic Earning power (ROCE) of the business is higher, thereby increasing the EPS and ROE, is called "Gearing Effect" or **"Trading on Equity".**

Chapter 7
Investment Decision

Capital Budgeting

Capital Budgeting is the process of:

- **Identification** of investment project proposals that are strategic to business overall objectives.
- **Estimating and evaluating** post-tax incremental cash flows for each of the investment proposals.
- **Selection** an investment proposal that maximises the return to the investors.

Purpose of Capital Budgeting:

Substantial Investment:

- Involves **significant capital investment** aligned with long-term organizational goals.
- Selection of financing sources based on the **size** of capital and **timing** of cash flows.

Long-Term Impact:

- Decisions **influence future** benefits, costs, and the overall **growth** trajectory of the firm.
- Extended impact over a **significant time period**.

Irreversibility:

- **Many** decisions are **irreversible** once implemented.
- **Challenges in reversing** decisions due to upfront payments, contractual obligations, and technological constraints.

Complexity:

- Involves assessing future events, making **predictions** challenging.
- **Difficulty** in **quantifying** all benefits and costs associated with a specific investment decision.

Process of Capital Budgeting

PHASE I: Planning:

- **Identification** of potential investment opportunities.
- The **ability** of the **management** of the firm to exploit the opportunity is determined.
- Opportunities having little merit are rejected and **promising opportunities** are **advanced** in the form of a proposal to enter the evaluation phase.

PHASE II: Evaluation:

- The **determination** of proposal and its investment, inflows and outflows.
- Investment **appraisal techniques**, like simple payback method, accounting rate of return, discounted cash flow techniques are used to appraise the proposals.

PHASE III: Selection:

- Consideration of the **returns** and **risks** associated with the individual projects as well as the cost of capital to the organisation.
- Choose among projects so as to **maximise** shareholder's **wealth**.

PHASE IV: Implementation:

- On the final selection, the firm must **acquire** the **necessary** funds.
- **Purchase** the **assets** and begin the implementation of the project.

PHASE V: Control

- The progress of the project is monitored with the aid of **feedback reports**.

PHASE VI: Review

- **On termination** of a project the organisation should review the entire project to explain its **success** or **failure**.
- The **review** may produce ideas for new proposals to be undertaken in the future.

Types of Capital Investment Decisions:

1. On the basis of firm's existence:

(i) Replacement and Modernisation Decisions:

- **Objective:** Improve operating efficiency and reduce costs.
- **Replacement Decision:** Replace plant or machinery at the end of its economic life.
- **Modernisation Decision:** Upgrade technology to stay current.

(ii) Expansion Decisions:

- **Scenario:** Existing successful firms facing increased demand.
- **Objective:** Add capacity to meet growing product demand.

(iii) Diversification Decisions:

- **Scope:** Evaluate proposals for new product lines or markets.
- **Objective:** Reduce risk by operating in different products or markets.

2. On the basis of situations:

(i) Mutually Exclusive Decisions:

- **Characteristics:** Acceptance of one proposal excludes others.
- **Example:** Choosing between a semi-automatic or highly automatic machine.

(ii) Accept-Reject Decisions:

- **Scenario:** Independent proposals not competing with each other.
- **Decision Criteria:** Accept proposals with returns exceeding a minimum desired rate.

(iii) Contingent Decisions:

- **Dependency:** Investment in one proposal requires investment in others.
- **Example:** Accepting a factory proposal in a remote area necessitates infrastructure investment.

Steps of Capital Budgeting Procedure

1. **Estimation of Cash flows** over the entire life for each of the projects under consideration.
2. **Evaluate** each of the alternative, using different decision criteria.
3. **Determining** the minimum required rate of return (i.e., WACC) to be used as discount rate.

Estimation of Project Cash Flows:

Incremental Cash Flows:

- **Focus:** Capital budgeting considers only incremental cash flows resulting from project acceptance.
- **Importance:** Vital for project evaluation, especially in comparison to accounting profit.

Accounting Rate of Return (ARR) Limitations:

- **Challenge:** Timings of cash flow may not align with profit periods.
- **Issue:** Non-cash items like depreciation lack immediate cash outflow.

Departments' Inputs for Cash Flow Estimation:

- **Involvement:** Various departments (Production, Finance, Marketing) provide crucial inputs.
- **Composition:** Cash flow stream includes outflows (costs) and inflows (benefits).

Cash Outflows vs. Cash Inflows:

- **Identification:** Costs are labeled as "cash outflows."
- **Benefits:** Revenues and gains are considered "cash inflows."

Determining Project Life:

- **Considerations:** Project life influenced by technological obsolescence, physical deterioration, and demand decline.
- **Uncertainty:** Despite maintenance and forecasting efforts, uncertainty persists.

Calculating Cash Flows:

Depreciation:

- **Nature:** Non-cash item, doesn't impact cash flow directly.
- **Consideration:** Tax benefit from depreciation is considered a cash inflow.
- **Significance:** Reduces cash outflow for taxes.

Opportunity Cost:

- **Definition:** Foregoing a benefit by choosing an alternative investment.
- **Example:** Sale value of a piece of land, if used for a project.

- **Timing:** Occurs during initial outlay and project tenure.
- **Consideration:** Estimated for cash outflow.

Sunk Cost:

- **Definition:** Past cash outlay, irreversible in the present.
- **Example:** Consultancy fee for project analysis.
- **Impact:** Irrelevant for decision-making.
- **Exclusion:** Not considered in capital budgeting analysis.

Working Capital:

- **Requirement:** Essential for every significant project.
- **Treatment:** Initial requirement as cash outflow, release as cash inflow.
- **Depreciation:** No depreciation provided on working capital.
- **Adjustments:** Incorporate adjustments for changes during project life.

Allocated Overheads:

- **Charge Basis:** Allocated based on machine hour, labor hour, etc.
- **Treatment:** Expenditures already incurred, not considered as cash flows.
- **Exception:** Incremental overhead cost due to proposal acceptance is treated as cash outflow.

Additional Capital Investment:

- **Timing:** Capital investment may be required during the project.
- **Treatment:** Treated as cash outflow when required during project continuity.

Categories of Cash Flows: It is helpful to place project cash flows into three categories:

(a) Initial Cash Outflow:

The initial cash outflow for a project depends upon the type of capital investment decision as follows:
(i) If decision is related to investment in a **fresh proposal or an expansion decision,** then initial cash outflow shall be calculated as follows:

		Amount	Amount
	Cost of new Asset(s)		xxx
Add:	Installation/Set-Up Costs	xxx	
Add:	Investment in Working Capital	xxx	xxx
	Initial Cash Outflow		xxx

(ii) If decision is related to **replacement decision,** then initial cash outflow shall be calculated as follows:

		Amount	Amount
	Cost of new Asset(s)		xxx
Add:	Installation/Set-Up Costs	xxx	
Add/(less):	Increase (Decrease) in net Working Capital level	xxx	
Less:	Net Proceeds from sale of old assets	(xxx)	
Add/(less):	Tax expense (saving/ loss) due to sale of Old Asset	xxx	xxx
	Initial Cash Outflow		xxx

(b) Interim Cash Flows:

After making the initial cash outflow that is necessary to begin implementing a project, the firm hopes to get benefit from the future cash inflows generated by the project. The initial cash outflow for a project depends upon the type of capital investment decision as follows:
(i) If analysis is related to a fresh or completely a **new project** then interim cash flow is calculated as follows:

		Amount	Amount
	Profit after Tax (PAT)		xxx
Add:	Non-Cash expenses (e.g. Depreciation)	xxx	
Add/(less):	Net decrease (increase) in Working Capital	xxx	xxx
	Interim net cash flow for the period		xxx

(ii) Similarly, interim cash flow in case of replacement decision shall be calculated as follows:

		Amount	Amount
	Net increase (decrease) in Operating Revenue		xxx
Add/(less):	Net decrease (increase) in operating expenses		xxx
	Net changes in income before taxes		xxx
Add/(less):	Net decrease (increase) in taxes		xxx
	Net change in income after taxes		xxx
Add/(less):	Net decrease (increase) in depreciation charges		xxx
	Incremental net cash flow for the period		xxx

(c) Terminal-Year Net Cash Flow:

For calculating the net cash flow at the terminal year, we will first calculate the incremental net cash flow for the period as calculated in point (b) above and further, we will make adjustments to it as follows:

		Amount	Amount
	Final salvage value (disposal costs) of asset		xxx
Add:	Interim Cash Flow	xxx	
Add/(less):	Tax savings (tax expenses) due to sale or disposal of asset (Including depreciation)	xxx	
Add:	Release of Net Working Capital	xxx	xxx
	Terminal Year net cash flow		xxx

Tax Shield and Depreciation in Cash Flow Calculation:

Tax Shield Importance:

- **Purpose:** Integral in calculating project cash flows.
- **Calculation:** Derived from the tax benefit resulting from depreciation.

Taxable Income Determination:

- **Method:** Computed per the provisions of the Income Tax or similar Act.
- **Consideration:** Integral for assessing the tax impact on project cash flows.

Block of Assets Concept:

- **Definition:** Group of assets within a specific asset class.
- **Examples:** Building, machinery, furniture, etc.
- **Depreciation:** Charged at the same rate for assets within the same class.

Tax Treatment based on Asset Blocks:

- **Single Asset Block:** If a block consists of only one asset.
  - **Depreciation Treatment:** Depreciation is calculated individually.
  - **Tax Impact:** Directly related to the depreciation of the single asset.
- **Multiple Assets Block:** If a block consists of several assets.
  - **Depreciation Treatment:** Depreciation calculated collectively for all assets.
  - **Tax Impact:** Tax considerations influenced by the total depreciation for the block.

Exclusion of Financing Costs Principle:

Purpose:

- **Objective:** Define cash flows related to long-term funds.
- **Exclusion Rationale:** Financing costs (interest on long-term debt and equity dividend) are excluded from the analysis.

Reasoning:

- **Avoiding Double Counting:** Financing costs are already factored into the weighted average cost of capital.
- **Preventing Duplication:** Excluding interest and dividends ensures that the cost of long-term funds is not counted twice.

Principle Components:

- **(i) Ignoring Long-term Debt Interest**: While computing profits and taxes, interest on long-term debt is disregarded.
- **(ii) Irrelevance of Expected Dividends:** Expected dividends are considered irrelevant in the analysis of cash flows.

Handling Interest Properly:

- **Interest Deduction in Profit After Tax:** Interest is typically deducted to arrive at profit after tax.
- **Adjustment Formula:** Add back the amount equal to 'Interest × (1 - Tax rate)' to profit after tax.

Adjustment Formula:

- **Profit After Tax Adjustment:** Profit After Tax + Interest × (1−Tax Rate)
- **Consistency in Results:** Whether applying the tax rate directly to profit before interest and tax or adding tax-adjusted interest, the result remains consistent.

Capital Budgeting Techniques

Traditional or Non- Discounting

1. Payback Period
2. Accounting Rate of Return

Time Adjusted or Discounted Cash Flows

1. Net Present Value
2. Profitability Index
3. Internal Rate of Return
4. Discounted Payback Period
5. Modified Internal Rate of Return

1. Payback Period

Payback Period represents the **time period required** for **complete recovery** of the **initial investment** in the project. It is the period within which the total cash inflows from the project equals the cost of investment in the project. The **lower** the **payback** period, the **better** it is, since initial investment is recovered faster.

Steps in Payback period technique:

(a) The **first step** in calculating the payback period is determining the total **initial capital investment** (cash outflow).
(b) The **second step** is calculating/estimating the annual expected after-tax **cash flows** over the useful life of the project.

Advantages of Payback Period:

Ease of Computation:

- **Quick** and straightforward calculation.

Simplicity and Comprehensibility:

- Provides a **quick estimate** of the time required to recoup the invested cash.
- **Easy** to **understand**, making it accessible to various stakeholders.

Risk Estimation:

- **Length** of the **payback** period can serve as an **indicator** of project **risk**.
- **Longer payback** periods may signify **higher risk**, especially in industries with obsolescence concerns.

Decision Influence:

- In cash-constrained situations or industries with high obsolescence risk, **short payback** periods often become a **crucial factor** in investment decisions.

Limitations of Payback Period:

Time Value of Money Ignored:

- **Fails** to consider the **time value** of money.
- Treats projects with the **same payback** period **equally**, irrespective of the distribution of net cash inflows over time.

Incomplete Profitability View:

- **Overlooks** an investment's total **profitability**.

- Focuses only on cash inflows up to the point of full recovery of the initial investment, ignoring post-payback cash flows.

Emphasis on Short-Term Projects:

- Places excessive importance on short payback periods, neglecting the evaluation of long-term projects.

Payback Reciprocal

Payback Reciprocal is the reciprocal of Payback Period. It is computed as Average annual cash inflows(CFAT p.a.)/Initial investment.

Usage:

The Payback Reciprocal is considered to be an approximation of the Internal Rate of Return, if:
(i)The life of the project is at least twice the Payback Period, and
(ii) The Projects generates equal amount of the annual cash inflows.
Example:
A project with an Initial Investment of ₹ 50 lakhs and life of 10 years, generates CFAT of ₹ 10 lakhs per annum. It's Payback Reciprocal will be Rs 10 lakhs/50 lakhs = 20%.

