Financial Management Notes – AB 2023 and 2024 – IV Sem

1.1 Meaning and Scope of Finance Function

Definition

The finance function means planning, raising, managing, and controlling the money of a business so that it operates smoothly and grows steadily.

Meaning of Finance Function

The finance function includes all activities related to getting funds and using them wisely for business needs. It ensures that money is available at the right time and used in the right place.

Purpose of Finance Function

The main purpose is to make sure the business never faces a shortage of money and can meet both day-to-day and future financial requirements.

Finance supports every part of the business by providing timely funds and helping avoid financial problems.

Scope of Finance Function

The scope covers planning financial needs, arranging funds, investing money carefully, and controlling how money is used in the business.

Estimating Financial Needs

This includes calculating how much money the business will need for its daily work and future growth plans.

Raising and Collecting Funds

It involves selecting the best sources of finance like loans, shares, or retained earnings to get money at a low cost.

Investment Decisions

The finance function helps decide which projects or assets the business should invest in to earn good and safe returns.

Capital Structure Decisions

It chooses the right mix of debt and equity so that the business has enough funds with minimum risk.

Dividend Decisions

This involves deciding what portion of profit should be given to shareholders and what part should be kept for future use.

Working Capital Management

It ensures the business has enough cash, stock, and other current assets to run daily activities smoothly.

Cash Management

The finance function maintains sufficient cash flow so that all short-term payments and expenses can be handled on time.

Inventory and Receivables Control

It manages stock levels and customer payments to maintain steady operations and avoid cash shortages.

Financial Control

The finance function uses budgets and financial statements to check the company's financial performance and make improvements.

Risk Management

It identifies financial risks like market changes or credit delays and takes steps to reduce their impact on the business.

Compliance and Reporting

The finance function ensures the business follows financial rules and prepares accurate reports for management.

1.2 Goals of Financial Management

Primary Goal – Wealth Maximization

The main goal is to increase the value of the business and improve the wealth of shareholders over time.

It considers long-term growth, risk, and future returns, making it a better measure of financial success.

Stable Returns to Shareholders

Financial management aims to give steady and reliable returns to shareholders through dividends and capital appreciation.

Efficient Use of Funds

It ensures money is used in the most productive places so the business earns higher profits.

Ensuring Liquidity

A key goal is to maintain enough cash so the business can meet its daily expenses without stress.

Maintaining Profitability

Financial management tries to increase profits by controlling costs and choosing the right investments.

Reducing Risk

It aims to lower financial risks by choosing safe funding sources and managing debt carefully.

Optimal Capital Structure

Another goal is to find the right balance between debt and equity so the business can grow without too much financial pressure.

Long-Term Survival

Financial management aims to keep the business financially strong so it can survive changes in the market.

Supporting Business Growth

It ensures funds are available for expansion, new projects, and future opportunities.

Improving Operational Efficiency

Using money wisely helps departments work better, reducing waste and improving productivity.

Building Investor Confidence

Good financial decisions increase trust among investors, lenders, and stakeholders.

Maximizing Market Value

The aim is to strengthen the company's reputation and standing in the market through sound financial performance.

1.3 Profit Maximization

- Profit maximization means earning the highest possible profit within a specific period.
- It focuses on increasing revenue and reducing costs to achieve maximum financial gain.

Meaning

- It treats profit as the main measure of business success.
- All decisions are aimed at selecting the option that gives the highest immediate profit.
- It is mainly concerned with short-term earnings.

How It Works

- Managers compare alternatives and choose the most profitable one.
- It looks at price, cost, output level, and demand to maximize financial returns.
- The goal is to increase the gap between total revenue and total cost.

Advantages

- Easy to understand and measure since profit is a clear indicator.

- Higher profits improve the financial strength of the business.
- Helps in paying dividends and rewarding owners.
- Provides funds for expansion, growth, and innovation.
- Improves the business's ability to survive in competition.

Limitations

- Focuses only on short-term gains, ignoring long-term stability.
- Does not consider risk or uncertainty.
- Ignores customer satisfaction and product quality.
- May encourage unethical practices for quick profit.
- Does not consider the timing of returns or long-term value.

Conclusion

- Profit maximization is important for business survival and growth.
- However, it should be balanced with long-term planning and ethical practices for sustainable success.

1.4 Wealth Maximization

- Wealth maximization means increasing the overall value of the business for its shareholders.
- It focuses on long-term growth in the market value of the company's shares.

Meaning

- It aims to maximize the present value of future cash flows of the business.
- It considers long-term benefits instead of short-term profits.
- Wealth maximization is seen as a better and modern goal of financial management.

How It Works

- Decisions are made based on future cash flows, risk involved, and timing of returns.
- A project is accepted only if it increases the overall value of the firm.
- It uses tools like Net Present Value (NPV) to measure value creation.

Advantages

- Considers long-term growth and sustainability of the business.
- Takes into account risk, time value of money, and future returns.
- Leads to better decision-making and stronger financial performance.
- Improves shareholder confidence and market reputation.
- Encourages ethical practices and customer satisfaction for long-term value.

Limitations

- Future cash flows may be difficult to estimate accurately.
- Requires technical knowledge and financial analysis tools.
- Shareholder wealth may fluctuate due to market conditions beyond management control.

Conclusion

- Wealth maximization is considered the best and most modern financial goal.
- It creates long-term value and ensures stable growth while balancing risk and return.