2. Accounting or Average Rate of Return (ARR)

Accounting or Average Rate of Return (ARR) means the average annual yield on the project. In this method, Profit after Taxes (i.e. PAT, instead of CFAT) is used for evaluation.

ARR= Average PAT p.a./Net initial investment

, where Average PAT p.a. = Total PAT during project life/No of years during project life
Net Initial Investment = Initial Investment –Salvage Value.

Advantages of Accounting Rate of Return (ARR):

Utilization of Readily Available Data:

- Utilizes data readily available in routine financial reports, eliminating the need for special data generation procedures.

Consistency in Decision-making and Performance Evaluation:

- Mirrors the method used for evaluating performance in both investment decision-making and management performance evaluation, ensuring consistency.

Comprehensive Profitability Measurement:

- Considers all net incomes over the entire life of the project.
- Provides a measure of the investment's profitability.

Limitations of Accounting Rate of Return (ARR):

Neglects Time Value of Money:

- Ignores the time value of money, treating all cash flows as equal.

Dependency on Accounting Procedures:

- Relies on accounting numbers influenced by the organization's choice of accounting procedures.
- Different accounting methods, such as depreciation techniques, can lead to substantially different figures for an investment's net income and book values.

Focus on Net Income, Ignoring Cash Flows:

- Emphasizes net income over net cash flow.
- While net income measures profitability, net cash flow is considered a superior measure of investment performance.

Exclusion of Working Capital Commitments:

- Excludes commitments of working capital and other outlays not reflected in the book value of the project.

Determining Discount Rate:

Theoretical Basis:

- The discount rate represents the desired or expected rate of return on an investment.
- Theoretically, it is the rate of return the firm would earn by investing the same funds in the best available alternative investment with similar risk.

Challenges in Identifying True Opportunity Cost:

- Identifying the best alternative opportunity with the same risk is practically challenging.

- Organizations often use alternative measures for the desired rate of return due to the difficulty in determining the true opportunity cost.

Establishing Minimum Rate of Return:

- Organizations may set a minimum rate of return that all capital projects must meet.
- This minimum rate could be based on industry averages or the cost of other investment opportunities.

Use of Weighted Average Cost of Capital (WACC):

- Many organizations opt to use the Weighted Average Cost of Capital (WACC).
- WACC is the overall cost of capital incurred or expected to be incurred by the organization in raising funds for an investment.

Net Present Value (NPV)

The Net Present Value (NPV) of a project is the sum of the Present Values of all future Cash Inflows less the sum of the Present Values of all Cash Outflows associated with the proposal. NPV represents the additional value created with the cash available in hand now for the investment.

NPV = Discounted Cash Inflows – Discounted Cash Outflows

DECISION MAKING:

NPV > 0 Accept the Project

NPV = 0 This constitutes an Indifference Point

NPV < 0 Reject the Project

NPV Method is based on the assumption that all intermediate/future cash flows can be immediately re-invested at a rate of return equal to the Firm's Cost of Capital.

Steps for calculating Net Present Value (NPV):

The steps for calculating net present value are:

1. Determine the net cash inflow in each year of the investment.
2. Select the desired rate of return or discounting rate or Weighted Average Cost of Capital.
3. Find the discount factor for each year based on the desired rate of return selected.
4. Determine the present values of the net cash flows by multiplying the cash flows by respective discount factors of respective period called Present Value (PV) of Cash flows
5. Total the amounts of all PVs of Cash Flows.

Advantages of NPV:

Time Value of Money:

- NPV considers the time value of money, recognizing that a rupee today is worth more than a rupee in the future.

Comprehensive Cash Flow Evaluation:

- The entire stream of cash flows over the project's life is taken into account.

Alignment with Shareholders' Wealth:

- Net Present Value is viewed as an addition to the wealth of shareholders, aligning with fundamental financial objectives.

Comparative Analysis of Projects:

- NPV utilizes discounted cash flows, enabling the comparison of NPVs for different projects.
- Each project can be evaluated independently on its own merit.

Limitations of NPV:

Complex Calculations:

- Involves intricate calculations, making it relatively complex to apply.

Dependency on Forecasting:

- Accuracy depends on precise estimation of cash flows and the discount rate, which can be challenging in practice.

Absolute Measure in Decision-Making:

- The decision is based on an absolute measure, neglecting differences in initial outflows and variations in the size of different proposals when evaluating mutually exclusive projects.

Desirability / Profitability Index

The Profitability Index (PI) technique is used where different investment proposals each involving different Initial Investments and Cash Inflows are to be compared. PI or Desirability Factor or Benefit Cost Ratio =

$$\frac{\textit{Total Discounted Cash Inflows}}{\textit{Total Discounted Cash Outflows}} = \frac{\textit{Total DCFAT}}{\textit{Initial Investment}}$$

Importance:
PI represents the amount obtained at the end of the project life, for every rupee invested in the project. The higher the PI, the better it is, since the greater is the return for every rupee of investment in the project.

DECISION
PI > 1 Accept the Project
PI = 1 This constitutes an Indifference Point
PI < 1 Reject the Project

Advantages of Profitability Index (PI):

Incorporation of Time Value of Money:
- Like NPV, the Profitability Index **considers** the concept of **time value** of **money**.

Relativity in Profitability Measurement:
- **PI** is a **relative measure** of a project's profitability as it divides the present value of cash inflows by the present value of cash outflows.

Limitations of Profitability Index (PI):

Ineffectiveness in Capital Rationing:
- PI is **ineffective** in **guiding decisions** during capital rationing scenarios where projects cannot be divided.

Exclusion of Small Projects:
- Choosing a single large project with a high NPV may exclude the possibility of accepting several small projects that, when combined, could yield a higher NPV.

Deferred Project Opportunities:
- There might be situations where a project with a lower profitability index is selected, but it generates cash flows allowing another project to be undertaken one or two years later, resulting in a higher total NPV than the project with the highest Profitability Index.

Internal Rate Of Return

Internal Rate of Return (IRR) is the rate at which the sum total of Discounted Cash Inflows equals the Discounted Cash Outflows. So, IRR of a project is the discount **rate at which NPV** of the project **equal** to **zero**. IRR refers to that discount rate K, such that

$$\frac{FV_1}{(1+K)^1} + \frac{FV_2}{(1+K)^2} + \frac{FV_3}{(1+K)^3} + \frac{FV_4}{(1+K)^4} + \ldots\ldots + \frac{FV_n}{(1+K)^n} \text{ Less Initial Invt}_o = 0 \text{ (Zero)}$$

At IRR, **NPV = 0 and PI = 1** Discount Rate (i.e. Cost of capital) is assumed to be known and constant in the computation of NPV, while in computation of IRR, the NPV is set equal to zero, and the discount rate which satisfies this condition is calculated.

DECISION MAKING OR ACCEPTANCE RULE:
IRR >Ko Accept the Project
IRR = Ko This constitutes an Indifference Point
IRR <Ko Reject the Project

Advantages of Internal Rate of Return (IRR):

Time Value of Money Consideration:
- IRR **incorporates** the concept of **time value** of **money** in its calculations.

Comprehensive Cash Flow Evaluation:
- All **cash flows** in the project are **taken** into account when using the IRR method.

Ease of Desirability Assessment:
- IRR is **user-friendly**, allowing for a quick assessment of desirability by comparing it with the cost of capital.

Shareholder Wealth Maximization:
- IRR aids in achieving the objective of **maximizing** shareholder **wealth**.

Limitations of Internal Rate of Return (IRR):

Complex Calculation Process:

- The calculation process can be tedious, especially with multiple cash outflows interspersed between cash inflows, leading to the possibility of multiple IRRs, making interpretation challenging.

Comparison Challenges with Different Project Patterns:

- Comparing projects with different inflow/outflow patterns can create difficulties when using the IRR approach.

Assumption of Uniform Reinvestment Rates:

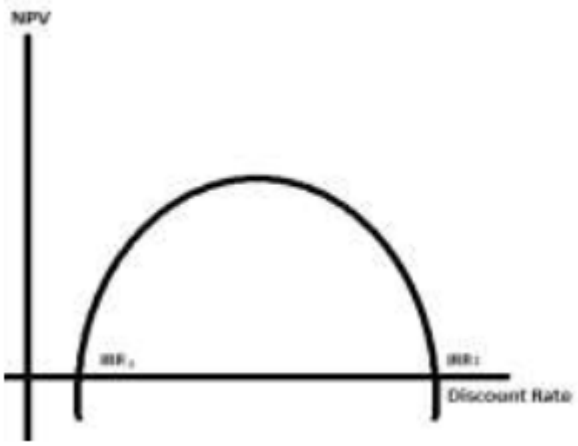
- The method assumes that all future cash inflows are reinvested at a rate equal to the IRR, neglecting the firm's ability to reinvest in a portfolio with different rates.

Misleading Decisions in Mutually Exclusive Projects:

- IRR may lead to incorrect decisions in the case of mutually exclusive projects with significantly different cash outlays. A project with a larger fund commitment and a lower IRR may contribute more in absolute NPV, enhancing shareholders' wealth. Decision-making solely based on IRR may be inappropriate in such situations.

Modified Internal Rate Of Return

In cases where project cash flows change signs or reverse during the life of a project for example, an initial cash outflow is followed by cash inflows and subsequently followed by a major cash outflow; there may be more than one internal rate of return (IRR). The following graph of discount rate versus net present value (NPV) may be used as an illustration:



In such situations if the cost of capital is less than the two IRR's, a decision can be made easily, however, otherwise the IRR decision rule may turn out to be misleading as the project should only be invested if the cost of capital is between IRR1 and IRR2.

The MIRR is obtained by assuming a single outflow in the zeroth year and the terminal cash inflow as mentioned above. The discount rate which equates the present value of the terminal cash inflow to the zero year outflow is called the MIRR .

Discounted Payback Period

Payback Period is time taken to recover the original investment from project cash flows. It is also termed as break-even period. The focus of the analysis is on liquidity aspect and it suffers from the limitation of ignoring time value of money and profitability. Discounted payback period considers present value of cash flows, discounted at company's cost of capital to estimate breakeven period i.e. it is that period in which future discounted cash flows equal the initial outflow. The shorter the period, better it is. It also ignores post discounted payback period cash flows.

Comparison of Net Present Value and Internal Rate of Return Methods

Similarity

- Both the net present value (NPV) and the internal rate of return (IRR) methods are discounted cash flow methods which consider the time value of money.
- Both the techniques consider all cash flows over the expected useful life of the investment.

Different Conclusions in Net Present Value (NPV) and Internal Rate of Return (IRR) Methods:

Scenario 1 – Scale or Size Disparity:

- Explanation: **IRR** is a **relative** measure, and **NPV** is an **absolute** measure. In cases where there is a disparity in scale or size among projects, the two methods may yield contradicting rankings.

Scenario 2 – Time Disparity in Cash Flows:

- Explanation: If overall cash flows are similar between projects but there is a **disparity** in the **timing** of these **flows** (e.g., larger inflows occurring at the beginning or end of the project), differences in rankings may **emerge** between the two methods.

Scenario 3 – Disparity in Life of Proposals (Unequal Lives):

- Explanation: When comparing two projects, especially those that are mutually exclusive, and they have unequal project lives, **conflicts in ranking** may arise between NPV and IRR. The discrepancy in project duration can lead to divergent conclusions between the two evaluation methods.

IRR and Mutually Exclusive Projects:

Mutually Exclusive Projects:

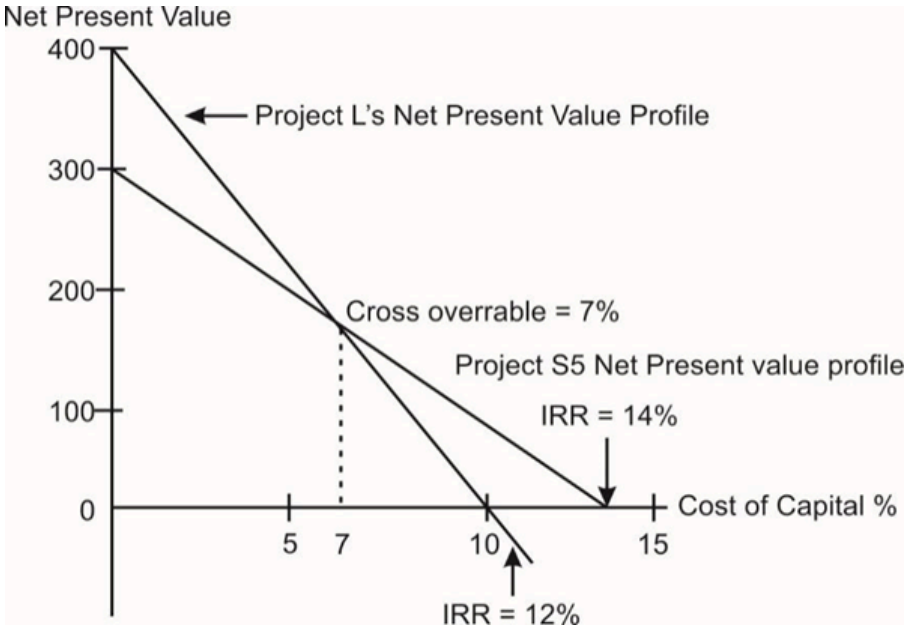
- **Definition:** Projects are mutually exclusive when selecting one excludes others. For example, if a piece of land can be used for Project S or Project L, choosing one means rejecting the other.

NPV and IRR in Mutually Exclusive Projects:

- **Outcome Differences:** In such scenarios, NPV and IRR methods may disagree. When the cost of capital exceeds the crossover rate (e.g., 7%), both methods favor Project S. If the cost of capital is below 7%, NPV prefers Project L, while IRR suggests Project S.

Challenge with IRR in Mutually Exclusive Projects:

- **Limitation:** IRR, expressed as a percentage, doesn't consider the investment scale. This can lead to conflicting results with NPV in evaluating mutually exclusive projects.



The Reinvestment Assumption:

NPV Technique:

- **Assumption:** Assumes all cash flows can be reinvested at the discount rate used for NPV calculation.
- **Logic:** Implies that projects with a higher return than the discounting factor are accepted.

IRR Technique:

- **Assumption:** Assumes all cash flows are reinvested at the project's IRR.
- **Effect:** Favors projects with heavy early-year cash flows over those with larger cash flows in later years.
- **Example:** Projects like A, with early-year cash concentration, are preferred by IRR over projects like B.

Capital Rationing

1. **Resource Constraints:** Sometimes a firm has a number of Projects that yield a positive NPV and funds are not fully available to undertake all the projects. This is considered as a Resource Constraints situation.

2. **Capital Rationing:** In case of limited availability of funds, the objective of the firm is to maximise the wealth of shareholders with the available funds. Such investment planning is called Capital Rationing. There are two possible situations of Capital Rationing –

a. Firm fix up the maximum funds that can be invested in capital projects, during a given period of time. This budget ceiling imposed internally is called as Soft Capital Rationing

b. There may be a market constraint on the funds available for investment during a period. This inability to obtain funds from the market, due to external factors is called Hard Capital Rationing.

3. **NPV Maximisation:** Whenever capital rationing situation arises, the Firm should allocate the limited funds available in such a way that maximises the NPV of the firm. The following principles may be applied in selecting the appropriate investment proposals/ combinations.

Capital Budgeting under Capital Rationing:

Resource Constraints:

- Sometimes, positive NPV projects face resource constraints (capital rationing).
- Two scenarios influence the evaluation method.

Independent and Divisible Projects:

- **Nature:** Projects are independent and divisible.
- **Approach:** Use 'NPV per rupee of Capital' method to rank projects.
- **Objective:** Optimize resource allocation based on maximum NPV per unit of capital.

Indivisible Projects:

- **Nature:** Projects are not divisible.
- **Approach:** Rank projects on absolute NPV.
- **Implementation:** Select projects until available resources are exhausted.

Projects with Unequal Lives:

Issues with Unequal Lives:

- Firms face challenges in decisions involving:
    - Retaining an old asset or replacing it.
    - Choosing between mutually exclusive proposals.

Methods to Address Unequal Lives:

- **Replacement Chain Method:** Evaluates projects in succession to maintain uniform life.
- **Equivalent Annualized Criterion:** Converts project values into equivalent annual cash flows for comparison.

Chapter 8
Dividend Decisions

Long Term Finance Function Decisions: Financing, Investment, and Dividend

The long-term finance function decisions encompass three critical areas:

i. Financing Decision:

- Concerned with determining the optimal capital structure for the company.
- Involves deciding the mix of equity and debt to fund the firm's operations and growth initiatives.

ii. Investment Decision:

- Focuses on identifying and evaluating potential investment opportunities.
- Aims to allocate resources effectively to projects that maximize the firm's value.

iii. Dividend Decision:

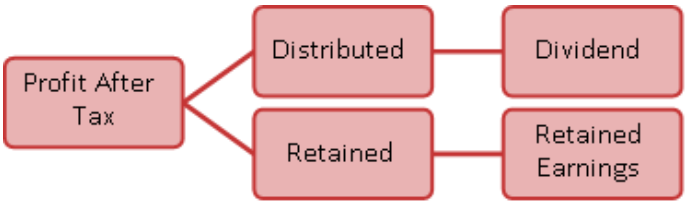
- Involves determining the dividend payout to shareholders.
- Balances the need for distributing profits to shareholders with the retention of earnings for future growth.

Dividend Decision Complexity:

- **Example Dilemma:** Consider a company, X Limited, accustomed to paying dividends at a regular growth rate. In a profitable year, the management faces the challenge of deciding whether to maintain the regular dividend or increase it.
- **Dilemma Reasoning:** Choosing a higher dividend may result in challenges if future growth doesn't match the exceptional year. Maintaining a regular dividend, on the other hand, risks idle retained earnings, potentially leading to over capitalization.

Dividend Theories:

- **Complexities Highlighted:** Dividend theories shed light on the intricacies of dividend decision making.
- **Categories of Theories:** Two categories of dividend theories explore the factors influencing dividend decisions, providing insights into the challenges faced by management in this critical area.



Meaning of Dividend:

Dividend is the portion of Profit After Tax (PAT) that a company distributes to its shareholders. After meeting tax obligations, a company has the choice to utilize its earnings in two primary ways:

i. Distribution of Dividend:

- Companies may choose to **distribute** a **portion** **of** their **profits** to shareholders as dividends. This serves as a reward to investors for their ownership and provides them with a share in the company's financial success.

ii. Retention as Surplus for Future Growth:

- Alternatively, a company can **retain** its **earnings** as surplus to fuel future growth. This retained amount contributes to the company's reserves and is reinvested in various operational and strategic initiatives.

Ex-Dividend:

- **Definition:** Ex-dividend refers to shares that no longer entitle the holder to receive the upcoming dividend payment.
- **Ex-Dividend Price:** This is the price at which shares trade immediately on the next day after the declaration of a dividend.
- **Key Point:** Investors purchasing shares on or after the ex-dividend date are not eligible to receive the declared dividend. The right to the dividend is transferred to the buyer.

Forms of Dividend:

Cash Dividend:

Common Form: Most prevalent dividend type.

Medium: Paid in cash, cheque, warrant, etc., excluding in-kind payments.

Share Repurchases:

Definition: Company buys back its shares with corporate cash.

Categories:

- a. Treasury Shares: Kept for future re-issuance.
- b. Cancelled Shares: Retired from issued share capital.

Significance: Viewed as a form of dividend distribution.

Financial Management Perspective:

- **Impact on Shareholder's Wealth:** Similar for cash dividends and share repurchases, assuming constant factors.
- **Equivalence:** Both considered equivalent for wealth maximization, contingent on similar circumstances.

Stock Dividend (Bonus Shares):

- **Definition:** A distribution of shares instead of cash dividend.
- **Process:** Company issues new shares to existing shareholders without consideration.
- **Proportional Distribution:** Bonus shares distributed proportionately, maintaining ownership.
- **Example:** If a shareholder owns 100 shares and a 10% dividend is declared, they receive 10 additional shares.
- **Impact on Capital:** Increases equity share capital, reduces reserves and surplus (retained earnings).
- **Net Worth:** Total net worth remains unaffected as retained earnings are capitalized.

Conditions for Stock Dividend (Bonus Issue):

Non-cash Substitution:

Bonus shares must not substitute cash dividends; they are an additional benefit for shareholders.

AOA Authorization:

The issuance of bonus shares requires authorization in the Articles of Association, often necessitating shareholder approval.

Conversion of Partly Paid-up Shares:

Bonus shares can only be declared once all partly paid-up shares are converted to fully paid-up shares.

No Default in Repayment:

The issuing company should not have defaulted on loan repayments, interest, or statutory dues.

Source of Bonus Shares:

Bonus shares must be issued from share premium and free reserves, not capital reserves resulting from fixed assets revaluation.

Prevention of Short-term Selling:

Bonus shares are strategically used to discourage short-term selling due to favorable tax rates (15% for short-term vs. 10% for long-term capital gains).

Period of Holding:

Shareholders are encouraged to hold bonus shares longer, starting the holding period from the bonus share issue date.

Tax Implications:

Bonus shares offer tax advantages, incentivizing investors to retain shares and indirectly stabilizing share prices.

Advantages of Stock Dividend:

To Shareholders:

Tax Savings: Shareholders receiving stock dividends from a domestic company are exempt from paying taxes on the stock dividend, as it is treated as a capital asset under the Income Tax Act, 1961.

Stable Income: Maintaining a fixed dividend per share, even after a stock dividend, enhances total cash dividends for shareholders, providing a stable income.

Enhanced Liquidity: Bonus shares improve liquidity by breaking down higher-priced shares into lower-priced ones, offering shareholders the option to sell lower-priced shares for liquidity.

To Company:

Cash Conservation: Issuing stock dividends allows the company to conserve cash, which can be directed towards profitable investments or addressing operational needs.

Addressing Cash Deficiency: Stock dividends are beneficial in cases of cash deficiency or when lenders restrict cash dividend payments, providing a way to distribute value to shareholders without depleting cash reserves.

Limitations of Stock Dividend:

To Shareholders:

No Real Wealth Impact: Stock dividends do not alter shareholders' real wealth; they formalize existing earnings without providing additional financial benefits. While perceived positively for indicating company growth, they do not change proportional ownership.

Psychological Impact: Shareholders may welcome stock dividends for their psychological impact, signaling company growth. However, this perception doesn't translate into direct financial gains.

To Company:

Administrative Costs: Administering stock dividends can be costlier than cash dividends due to paperwork and record-keeping. This may outweigh the benefits, especially for frequent small stock dividends.

Disadvantage for Small Periodic Dividends: Frequent small stock dividends can be costly for the company, with administrative burdens outweighing benefits, unlike the simplicity of cash dividends.

Significance of Dividend Policy:

The dividend policy of a firm holds significance in the following key aspects:

1. Long-Term Financing Decision:

- **Equity Financing:** Retained earnings, as a form of equity financing, are preferable due to their avoidance of flotation costs (issue expenses).
- **Investment Opportunities:** The decision to retain or distribute profits is influenced by the availability of profitable investment opportunities. Payment of cash dividends reduces funds available for financing investments.

2. Wealth Maximization Decision:

Dividend Payout Ratio (D/P) and Market Price of Shares (MPS):

- **Market Influence:** Shareholders prioritize near dividends over future dividends and capital gains due to market imperfections and uncertainty.
- **Balance Striking:** Dividend payments directly impact the market price of shares. Striking a balance between higher dividends (increasing share value) and retained earnings (boosting future earnings per share) is crucial.

Retained Earnings and Shareholder Expectations:

- **Future Earnings:** Retained earnings used for profitable investments increase future earnings per share, aligning with shareholder expectations for higher returns.
- **Investment Opportunities:** Increased dividends may lead to a reduction in investment opportunities, impacting future earnings per share.

Objective: Wealth Maximization for Shareholders:

- **Optimal Division:** A well-crafted dividend policy optimally divides net earnings into dividends and retained earnings.
- **Influence Factors:** The policy is influenced by available investment opportunities and the perceived value of dividends compared to capital gains for shareholders.

Relationship Between Retained Earnings And Growth

Growth (g) = br

It can be illustrated with the help of the following equation:

Where,

g = Growth rate of the firm

b = Retention ratio

r = Rate of return on investment

Determinants of Dividend Decisions:

The dividend policy of a company is influenced by various factors, shaping the decision-making process:

Availability of Funds:

Retained Earnings: If the business requires funds, retained earnings can be a preferred source, saving on flotation costs and preventing dilution of control associated with issuing new equity shares to the public.

Cost of Capital:
Debt vs. Equity: The choice between debt and equity financing impacts the dividend decision. If financing is through debt (a cheaper source), more dividends may be distributed, while retained earnings are preferable for equity financing.
Capital Structure:
Debt Equity Ratio: An optimal debt-equity ratio is considered in the dividend decision, ensuring a balanced capital structure.
Stock Price:
Market Value: The market price of shares is influenced by dividend decisions. Higher dividends typically increase the market value of shares, while lower dividends may decrease it.
Investment Opportunities:
Profitable Ventures: The presence of attractive investment opportunities may lead the company to retain more earnings rather than distributing dividends.
Industry Trends:
Survival in the Market: Industries reliant on regular dividend income from investors may need to pay dividends to remain competitive and survive in the market.
Shareholder Expectations:
Dividend Preferences: Shareholders' expectations vary, with some preferring regular income and others seeking growth. Dividend decisions need to align with these diverse expectations.
Legal Constraints:
Companies Act, 2013: Section 123 outlines legal provisions for the declaration of dividends, specifying that dividends can be paid only from profits, either of the current year or from previous years.
Taxation:
Pre and Post-April 2020: Before April 2020, dividends were subject to dividend distribution tax (DDT). Post-April 2020, changes in the Income Tax Act mean that dividend income from shares held as an investment is taxable in the hands of the investor at applicable slab rates.

Practical Considerations in Dividend Policy:

The practical aspects of a company's dividend policy revolve around key questions regarding stability and independence in dividend decisions. Here are the primary considerations:
(a) Financial Needs:

- **Retained Earnings:** Serving as a source of finance, retained earnings are crucial for capitalizing on profitable opportunities, especially when the company's return exceeds shareholder expectations.
- **Risk and Costs:** Raising capital through new share issuance incurs costs and adds financial obligations, emphasizing the cost-effectiveness of retained earnings.

Constraints on Paying Dividends:

(i) Legal:

- **Pre and Post-April 2020:** Before April 2020, dividends were subject to dividend distribution tax (DDT). Post-April 2020, changes in the Income Tax Act mean that dividend income from shares held as an investment is taxable in the hands of the investor at applicable slab rates.

(ii) Liquidity:

- **Cash Outflow:** Dividend payments depend on the firm's cash position. Mature companies may readily pay dividends, but growth-oriented firms may prioritize retaining funds for expansion.

(iii) Access to Capital Market:

- **Impact of Large Dividends:** Substantial dividends can affect cash reserves. If issuing new shares dilutes control due to existing shareholders' inability to purchase, dividends may be withheld for investments.

(iv) Investment Opportunities:

- **Inadequate Opportunities:** When investment options are limited, paying dividends becomes preferable, allowing external funds to be raised for potential opportunities.

Payout Policies:

(i) Constant Dividend Policy:

- **Fixed Dividend Amount:** Shareholders receive a fixed dividend, with adjustments based on the company's financial health. Requires a reserve like the Dividend Equalization Reserve Fund for stability.

(ii) Stable Dividend Policy:

- **Fixed Payout Ratio:** A fixed percentage of net earnings is paid as dividends annually. Infosys Technologies Limited, for instance, follows a stable policy, distributing up to 30% of consolidated profit after tax as dividends.

Linter's Model:

Developed by John Linter, this model introduces two key parameters:

i. Target Payout Ratio:

- The desired proportion of earnings a company aims to distribute as dividends over the long term.

ii. Spread for Adjusting to the Target:

- The rate at which current dividends adjust towards the target payout ratio.

Assumptions:

Long-Term Dividend Payout Ratio:

Firms maintain a consistent long-term payout ratio. Mature companies may have high payouts, while growth-oriented firms exhibit lower payouts.

Managerial Focus on Dividend Changes:

Managers prioritize changes in dividends over absolute amounts, making decisions crucial in financial management.

Dividend Changes Aligned with Earnings:

Changes in dividends are linked to changes in long-term sustainable earnings.

Reluctance to Reverse Changes:

Managers avoid implementing dividend changes that may need reversal, aiming for stability.

$$D_1 = D_0 + [(EPS \times \text{Target payout}) - D_0] \times Af$$

D_1 = Dividend in year 1
D_0 = Dividend in year 0 (last year dividend)
EPS = Earnings per share
Af = Adjustment factor or Speed of adjustment

Theories of Dividend

1. **Dividend's Irrelevance Theory**
   - Modigliani and Miller(MM) Hypothesis
2. **Dividend's Relevance Theory**
   - Walter's Model
   - Gordon's Model

Dividend's Irrelevance Theory
Modigliani and Miller(MM) Hypothesis:

Modigliani–Miller (MM) Theory:

Proposed by Modigliani and Miller in 1961, this theory asserts the irrelevance of a firm's dividend policy on stock price or cost of capital.

Market Value Dependency:

- Equity value depends solely on earning power, unaffected by how earnings are split between dividends and retained earnings.

No Impact of Dividend Size:

- **Stock value** remains **unaffected** by the **size of dividends**.

Equivalence of Dividends and Share Repurchases:

- **Dividends** and **share repurchases** are seen as **equivalent methods** for a company to return cash to shareholders.

Assumptions:

Perfect Capital Markets:

- All **investors** are **rational**, and information is freely available.

No Taxes:

- **No tax** discrimination between dividend income and capital appreciation, allowing universal applicability.

Fixed Investment Policy:
- All investments are financed through equity, excluding debt for simplicity.

No Floatation or Transaction Costs:
- Assumes zero floatation or transaction costs, acknowledging potential variations.

No Risk of Uncertainty:
- Investors can predict future prices and dividends with certainty, using a single discount rate.

Situations under MM Hypothesis:

Given the MM Hypothesis assumptions, firms face three possible dividend payment scenarios:

Firm Pays Cash Dividends from Reserve & Surplus:
Shareholders receive cash dividends, a mere transfer of assets with no net gain or loss. Firm value remains unaffected.

Firm Pays Cash Dividends from New Issue of Shares:
In case of insufficient cash, new shares are issued for dividend payment. Shareholders get cash but face capital loss due to dilution, resulting in unchanged wealth.

Firm Does Not Pay Any Dividend:
If the firm doesn't pay dividends, shareholders seeking cash may sell shares, creating a "home-made dividend." While shareholders receive cash, dilution leads to a capital loss, maintaining the firm's value.

$$P_o = P_1 + D_1 / (1+K_e)$$

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

Advantages of MM Hypothesis
1. This model is logically consistent.
2. It provides a satisfactory framework on dividend policy with the concept of Arbitrage process.

Limitations of MM Hypothesis
1. Validity of various assumptions is questionable.
2. This model may not be valid under uncertainty.

Dividend's Relevance Theory

1. Walter's Model:

Assumptions of Walter's Model:

Walter's model is based on the following assumptions for its theoretical framework:

Retained Earnings Financing:
- All investment proposals are to be financed exclusively through retained earnings.
- Constant 'r' and 'Ke':
- The rate of return ('r') and the cost of capital ('Ke') are assumed to be constant.

Perfect Capital Markets:
- The firm operates in a market where all investors are rational, and information is freely available to everyone.

No Taxes:
- There are no taxes or tax discrimination between dividend income and capital gain. This assumption ensures universal applicability, considering potential variations in tax rates across different countries.

No Floatation or Transaction Costs:
- Assumption of zero floatation or transaction costs, recognizing that these costs can vary across countries or markets.

Perpetual Life of the Firm:
- The firm is assumed to have a perpetual life.

Company	Condition of r vs Ke	Correlation between Size of Dividend and Market Price of share	Optimum payout ratio dividend
Growth	r > Ke	Negative	Zero
Constant	r = Ke	No correlation	Every payout ratio is optimum
Decline	r < Ke	Positive	100%

Growth Oriented Company: In this condition, a company is able to invest/utilize the fund in a better manner. Therefore, shareholders can accept low dividend because their value of share would be higher.
Declining Company: In this condition, a company is not in a position to cover the cost of capital. Therefore, shareholders would prefer a higher dividend so that they can utilize their funds elsewhere in more profitable opportunities.

Advantages of Walter's Model:

Simplicity and Computation Ease:
The formula is **simple** to understand and easy to compute.
Versatility in Market Scenarios:
Considers internal rate of return, market capitalization rate, and dividend payout ratio for determining market value, accommodating various market prices.

Limitations of Walter's Model:

Incomplete Consideration:
Does **not** factor in **all influences** on dividend policy and share prices. Determining the market capitalization rate can be challenging.
Omissions of Important Factors:
Overlooks crucial elements like taxation, legal obligations, management policies, and attitudes toward dividend policy, limiting its real-world applicability.

Dividend's Relevance Theory
2. Gordon's Model

Assumptions of Gordon's Model

- Firm is an **all equity** firm i.e. no debt.
- **IRR** will remain **constant**, because change in IRR will change the growth rate and consequently the value will be affected. Hence this assumption is necessary.
- **Ke** will remain **constant**, because change in discount rate will affect the present value.
- **Retention ratio** (b), once decide upon, is **constant** i.e. constant dividend payout ratio will be followed.
- **Growth rate** (g = br) is also **constant**, since retention ratio and IRR will remain unchanged and growth, which is the function of these two variable will remain unaffected.
- **Ke > g**, this assumption is necessary and based on the principles of series of sum of geometric progression for 'n' number of years.
- All investment proposals of the firm are to be **financed through retained earnings** only.

Company	Condition of r vs Ke			Optimum dividend payout ratio
Growth	r	>	Ke	Zero
Constant	r	=	Ke	There is no optimum ratio
Declining	r	<	Ke	100%

According to Gordon's model, when IRR is greater than cost of capital, the price per share increases and dividend pay-out decreases.

Bird-in-Hand Theory – Gordon's Revised Model:

Myron Gordon, in revising his dividend model, introduced the "Bird-in-Hand Theory," considering risk and uncertainty. This theory is based on two arguments:
(i) Investors' Risk Aversion:

- Investors generally prefer certainty over uncertainty in returns.

(ii) Premium on Certain Return:

- Investors value certain returns more, leading to a premium on current dividends, while uncertain returns are discounted.

Rational Investor Behavior:

- Gordon argues that rational investors, being risk-averse, are willing to pay a higher price for shares with current dividends. Conversely, they would discount shares of firms deferring dividends. The discount rate varies with the retention rate.

Dividend Discount Model (DDM):

Valuation Approach:
DDM values shares based on the present value of expected future dividend payments.
Calculation Method:
Determines the price of a share by summing the present values of all anticipated future dividends.
Discounting Factor:
Applies a risk-adjusted rate to discount future dividends, considering the level of associated investment risk.
Intrinsic Value:
Provides an estimate of the intrinsic value of a stock, reflecting its true worth in terms of expected future cash flows.

Intrinsic value = Sum of PV of future cash flows
Intrinsic value = Sum of PV of Dividends +PV of Stock Sale Price

Three possible situations

1. **Zero Growth Rate** assumes all dividend paid by a stock remains same.
2. **Constant Growth Rate** (Gordon's Growth Model)
3. **Variable Growth Rate** (Multi-Stage Growth Models):
   Variable-growth rate models, also known as multi-stage growth models, often assume three distinct rates of growth:
   Initial High Growth Rate:
   - Begins with a phase of rapid expansion.

   Transition to Slower Growth:
   - Followed by a gradual decrease in the growth rate, signifying a shift to more moderate growth.

   Sustainable, Steady Growth:
   - Concludes with a phase of long-term, steady growth.

   Calculation Method:
   - Extends the constant-growth rate model with three phases, each using the constant-growth method with different rates. Present values of each stage are summed for intrinsic stock value.

   Capitalization Rate Variation:
   - Allows for adjustments in the capitalization rate if changes in the rate are projected.

Advantages of Gordon's Model

1. The dividend discount model is a useful heuristic model that relates the present stock price to the **present value of its future cash flows.**
2. This Model is **easy** to understand.

Limitations of Gordon's Model

1. The **dividend discount** model depends on **projections** about company growth rate and future capitalization rates of the remaining cash flows, which may be difficult to calculate accurately.
2. The true **intrinsic value** of a stock is **difficult** to determine realistically.

Important considerations for Gordon's Model

1. With dividends growing at **constant rate of g**, the share price also grows at g. P0 = D1/(r-g)
Multiplying both sides by (1+g) gives as follows:
P0 (1+g) = D1 (1+g)/(r-g)
P1 = D2/(r-g) So both dividend and price have grown at the rate of g given r is constant.
2. **Growth rate g** is also referred to as capital appreciation or capital yield.
3. The dividend yield which is D1/P0 at t=0 will be constant as both **dividend** and **price** are **expected to grow** at the **same rate**, leaving dividend yield unchanged.

Stock split

Meaning of Stock Split
Stock split means **splitting one share into many,** say, one share of ` 500 into 5 shares of ` 100. Stock splits is a tool used by the companies to regulate the prices of shares i.e. if a share price increases beyond a limit, it may become less tradable, for e.g. suppose a company's share price increases from ` 50 to ` 1000 over the years, it is possible that it might goes out of range of many investors.
Advantages of Stock Splits
1. It makes the **share affordable** to small investors.

2. **Number** of shares may **increase** the number of shareholders; hence the potential of investment may increase.

Limitations of Stock Splits

1. Additional **expenditure** needs to be **incurred** on the process of stock split.
2. **Low** share **price** may **attract** **speculators** or short term investors, which are generally not preferred by any company.

Share Buyback

Definition:

Share buyback involves a company **repurchasing** its **own** **shares**, leading to a reduction in share capital. Repurchased shares are typically canceled, decreasing the total number of outstanding shares.

As a Form of Dividend:

Considered a **form** **of** **shareholders'** **dividend**, share buyback reduces circulating shares, increasing future dividend per share for existing shareholders.

Types of Share Buyback:

Open Market Buyback:

- Company purchases shares through the secondary market.

Tender Offer Buyback:

- Company offers a fixed price, allowing all shareholders to sell their shares.

Implications:

Share buyback affects a company's financial structure, signals confidence, and influences financial ratios, enhancing shareholder value.

Chapter 9
Management of Working Capital

Current Assets:
Definition: Assets classified as current when expected to be realized, sold, or consumed within the normal operating cycle or twelve months after the reporting period, whichever is longer.
Criteria for Classification:
- Realization or consumption within the operating cycle.
- Held primarily for trading in the ordinary course of business.

Categories for Working Capital Management:
- **(a) Inventory:** Raw materials, work in process, and finished goods.
- **(b) Receivables:** Trade receivables and bills receivables.
- **(c) Cash or cash equivalents:** Including short-term marketable securities.
- **(d) Prepaid expenses:** Costs paid in advance for future periods.

Other Current Assets:
- Short-term loans or advances.
- Accrued revenues.

Current Liabilities:
Definition: Liabilities classified as current when expected to be settled within the normal operating cycle or twelve months after the reporting period, whichever is longer.
Criteria for Classification:
- Settlement by using current assets or creating new current liabilities.

Categories for Working Capital Management:
- **(a) Payables:** Trade payables and bills payables.
- **(b) Outstanding payments:** Wages, salaries, overheads, and other expenses.

Other Current Liabilities:
- Short-term borrowings.
- Current portion of long-term debts.
- Short-term provisions payable within twelve months (e.g., provision for taxes).

Working Capital Management:
Definition: Process designed to ensure efficient operation by monitoring and utilizing current assets and liabilities.
Primary Objective: Maintain sufficient cash flows for day-to-day operating expenses and short-term obligations.
Two Angles of Working Capital:

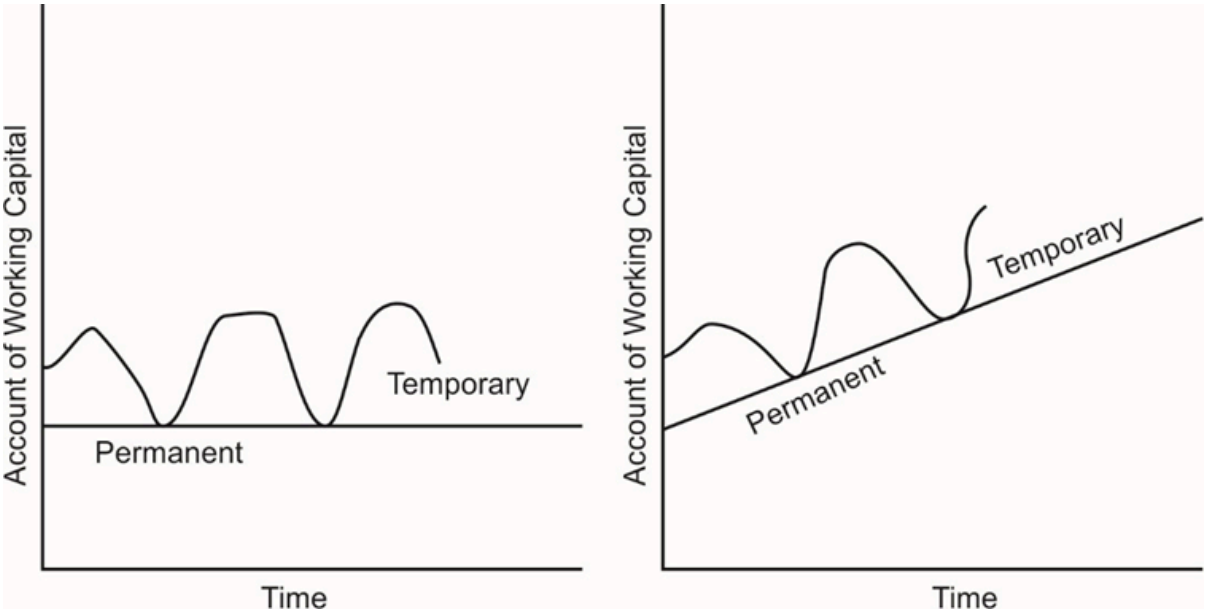
(a) On basis of value
- **Gross Working Capital:** Total current assets.
- **Net Working Capital:** Difference between current assets and current liabilities, indicating liquidity and short-term financial health.

(b) On basis of Time
Permanent Working Capital:
- **Definition:** The base level of investment in current assets necessary for day-to-day activities.
- **Nature:** Remains invested continuously, unaffected by short-term fluctuations.
- **Purpose:** Supports regular business operations.
- **Financing:** Typically funded by long-term sources of finance.
- **Changes:** May increase or decrease if operations are scaled up or down permanently.

Temporary Working Capital:
- **Definition:** The additional working capital required beyond the permanent level.
- **Aliases:** Variable or fluctuating working capital.
- **Purpose:** Addresses short-term working capital needs arising from fluctuations in sales volume or seasonal demand.
- **Examples:** Increased inventory for seasonal demand spikes.
- **Financing:** Usually financed by short-term sources of finance.
- **Dynamic Nature:** Varies with business cycles and specific operational demands.

Differentiating Factors:

- **Stability:** Permanent working capital remains stable, while temporary working capital fluctuates.
- **Duration:** Permanent is a constant requirement, whereas temporary is situational.
- **Financing Sources:** Permanent is typically funded through long-term sources, while temporary relies on short-term financing.
- **Strategic Consideration:** Proper management of both types crucial for effective working capital management.



Importance of Adequate Working Capital:

Crucial Financial Management Task:

- Finance managers must ensure a balanced working capital that **isn't excessive or insufficient**.

Risks of Excessive Working Capital:

- Large working capital leads to **idle funds** and **incurs costs**, missing opportunities for long-term investments.

Public Sector Undertakings Studies:

- Bureau of Public Enterprises studies show **over capitalization harms performance**, resulting in a lower rate of return.

Risks of Inadequate Working Capital:

- **Inadequacy increases insolvency risk**, hindering the ability to meet financial obligations and causing reputational damage.

Careful Estimation:

- Organizations must **strategically estimate** working capital needs for a balanced approach.
- Long-term survival depends on maintaining adequate working capital.

Considerations for Investments:

- Expansion decisions should consider not only new asset costs but also **additional current assets** required.
- Examples include increased production needing more raw materials and higher sales requiring additional inventory.

Optimum Working Capital Level:

- Finance managers play a **key role** in **estimating requirements** and determining the optimal level for a balanced financial position.

Optimum Working Capital:

Balancing Act:

- Maintaining a balance between current assets and liabilities is essential for creditor relations and safeguarding the company's reputation.

Key Ratios:

- **Current Ratio:** Aim for 2 as an optimal benchmark, with higher ratios signaling inefficiency and lower ratios indicating potential liquidity issues.

- **Acid Test Ratio:** Maintain at least 1 for comfortable liquidity, excluding inventory and prepaid expenses.

Widely Accepted Benchmarks:

- Financial stakeholders commonly use a current ratio of 2 and an acid test ratio of 1 as indicators of a healthy working capital situation.

Contextual Considerations:

- **Saleability of Inventories:** Easily saleable inventories or highly liquid debtors may justify a lower than 2 current ratio.
- **Nature of Goods:** Businesses with perishable goods or longer production times may deviate from traditional ratios.

Tailoring to Specifics:

- **Perishable Goods Business:** Restaurants or similar businesses can't afford excessive working capital due to the perishable nature of goods.
- **Production Time:** Longer production times may necessitate a higher working capital requirement.

Critical Balance:

- **Rule of Thumb:** Adequate working capital is critical for operational continuity.
- **Risk Avoidance:** Both excessive and inadequate working capital positions pose risks and should be avoided.

Determinants of Working Capital:

Need for Cash:

- Identify the cash balance for day-to-day expenses, minimizing cash holding costs.
- Examples include avoiding loss of interest on surplus cash invested in long-term assets.

Desired Level of Inventory:

- Determine the inventory level for uninterrupted production, optimizing raw material investment to enhance cash flow.
- Techniques like Just in Time (JIT) and Economic Order Quantity (EOQ) are utilized.

Receivables:

- Establish an appropriate credit policy to attract customers, balancing the impact on cash flows and the cash conversion cycle with increased revenue.
- Tools like Early Payment Discounts and allowances are employed.

Short-term Financing Options:

- Ideally finance inventory through supplier credit, but depending on the cash conversion cycle, utilize bank loans, overdrafts, or factoring to meet working capital needs.

Nature of Business:

- Varies based on sales nature; for instance, a restaurant with mostly cash sales requires less working capital compared to a pharmacy or a bookstore with higher inventory needs.

Market and Demand Conditions:

- Working capital requirements adjust based on demand; high demand reduces the need for significant finished goods inventory due to continuous sales.

Technology and Manufacturing Policies:

- Seasonal demand may influence production policies, with some businesses opting for steady production throughout the year or production only during peak demand seasons.

Operating Efficiency:

- Improve operational efficiency by eliminating waste, enhancing coordination, and implementing process improvements to reduce working capital requirements.

Price Level Changes & Exchange Rate Fluctuations:

- Rising prices may necessitate higher working capital due to increased cash outlays for maintaining existing activity levels.
- Unfavourable exchange rate movements for imported raw materials can lead to additional costs.

Management of Working Capital:

Working capital's significance for a business is akin to the importance of lifeblood for a living body or fuel for an engine. Efficient management is crucial, encompassing three key elements: **Economy, Efficiency, and Effectiveness.**

1. Liquidity and Profitability:

Objective: Ensure uninterrupted day-to-day business operations.

Considerations:

- Maintain even liquidity for smooth functioning.
- Recognize that each rupee of capital bears a cost.
- Strike a balance between higher working capital for increased revenue and the risk of tying up funds in idle assets.

Trade-off: Requires the three Es - economy in financing, efficiency in utilization, and effectiveness in achieving objectives.

2. Investment and Financing:

Investment in Working Capital:

Policy Decision: Depends on organizational objectives, trade policies, and financial considerations.

Factors influencing the decision:

- Nature of the industry (e.g., construction companies requiring large investments).
- Types of products (e.g., consumer durables vs. perishable products).
- Manufacturing vs. trading vs. service orientation.
- Volume of sales and credit policy.

Component of Working Capital	Advantages of higher side (Profitability)	Trade-off (between Profitability and Liquidity)	Advantages of lower side (Liquidity)
Inventory	Fewer stock-outs increase the profitability.	Use techniques like EOQ, JIT etc. to carry optimum level of inventory.	Lower inventory requires less capital but endangered stock-out and loss of goodwill.
Receivables	Higher Credit period attract customers and increase revenue (but can result in more bad debts)	Evaluate the credit policy; use the services of debt management (factoring) agencies.	Cash sales provide liquidity but fails to boost sales and revenue (due to lower credit period)
Pre-payment of expenses	Reduces uncertainty and profitable in inflationary environment.	Cost-benefit analysis required	Improves or maintains liquidity.
Cash and Cash equivalents	Payables are honoured in time, improves the goodwill and helpful in getting future discounts.	Cash budgets and other cash management techniques can be used	Cash can be invested in some other investment avenues
Payables and Expenses	Capital can be used in some other investment avenues	Evaluate the credit policy and related cost.	Payables are honoured in time, improves the goodwill and helpful in getting future discounts.

Level of investment depends on the various factors listed below:

(a)Nature of Industry: Construction companies, breweries etc. requires large investment in working capital due long gestation period.

(b)Types of products: Consumer durable has large inventory as compared to perishable products.

(c)Manufacturing Vs Trading Vs Service: A manufacturing entity has to maintain three levels of inventory i.e. raw material, work-in-process and finished goods whereas a trading and a service entity has to maintain inventory only in the form of trading stock and consumables respectively.

(d)Volume of sales: Where the sales are high, there is a possibility of high receivables as well.

(e)Credit policy: An entity whose credit policy is liberal has not only high level of receivables but may require more capital to fund raw material purchases as that will depend on credit period allowed by suppliers.

Approaches of Financing Working Capital

Approach	Matching Approach	Conservative Approach	Aggressive Approach

1. Long Term Funds used in	Fixed Assets & Permanent Working Capital.	Fixed Assets, Permanent Working Capital & Part of Temporary Working Capital.	Fixed Assets and part of permanent Working Capital.
2. Short Term Funds used in	Temporary Working Capital.	Balance part of Temporary Working Capital.	Balance part of Permanent Working Capital and entire Temporary Working Capital.
3. Effect on Liquidity	Well-balanced.	High Liquidity.	Low Liquidity.
4. Effect on profitability	Comparatively well-balanced.	Low Profitability & Return on assets.	High return on assets but risky.

Approaches of Working Capital Investment:

Working capital investment decisions are categorized into three approaches based on organizational policy and risk-return trade-off: aggressive, conservative, and moderate.

(a) Aggressive Approach:

Characteristics:

- Minimal investment in current assets, including low inventory levels, strict credit policies, and minimal cash balance.

Advantages:

- Lower financial costs due to minimal funds tied up in working capital.

Disadvantages:

- Risks of stock-outs, hindered growth, lower utilization of fixed assets, and potential long-term debt underutilization.
- Suited for highly integrated organizations with efficient processes.

(b) Conservative Approach:

Characteristics:

- High capital investment in current assets, including higher inventory levels, liberal credit policies, and substantial cash balance.

Advantages:

- Higher sales volume, increased demand due to liberal credit policies, and enhanced goodwill among suppliers.

Disadvantages:

- Increased cost of capital, inventory obsolescence, higher risk of bad debts, and potential liquidity shortages in the long run.

(c) Moderate Approach:

Characteristics:

- Balances risk and return, maintaining efficiency in fund utilization.

Balance of Risk and Return:

- Conservative policies imply greater liquidity and lower risk, while aggressive policies indicate higher risk and poor liquidity.
- Moderate current assets policy strikes a balance between conservative and aggressive approaches.

Flexibility:

- Organizations may adopt different policies based on trade or industry requirements.
- Policies may change over time as needed, depending on determinants of working capital.

Current Assets to Fixed Assets Ratio:

The finance manager aims to optimize current assets to maximize shareholder value. As output increases, current assets grow, but not necessarily in direct proportion. The current assets/fixed assets ratio, obtained by dividing current assets by fixed assets, gauges the relationship between the two.

Interpreting the Ratio:

- **Higher Ratio:** Indicates a conservative current assets policy with a larger allocation to current assets relative to fixed assets.
- **Lower Ratio:** Suggests an aggressive policy, allocating less to current assets compared to fixed assets.

Risk-Return Trade-Off:

- **Conservative Policy:** Higher ratio, lower risk, and potentially lower returns.
- **Aggressive Policy:** Lower ratio, higher risk, and potentially higher returns.

- **Moderate Policy:** Strikes a balance based on organizational needs and industry dynamics.

Estimating Working Capital Needs:

Operating Cycle Method:

- Most reliable for computation.
- Based on the company's operating cycle.

Other Methods:

- **Current Assets Holding Period:**
  - Estimation based on the average holding period of current assets.
  - Relates to costs using the company's previous year's experience.
  - Rooted in the Operating Cycle Concept.
- **Ratio of Sales:**
  - Estimates working capital needs as a ratio of sales.
  - Assumes current assets change proportionally with sales.
- **Ratio of Fixed Investments:**
  - Estimates working capital requirements as a percentage of fixed investments.

Factors Impacting Choice:

- **Seasonal Fluctuations:**
  - Considered in choosing estimation methods.
- **Sales Forecast:**
  - Accuracy of sales forecasts influences method selection.
- **Investment Cost:**
  - Considered in the choice of estimation method.
- **Variability in Sales Price:**
  - Method choice influenced by sales price variability.

Other Considerations:

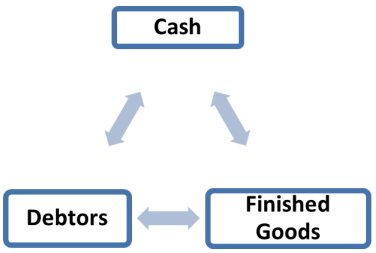
- **Production Cycle:**
  - Impacts Working Capital requirements.
- **Credit and Collection Policies:**
  - Influence the choice of estimation method.

Operating Cycle

Working Capital Cycle (also called Cash Cycle or Operating Cycle) is the time required for conversion of cash into cash equivalents like Raw Materials, Work-in-Progress, Finished Goods, Debtors, and thereafter back into cash.

Cash Cycle of Manufacturing Firm

Cash Cycle of Trading Firm



Phases:

The operating cycle has the following phases:

(a) Conversion of Cash into Raw Materials – Lead Time.
(b) Conversion of Raw Materials, into WIP and then into Finished Goods – Production/Process Cycle.
(c) Conversion of Finished Goods into Debtors through Sales – Stockholding Period.

(d) Conversion of Receivables into Cash – Average Collection Period.

Computation:

Operating Cycle or Cash Cycle or Working Capital Cycle (expressed in days) is computed as under:

Particulars	Amount
Raw Material Storage Period	-----
Add: Work-in-Progress holding period	-----
Add: Finished Goods Storage Period	-----
Add: Debtors Collection Period	-----
Less: Creditors Payment Period	-----

Importance:

(a) Surplus Generation: It represents the activity cycle of the business, i.e. purchase, manufacture, sales and collection thereof.

(b) Funds Rotation: Operating Cycle indicates the total time required for rotation of funds. The faster the funds rotate, the better it is for the Firm.

(c)Going Concern: Cash Cycle lends meaning to the Going Concern concept. If the cycle stops in between, the going concern assumption may be lost.

Hence, Working Capital Cycle should be on par with the industry average. A long cycle indicates overstocking of inventories or delayed collection of receivables and is considered unsatisfactory.

Using the Operating Cycle, the Working Capital Turnover can be computed as . Generally, the higher the Turnover Ratio, the better it is for business.

If you……	Then ……
Collect receivables (debtors) faster	You release cash from the cycle
Collect receivables (debtors) slower	Your receivables soak up cash.
Get better credit (in terms of duration or amount) from suppliers.	You increase your cash resources.
Shift inventory (stocks) faster	You free up cash.
Move inventory (stocks) slower	You consume more cash.

Double Shift Working

	Raw Material	Work-in-Progress	Finished Goods
Effect on Rate	Due to bulk purchasing, the Firm may be able to avail quantity discounts. Hence, average cost per unit of Raw Material may be reduced.	Due to reduction in Raw Material cost and economies of fixed costs, the average cost per unit of WIP may be reduced.	Cost of production per unit will be reduced on account to lower cost of materials and economies of fixed costs per unit.
Effect on Quantity	Stock requirements may double since consumption per day will be twice as earlier.	There will be no change in the quantity of WIP, since work commenced in the first shift will be completed in the second shift. Hence, at the end of any day, the quantity of WIP will remain the same as it was in single shift working.	Due to greater production, Finished Goods Stock may double in quantity.

Treasury Management: Meaning

Competitive Business Environment:

- Arises from economic liberalization, demanding scientific cash management.

Challenges:

- Expansion needs, high interest rates, foreign exchange volatility, and increased financial transactions.

Definition:

- **Encompasses:**
  - Planning, organizing, and controlling funds and working capital.
  - Aims for optimal fund utilization, liquidity maintenance, cost reduction, and risk mitigation.
  - Involves corporate handling of financial matters, generating internal and external funds, managing currencies, cash flows, and corporate finance strategies.

Key Components:

- **Working Capital Management:**
  - Efficient management of current assets and liabilities.
- **Financial Risk Management:**
  - Involves forex and interest rate management.

Key Goals:

- **Maximize Return:**
  - On available cash.
- **Minimize Interest Cost:**
  - On borrowings.
- **Mobilize Cash:**
  - For corporate ventures, maximizing returns.
- **Effective Dealing:**
  - In forex, money, and commodity markets.
  - Reduces risks from fluctuating exchange rates, interest rates, and prices affecting profitability.

Functions of the Treasury Department:

Cash Management:

- Efficiently **handles cash** collection and payments.
- **Manages surplus** funds through investment portfolios.

Currency Management:

- **Manages** foreign currency **risk exposure** in multinational companies.
- Advises on **minimizing** transaction **costs** and currency usage for overseas sales.
- **Uses tools** like forward contracts for managing exchange exposures.

Fund Management:

- Plans and sources short, medium, and long-term cash needs.
- **Facilitates temporary investment** of surplus funds.
- **Participates in capital structure** decisions and forecasts interest and currency rates.

Banking:

- **Maintains positive relationships** with bankers.
- **Negotiates** with bankers on **rates** and acts as the initial contact.
- **Manages** short-term **finance** through loans or commercial paper sales.

Corporate Finance:

- **Handles acquisition**, divestment, and investor relations.
- **Manages** corporate **finance activities** and strategic decision-making.

Management of Cash

It is concerned with the managing of:
(i) Cash flows into and out of the firm;
(ii) Cash flows within the firm; and
(iii) Cash balances held by the firm at a point of time by financing deficit or investing surplus cash.

Main objectives of cash management for a business are:-

- Provide **adequate cash** to each of its units as per requirements;
- **No** funds are blocked in **idle cash**; and
- The **surplus** cash (if any) should be **invested** in order to maximize returns for the business.

The Need for Cash:

Lord Keynes, a British Economist, outlined three fundamental considerations for determining the amount of cash or liquidity:

Transaction Need:

- Cash facilitates day-to-day expenses and debt payments.

- Reserve cash balances are crucial when normal inflows are temporarily blocked.

Speculative Needs:

- Holding cash to seize profitable opportunities.
- Ready cash ensures the ability to capitalize on advantageous situations.

Precautionary Needs:

- Holding cash as a safety measure against unexpected events.
- Acts as a buffer against unforeseen challenges or emergencies.

Cash Planning:

Definition:

- Technique for planning and controlling cash usage.
- Protects financial conditions by projecting cash statements from expected inflows and outflows.

Frequency:

- Periodic planning, daily, weekly, or monthly, based on firm size and management philosophy.

Growth Impact:

- Essential for success as firms grow and operations become complex.

Estimation:

- Initial step involves estimating cash requirements.
- Preparation of cash flow statements and cash budget is essential.

Implementation:

- Cash planning becomes inevitable for continued success, especially as businesses expand.

Cash Budget:

Significance:

- Foremost **tool for planning** and controlling **cash** receipts and payments.
- Represents cash requirements during the budget period.

Purposes:

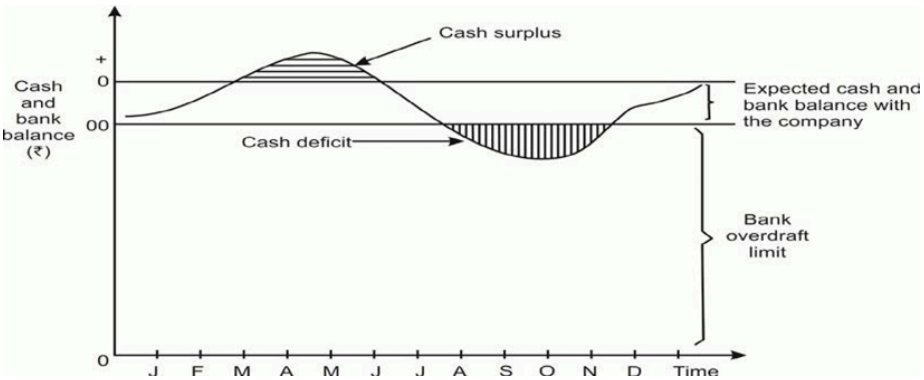
- **Coordinate Cash Needs:**
  - Identifies periods of cash shortage or abnormally large requirements.
- **Identify Excess Cash Periods:**
  - Highlights periods of likely excess cash.
- **Optimize Cash Utilization:**
  - Enables taking advantage of cash discounts on accounts payable.
- **Plan Adequate Funds:**
  - Facilitates planning and arranging needed funds on favorable terms.

Utilization of Surplus and Management of Shortages:

- **Surplus Cash:**
  - Decision to invest in marketable securities for profit.
- **Shortages:**
  - Managed by arranging overdrafts or credit with banks.

Main Components:

- **Planning Horizon:**
  - Selection of the budget period defines the planning horizon.
- **Cash Flow Factors:**
  - Divided into operating (from firm operations) and financial (from financial activities) categories



Methods of Cash Flow Budgeting:

Receipts and Payments Method:

- Considers expected receipts and payments for the budget period.
- Includes cash inflow and outflow, excluding accruals and adjustments.
- Commonly used in business organizations.

Adjusted Income Method:

- Calculates annual cash flows by adjusting sales revenue and costs for delays.
- Eliminates non-cash items like depreciation.

Adjusted Balance Sheet Method:

- Predicts the balance sheet by expressing assets and short-term liabilities as a percentage of expected sales.
- Profit is a percentage of sales, helping forecast owner's equity.
- Adjustments determine additional finance needs or positive cash balance.

Note:

- The cash flow budget considers the capital budget, incorporating new investments and project costs. Can be prepared for a short or long period.

Managing Cash Collection and Disbursements:

Objective:

- Ensure alignment between projected and actual cash flows after preparing the cash budget.

Efficiency Measures:

- **Control of Cash Flows:**
  - Implement efficient control of both cash collection and disbursement.
- **Twin Objectives:**
  - Accelerate Cash Collections:
    - Strive to speed up cash inflows.
  - Decelerate or Delay Cash Disbursements:
    - Manage cash outflows within permissible time frames.

Different Kinds of Float in Cash Management:

Understanding the time in the cash collection process is crucial. "Float" represents periods affecting cash movement. Four types are:

Billing Float:

- Time between sale and invoice mailing.

Mail Float:

- Time when a cheque is in transit.

Cheque Processing Float:

- Time for sorting and depositing received cheques.

Banking Processing Float:

- Time from cheque deposit to fund crediting.

Reducing Floats in Cash Management:

1. Accelerating Cash Collections:

- Issuing invoices promptly reduces billing float, minimizing the time between invoicing and payment.
- Shortening the time lag between customer payments and cheque collection helps eliminate mail float.

2. Concentration Banking:

- Establishment of multiple collection centers in different regions instead of a single central center.
- Decentralized system to reduce the time between customer remittances and the availability of spendable funds.
- Payments deposited in local banks, with surplus funds transferred to the concentration bank at the headquarters.
- Effective in minimizing float size and streamlining fund management.

3. Lock Box System:

- Regional arrangement to expedite fund flow by eliminating time between receiving remittances and depositing them.
- Company rents local post-office boxes, authorizing banks at each location to collect remittances.
- Customers instructed to mail payments to lock boxes; banks pick up mail multiple times a day.

- Cheques deposited directly into the company's account, reducing processing time.
- Advantage lies in accelerated cheque deposit, eliminating cheque processing float.

Considerations for Using Lock Box System:

- While advantageous, the lock box system incurs operational costs, including charges for additional services.
- Decision based on comparing added costs with marginal income generated from released funds.
- Profitability hinges on benefits of quicker fund availability outweighing operational costs.
- Lock box arrangements more beneficial for companies with larger remittances, as costs are often proportional to the number of cheques deposited.

Controlling Payments for Faster Cash Turnover:

On-Time Payments:

- Making payments on the due date helps in efficient cash turnover.
- Use of Drafts (Bill of Exchange):
- Opting for drafts instead of cheques can expedite payment processes.

Strategic Use of Float:

- Estimating the time when issued cheques will be cashed.
- Utilizing the float period advantageously by having a cash balance sufficient to cover expected cheque presentations.
- Issuing more cheques strategically to maximize cash availability.

Delayed Cheque Payments:

- Making payments to outstation suppliers via cheque and sending through mail.
- Delays in transit and cheque collection are used to increase the float period.

Cash Management Models: Optimizing Cash Balances

Introduction to Mathematical Models:

- Recent years have seen the development of mathematical models to determine the best cash balance for businesses.

Objective:

- Ensure cash is not idle unnecessarily.
- Prevent the firm from facing cash shortages.

Two Categories of Models:

a. Inventory Type Models:

- Assist finance managers in determining the optimal cash balance.
- William J. Baumol's economic order quantity (EOQ) model is applicable under certainty or predictable cash flows.

b. Stochastic Models:

- Come into play when the EOQ model is not applicable.
- Useful in situations where demand for cash is uncertain and not known in advance.

William J. Baumol's Economic Order Quantity Model,(1952)

1. Assumptions:

(i) Cash needs of the firm are known with certainty.
(ii) The cash is used uniformly over a period of time and it is also known with certainty.
(iii) The holding cost is known and it is constant.
(iv) The transaction cost also remains constant.

2. Principle:

According to Baumol Model, Optimum Investment Size is that level of investment where the total of Transaction Costs per annum and Carrying Costs per annum are the minimum.

3. Formula:

Optimum Cash balance = C =
Where
U = Annual (Monthly) Cash Requirement / Disbursement.
P = Fixed Cost per transaction
S = Opportunity cost of one rupee per annum (or Per Month)

(A) Average Cash Balance = ½ of Optimum Transfer Size
(B) Associated Costs of Optimum Investment Size = Transaction Costs p.a. + Interest Costs p.a. = [(No. of Transaction X Cost per Transaction) + (Average Cash balance × Interest Rate p.a.)]
(C) At the Optimum Investment Size level, Transaction Costs p.a. = Interest Costs p.a. = ½ of Associated Costs per annum

Miller-Orr Cash Management Model (1966): Control Limit Strategy

Stochastic Net Cash Flow:

- Miller-Orr model is applied when net cash flow is unpredictable and stochastic.

Application of Control Theory:

- Utilizes control theory for managing changes in cash balance occurring randomly.

Control Limits:

- **Model sets control limits for cash balances:**
  - Upper Limit (h)
  - Return Point (z)
  - Lower Limit (0)

Transfer Actions:

- **Upper Limit Reached:**
  - Transfer cash (h - z) to the marketable securities account.
- **Lower Limit Touched:**
  - Transfer from marketable securities to cash account.
- **Between Limits (h, z) and (z, 0):**
  - No transactions between cash and marketable securities accounts.

Setting Limits:

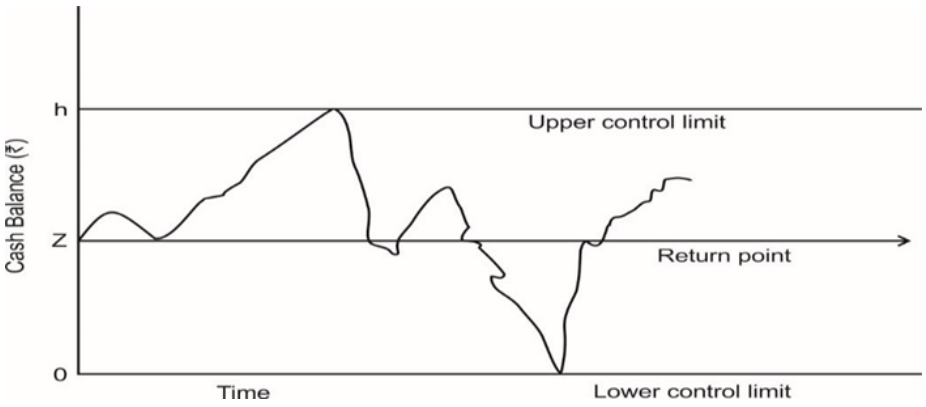
- **Limits based on:**
  - Fixed costs of securities transactions.
  - Opportunity cost of holding cash.
  - Likelihood of fluctuations in cash balances.

Total Cost Minimization:

- Limits aim to meet cash demands with the lowest possible total costs.

Illustration:

- Diagrammatic representation showcases the Miller-Orr model.



Recent Developments in Cash Management

1. Electronic Fund Transfer

- **Information Technology Impact:**
  - Banking systems transitioning to computerization for efficient services.
  - Network links branches and banks.
- **Customer Benefits:**
  - Instant account updates.
  - Quick fund transfers.
  - Instant access to foreign exchange rates.

2. Zero Balance Account

- **Cash Management Efficiency:**
  - Firms substitute marketable securities for cash using zero balance accounts.

- Daily balance transfers based on cheque payments.

3. Money Market Operations

- **Treasury Function:**
  - Larger companies invest surplus funds in the money market.
  - Banks compete for deposits from companies, public authorities, and High Net Worth Investors (HNI).
  - Rates fluctuate based on daily supply and demand.

4. Petty Cash Imprest System

- **Control on Cash:**
  - Companies use the petty cash imprest system for better control.
  - Weekly pre-determined cash balance for petty expenses.

5. Management of Temporary Cash Surplus

- **Profitable Investments:**
  - Temporary cash surpluses can be invested in:
    - Short-term deposits.
    - Short-term debt market instruments.
    - Long-term debt instruments or shares of Blue chip listed companies.
- **Investment Considerations:**
  - Based on economic situation, return volatility, and organizational risk appetite.

6. Electronic Cash Management System

- **Electronic Basis:**
  - Most modern cash management systems are electronically based for speed.
- **Network Connectivity:**
  - Elements linked through satellite, including instrument collection, fund transfers, and payments.
  - Limited third-party access for regular dealings.
- **Benefits:**
  - Time savings.
  - Increased interest earned, decreased interest expense.
  - Reduced paperwork and manpower.
  - Enhanced accounting accuracy.
  - Greater control over time and funds.
  - Supports electronic payments.
  - Faster fund transfers and instrument conversion.
  - Reduction in 'idle float.'
  - Centralized cash management with electronic reconciliation.

7. Virtual Banking

- **Evolution of Banking:**
  - Banking shifts from traditional branches to remote electronic services.
  - Virtual banking signifies extensive use of technology for banking without direct bank visits.
- **Historical Context:**
  - Origin traced back to the seventies with ATMs.
  - Growing prominence globally due to competitive market pressures and technological advancements.
- **RBI Initiatives:**
  - RBI initiatives for active involvement in sophisticated cash management systems.
  - Introduction of computerized settlement, MICR technology, inter-city clearing, ECSS, EFT, UPI, RTGS, DVP, INFINET, CFMS, SSS, SFMS.
- **Vision for Payment Systems:**
  - Vision includes linking all bank branches to the domestic payment systems network.
  - Enables effective control over cash management for banks and corporates.
- **Advantages of Virtual Banking:**
  - Lower transaction handling costs.
  - Faster response to customer needs.
  - Cost efficiency with reduced branch network and staff costs.
  - Rapid, accurate, and convenient service availability.
  - Popularity due to speed, convenience, and 24/7 access.

Management of Marketable Securities

Integral Investment:

- Management of marketable securities is crucial for efficiently investing excess cash.

Dual Purpose:

- Serves the dual purpose of liquidity and cash when chosen correctly.
- Excess funds can be parked in short-term securities, ready for liquidation when cash needs arise.

Guiding Principles:

- **Safety:**
  - Minimum risk is the key criterion due to the primary objective of ensuring liquidity.
- **Maturity:**
  - Matching maturity with forecasted cash needs is essential.
  - Preference for short-term securities to minimize risk.
- **Marketability:**
  - Conversion of security into cash should be convenient, speedy, and cost-effective.
  - High liquidity or marketability is crucial.

Securities of Choice:

- Limited to Government treasury bills, deposits with banks, and inter-corporate deposits.
- Units of Unit Trust of India, commercial papers of corporates, and deposits with sister or associate companies are also attractive choices.
- Money Market Mutual Funds (MMMFs) have emerged as short-term investment avenues.

Inventory Management

Significance in Working Capital:

- Inventories are a significant component of working capital.

Control Objectives:

- Similar to cash management objectives.
- Proper control to optimize investment in inventory.

Management Goals:

- **Fixation of Levels:**
  - Set minimum and maximum inventory levels.
- **Inventory Size:**
  - Determine the optimal size of inventory to be maintained.
- **Procedures:**
  - Decide on issues, receipts, and inspection procedures.
- **Order Quantity:**
  - Determine the economic order quantity for efficient ordering.
- **Storage Facilities:**
  - Ensure proper storage facilities to prevent damage or deterioration.
- **Obsolescence Control:**
  - Monitor and control obsolescence.
- **Movement Oversight:**
  - Establish control over the movement of inventories.

Management of Receivables: Meaning and Objective

Definition:

- Management of receivables involves planning and controlling the debt owed to the firm from customers due to credit sales, also known as trade credit management.

Basic Objective:

- The primary goal is to optimize the return on investment tied up in receivables.

Balancing Act:

- Balancing act between avoiding bad debts and minimizing the cost of debt collection.
- Striking a balance to prevent excessive tying up of funds in receivables, which could restrict sales, while ensuring competitive terms.

Importance:

- Critical issue requiring well-defined policies and effective implementation to achieve a balance between risk and opportunity in credit management.

Aspects of Management of Debtors

Credit Policy:

- **Definition:** Balanced credit policy for effective receivables management.
- **Components:**
  - Credit standards, terms, and collection efforts.
  - Trade-off between additional sales profits and costs of carrying debtors and bad debt losses.
- **Credit Terms Example:**
  - "Net 50" implies customers repay within 50 days.
  - "3/15 net 60" signifies a 3% discount if paid within 15 days, with a final payment due in 60 days.

Credit Analysis:

- **Objective:** Determine the risk of extending credit to a specific party.
- **Key Process:** Due diligence and reputation check regarding the creditworthiness of customers.

Control of Receivables:

- **Responsibility:** Finance manager follows up with debtors and decides on an appropriate credit collection policy.
- **Implementation:** Involves laying down credit policies and their execution.

Costs Associated with Maintaining Receivables:

1. Additional Funds:

- Cost in the form of interest (loan funds) or opportunity cost (own funds).

2. Administrative Costs:

- Record keeping, creditworthiness investigation, etc.

3. Collection Costs.

4. Defaulting Costs.

Factors Determining Credit Policy

Importance of Credit Policy:

Crucial in determining both the quantity and quality of accounts receivables.

- The effect of credit on the volume of sales;
- Credit terms;
- Cash discount;
- Policies and practices of the firm for selecting credit customers;
- Paying practices and habits of the customers;
- The firm's policy and practice of collection; and
- The degree of operating efficiency in the billing, record keeping and adjustment function, other costs such as interest, collection costs and bad debts etc.

Finance manager's involvement includes:-

- Supervising the administration of credit;
- Contribute to top management decisions relating to the best credit policies of the firm;
- Deciding the criteria for selection of credit applications; and
- Speed up the conversion of receivables into cash by aggressive collection policy.

Approaches to Evaluate Credit Policies

- Total Approach
- Incremental Approach

Financing Receivables: Pledging and Factoring

Pledging:

- **Definition:** Use of a firm's receivables to secure a short-term loan.
- **Collateral:** Receivables serve as prime collateral for a secured loan.
- **Lender Scrutiny:** Lender scrutinizes receivables' quality, selects acceptable accounts, and creates a lien.
- **Financing Percentage:** Typically ranges from 50% to 90%.
- **Advantages:**
  - **Flexibility**: Easy and flexible for the borrower.
  - **Regular** Financing: Financing occurs regularly.
- **Disadvantages:**

- **High Cost:** Faces high financing costs.
- **Impact on Ratios:** Affects debt-equity ratio by increasing debt.

Factoring:

- **Definition:** Outright sale of accounts receivables to a factor or financial agency.
- **Factor's Role:** Factor acquires receivables, bears collection risk, and services accounts for a fee.
- **Recourse vs. Non-Recourse:**
  - Recourse: Factor can turn back uncollected receivables to the organization for resolution.
  - Non-Recourse: Factor bears the ultimate risk of loss, charging higher commission.
- **Advantages of Factoring:**
  - Immediate Cash Conversion: Receivables quickly converted into cash.
  - Predictable Cash Flows: Predictable patterns of cash flows.
  - Liquidity without Liability: Provides liquidity without creating a net liability, no impact on debt-equity ratio.
  - Flexibility: Flexible financial tool with timely funds, efficient record-keeping, and effective collection management.
  - Not a Loan: Not considered a loan, no debt repayment, no compromise to the balance sheet.
  - Growth Support: Enables the use of cash for business growth needs without long-term agreements or delays associated with other capital-raising methods.

Meaning of Forfaiting

Definition:

- **Forfait:** French term meaning "relinquish a right."
- **Forfaiting:** Bill discounting arrangement where a financial institution buys trade bills or receivables from exporters, who relinquish their right to receive payment from importers.

Process:

- Financial institution or bank purchases trade bills or receivables from exporters.
- Exporter gives up the right to receive payment from the importer.
- Immediate finance provided to the exporter on a "without recourse" basis.
- Risk and rewards associated with bills/receivables transferred to the financial institution/bank.

Credit Facility:

- Unique credit facility where an overseas buyer (importer) opens a letter of credit in favor of the exporter.
- Allows the importer to import goods and services on deferred payment terms.

Functions of Forfaiting

- **Goods or Services Sale:**
  - Exporter sells goods or services to an overseas buyer.
- **Letter of Credit:**
  - Overseas buyer (importer) draws a letter of credit through its bank based on trade bills and import documents.
- **Exporter's Bank Involvement:**
  - Exporter, upon receiving the letter of credit, approaches its bank (exporter's bank).
- **Bill Purchase:**
  - Exporter's bank buys the letter of credit without recourse and provides payment to the exporter for the bill.

Features of Forfaiting

- **Motivation for Exporters:**
  - Encourages exporters to explore new geographies as payment is assured.
- **Deferred Payment Terms:**
  - Overseas buyer (importer) can import goods and services on deferred payment terms.
- **Reduced Transaction Costs:**
  - Exporter enjoys reduced transaction costs and complexities of international trade transactions.
- **Competitive Market Entry:**
  - Enables exporters to compete in the international market and utilize working capital for business expansion.
- **Importer's Advantage:**
  - Importers utilize forfaiting to finance imports at competitive rates from international financial institutions.

Innovations in Receivable Management

Re-engineering Receivable Process:

- **Definition:** Fundamental re-think and re-design of business processes for efficiency.
- **Centralisation:** Concentrating high-value transactions for specialized, speedy recovery.
- **Alternative Payment Strategies:** Providing various payment options for quicker settlements.

Evaluation of Risk:

- **Risk Assessment:** Identifying and assessing risks to introduce effective control mechanisms.
- **Process Rethink:** Opportunities for removing inefficiencies and enhancing effectiveness.

Use of Latest Technology:

- **E-commerce:** Utilizing electronic technologies like EDI, EFT, and Electronic Catalogue Systems for inter-organizational trade.
- **Automated Systems:** Integration of systems, automation, and e-commerce for streamlined accounts receivable management.

Receivable Collection Practices:

- **Reducing Time Lag:** Aim to minimize the time between sale and collection to control receivables and avoid bad debts.
- **Collection Procedures:** Invoice issuance, open accounts, credit terms, periodic statements, and follow-ups.

The following are **major receivable collection procedures** and practices:

(i) Issue of Invoice.
(ii) Open account or open-end credit.
(iii) Credit terms or time limits.
(iv) Periodic statements and follow ups.
(v) Use of payment incentives and penalties.
(vi) Record keeping and Continuous Audit.
(vii) **Export Factoring:** Factors provide comprehensive credit management, loss protection collection services and provision of working capital to the firms exporting internationally.
(viii) **Business Process Outsourcing:** This refers to a strategic business tool whereby an outside agency takes over the entire responsibility for managing a business process like collections in this case.

Use of Financial Tools/Techniques in Receivable Management:

(i) Credit Analysis:

- **Objective:** Evaluate individual customers for creditworthiness and assess the risk of bad debts.
- **Credit Rating:** Rating debtors seeking credit, often done by specialized agencies like Dun and Bradstreet.
- **Evaluation Factors:** Financial status, reputation, and past commitment record of the party.
- **Information Sources:** Trade references, bank references, credit bureau reports, past experiences, published financial statements, and salesman's interviews.
- **Credit Limit Setting:** Based on the ascertained creditworthiness, the credit manager sets an initial credit limit, subject to adjustment based on client interactions.

(ii) Credit Granting - Decision Tree Analysis:

- **Decision Analysis:** Involves assessing costs and benefits of granting credit, considering probabilities of payment or default.
- **Probability Distribution:** Determining the chances of recovery and default, forming a probability distribution.
- **Example:** If the chances of recovery are 9 out of 10, the probability of recovery is 0.9, and that of default is 0.1.

(iii) Control of Receivables:

- **Importance:** Beyond setting standards and policies, constant monitoring and follow-ups are crucial for effective receivable management.

(iv) Collection Policy:

- **Efficient Collection:** Timely and efficient debt collection minimizes bad debt losses and shortens the average collection period.
- **Expenditure Trade-off:** Balancing resources spent on collection against the decrease in bad debt losses and investment in debtors.
- **Procedure Establishment:** Clear-cut procedures for credit collection, including timelines for initiation, follow-ups, reminders, and personal calls.

- **Handling Doubtful Accounts:** Establishing procedures for doubtful accounts, deciding on legal actions or escalation matrices.

Monitoring of Receivables:

Constant monitoring of receivables is crucial for effective receivables management. The process involves several steps:

(i) Computation of Average Age of Receivables:

- **Objective:** Calculate the average collection period.

(ii) Ageing Schedule:

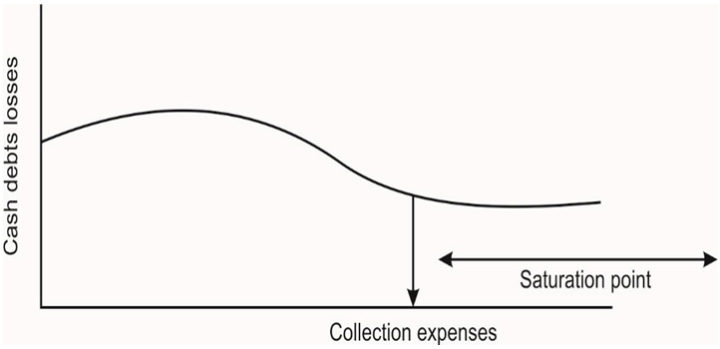
- **Definition:** Analysis of receivables based on their age, often presented in an ageing schedule.
- **Purpose:**
  - **Historical Comparison:** Enables a quick comparison of current receivables liquidity with the past.
  - **Competitive Analysis:** Compares the liquidity of the firm with competitors.
  - **Future Prediction:** Aids in predicting future receivables collection patterns.
- **Periodic Comparison:** Periodic assessment for consistent evaluation.

Ageing Schedule (Continued):

- **Control Over Accounts:** Classifies receivables into age groups for better control over individual account quality.
- **Data Source:** Extracts dates of customer purchases and payments from the receivables ledger.
- **Supplement to Analysis**: Acts as a supplement to average collection period analysis.
- **Recent Trends:*** Recognizes recent increases or slumps in sales.
- **Comparison Practices:** Compares current ageing schedule with past records within the firm and against other firms' experiences for a comprehensive analysis.

Debt Collection Programme:

- Monitoring the state of receivables.
- Intimation to customers when due date approaches.
- E-mail and telephonic advice to customers on the due date.
- Reminding the legal recourse on overdue A/cs and follow escalation matrix if available.
- Legal action on overdue A/cs.



Cost and Benefits of Trade Credit:

(a) Cost of Availing Trade Credit:

Price Discount:

- Explanation: A discount on the price may be available, but to benefit, immediate payment is necessary, resulting in implicit costs.

Loss of Goodwill:

- **Scenario:** Overstepping credit limits may lead to supplier discrimination, impacting goodwill.

Cost of Managing:

- **Nature:** Involves administrative and accounting expenses related to creditor management.

Conditions:

- **Requirement:** Some suppliers may stipulate minimum order sizes or regularity for credit facility access.

(b) Cost of Not Taking Trade Credit:

Impact of Inflation:

- **Favorable Position:** Borrowers benefit as paying fixed amounts later in an inflationary environment is advantageous.

- **Subsequent Transactions:** Future transactions occur at higher prices due to inflation.

Interest:

- **Interest-Free Loan:** Trade credit serves as an interest-free loan; not using it incurs interest costs, especially if interest rates are high.

Inconvenience:

- **Scenario:** May inconvenience the supplier accustomed to deferred payments.

Working Capital Finance: Spontaneous vs. Negotiable

Spontaneous Sources:

Definition:

- **Nature:** Arises naturally in business.

Examples:

- Trade Credit, Employee Credit, Service Suppliers.

Negotiated Sources:

Definition:

- **Nature:** Requires specific negotiation.

Examples:

- Commercial Banks, Financial Institutions, Public.

Considerations for Finance Manager:

Cost Factor:

- **Guidance:** Choose cost-effective sources.

Impact on Credit Rating:

- **Concern:** Evaluate impact on creditworthiness.

Feasibility:

- **Evaluation:** Assess practicality and viability.

Reliability:

- **Dependability:** Consider source consistency.

Restrictions:

- **Review:** Be aware of any limitations.

Hedging or Matching Approach:

- **Strategy:** Align financing with asset maturity.

Spontaneous Sources:

(a) Trade Credit:

- **Definition:** Spontaneous credit from sellers or service providers.
- **Contribution:** Accounts for about one-third of short-term requirements.
- **Nature:** Guarantees credit for acquired supplies without immediate payment.
- **Formality:** "Open account trade credit" involves minimal formalities.

(b) Bills Payable:

- **Definition:** Written promise to pay a specified amount on demand or future date.
- **Usage:** Common for small and large organizations.
- **Benefit:** Simplicity, easy availability, and lower explicit costs.
- **Dependence:** Influenced by purchase volume and payment timing.

(c) Accrued Expenses:

- **Definition:** Unpaid services, e.g., wages, salaries, taxes, duties.
- **Automatic Source:** Inherent and automatic, as payments are typically at period-end.
- **Interest-Free:** Represents an interest-free source of finance.
- **Liquidity:** Enhances liquidity without explicit or implicit costs.

Inter-corporate Loans and Deposits

Sometimes, organizations having surplus funds invest for short-term period with other organizations. The rate of interest will be higher than the bank rate of interest and depends on the financial soundness of the borrower company. This source of finance reduces dependence on bank financing.

Commercial Papers (CP)

Definition:

- Unsecured promissory note for short-term funds.
- Issued by highly rated corporate borrowers.

Key Features:

- **Maturity:** 7 days to less than 1 year from the issue date.
- **Denomination:** ₹5 lakhs or multiples thereof.

Advantages:

(a) Unsecured Basis: CP is unsecured and lacks restrictive conditions.
(b) Continuous Funding: Maturity funds can be repaid by issuing new CP.
(c) Tailored Maturity: Maturity can be adjusted to the firm's needs.
(d) Source in Tight Markets: Can be issued even in tight money market conditions.
(e) Cost Advantage: Generally, costs less than commercial bank loans.

Limitations:

(i) Credit Rating Requirement: Only highly-rated firms can issue CP.
(ii) Rigid Terms: Cannot be redeemed or extended before maturity.

Funds from Operations

- Generated from day-to-day operations.
- **Components:** Profit and depreciation.
- Increases working capital.

Public Deposits

- Important for well-established companies.
- Source for short to medium-term financing.

Bills Discounting

- Short-term financing.
- Supplier issues a bill of exchange for deferred payment.

Bill Rediscounting Scheme

- Introduced by RBI from November 1, 1970.
- Promotes bill of exchange use.
- Licensed scheduled banks can offer bills for rediscount.

Factoring

- Continuous arrangement between a financial institution and a firm.
- Client sells trade debts at a discount.
- Differs from bills discounting in terminology, parties involved, nature, and legislation

Instructions on Working Capital Finance by Banks

Assessment of Working Capital

- RBI withdrew Maximum Permissible Bank Finance (MPBF) concept in April 1997.
- Banks can now formulate methods for assessing working capital within prudential guidelines.
- Banks must consider RBI's instructions on directed credit and prohibition of credit while formulating lending policies.
- Instructions related to MPBF and lending discipline ceased to be mandatory.
- Banks can choose to incorporate relevant instructions in their lending policies/procedures.

Forms of Bank Credit

Cash Credit

- Continuous credit facility with specified limits.
- Borrower cannot exceed sanctioned limits.

Bank Overdraft

- Short-term borrowing for urgent fund needs.
- Banks impose limits and can call in overdrafts with short notice.

Bills Discounting

- Seller discounts bills drawn on buyers with the banker.
- Bank earmarks the discounting bill limit.

Bills Acceptance

- Company draws a bill on the bank, which accepts it.
- Bank promises to pay the bill amount on a specified future date.

Line of Credit

- Bank commits to lending a specified amount on demand.

Letter of Credit

- Issuing bank undertakes to pay or accept against stipulated documents.

Bank Guarantees

- Banks extend guarantees on behalf of clients to third parties.