1.5 Importance of Financial Management

Definition

Financial management refers to planning, organizing, managing, and controlling a business's financial resources to achieve its goals effectively.

Importance of Financial Management

- **Ensures Adequate Funds**: It ensures that sufficient funds are available for smooth business operations.
- **Efficient Use of Funds**: Helps in using money in the most productive and cost-effective way.
- **Planning and Forecasting**: Assists in estimating financial requirements for short-term and long-term needs.
- **Investment Decisions**: Guides in choosing profitable projects and assets for investment.
- **Financing Decisions**: Helps select the right sources of funds at the lowest cost.
- **Dividend Decisions**: Determines the portion of profits to distribute and retain.
- **Liquidity Management**: Maintains enough cash to meet day-to-day expenses and obligations.
- **Profit Maximization**: Aims to increase profits through better cost control and revenue planning.
- **Wealth Maximization**: Supports long-term growth and increases shareholder value.
- **Risk Management**: Identifies financial risks and implements measures to minimize them.
- **Financial Control**: Uses budgets, financial statements, and ratios to monitor performance.
- **Supports Growth and Expansion**: Ensures funds are available for future projects and business development.
- **Builds Investor Confidence**: Reliable financial management attracts investors and lenders.
- **Stability and Survival**: Helps the business survive competition and economic fluctuations.
- **Decision-Making Support**: Provides accurate financial information to guide management decisions.

1.6 Financial Planning and Forecasting

Definition

Financial planning is the process of estimating the financial needs of a business and deciding how to arrange funds to meet those needs. Forecasting is predicting future financial requirements based on past performance and expected growth.

Financial Planning

- **Purpose**: Ensures that funds are available when needed for smooth operations.
- **Resource Allocation**: Helps in assigning funds to different departments and projects efficiently.
- **Capital Requirements**: Determines the amount of long-term and short-term funds required.
- **Financial Goals**: Aligns funding with business objectives like growth, expansion, or diversification.
- **Control Mechanism**: Acts as a guide to control expenses and avoid financial mismanagement.

Financial Forecasting

- **Purpose**: Predicts future revenue, expenses, profits, and cash flow requirements.
- **Basis**: Uses past financial data, market trends, and economic conditions.
- **Short-Term Forecasting**: Focuses on cash flow, working capital, and immediate fund needs.

- **Long-Term Forecasting**: Estimates funds for expansion, capital investments, and strategic projects.
- **Decision Support**: Helps management make informed investment, financing, and operational decisions.
- **Risk Reduction**: Identifies potential financial shortages or surpluses in advance.

Importance

- Ensures financial stability by avoiding fund shortages or idle resources.
- Helps in proper allocation and utilization of funds.
- Supports profit and wealth maximization objectives.
- Provides a framework for monitoring financial performance and controlling costs.
- Improves investor confidence by demonstrating systematic financial planning.

1.7 Factors Affecting Financial Planning

- **Nature and Size of Business**: Large businesses need more detailed financial planning than small businesses due to complex operations.
- **Business Objectives**: Goals like expansion, diversification, or stability affect fund requirements and planning strategies.
- **Capital Structure**: The mix of debt and equity influences how much additional funding is required.
- **Revenue and Profit Trends**: Past earnings and projected profits help in estimating future financial needs.
- **Cost Structure**: High fixed costs require careful planning to ensure sufficient funds for operations.
- **Growth and Expansion Plans**: Plans for new projects or market expansion increase financial requirements.
- **Working Capital Requirements**: Day-to-day cash needs, inventory, and receivables affect short-term financial planning.
- **Economic Conditions**: Inflation, interest rates, and economic stability influence funding decisions.
- **Government Policies**: Taxes, subsidies, and regulations can increase or decrease financial requirements.
- **Technological Changes**: Adoption of new technology may require additional investment and planning.
- **Market Conditions**: Competition and demand fluctuations impact revenue forecasts and financial planning.
- **Availability of Funds**: Access to loans, equity, or internal funds affects the financial plan.
- **Risk and Uncertainty**: Potential risks in the market or business operations influence the level of financial reserves needed.

2.1 Meaning of Capital Structure

Definition

Capital structure refers to the mix of different sources of long-term funds used by a business to finance its operations and growth.

Meaning

- It shows how a company finances its assets through a combination of debt (borrowed funds) and equity (owners' funds).
- Debt includes loans, bonds, and debentures, while equity includes share capital and retained earnings.
- The capital structure determines the proportion of borrowed funds and owners' funds in the business.
- A proper capital structure ensures financial stability, lower cost of capital, and optimal risk-return balance.
- The choice of capital structure affects profitability, risk, and the company's ability to raise funds in the future.

2.2 Factors Influencing Capital Structure

- **Nature of Business**: Capital-intensive businesses may rely more on debt, while service-oriented firms may need less.
- **Business Size**: Larger firms often have easier access to debt and equity, influencing their capital mix.
- **Profitability**: Highly profitable companies may prefer equity or retained earnings over debt to avoid interest obligations.
- **Financial Risk**: Companies with higher risk may use less debt to reduce the chance of financial distress.
- **Cost of Capital**: The relative cost of debt versus equity affects the choice between the two.
- **Flexibility**: Firms may prefer equity to maintain flexibility in operations without fixed obligations.
- **Tax Considerations**: Interest on debt is tax-deductible, making debt more attractive for tax planning.
- **Growth and Expansion Plans**: Firms planning rapid growth may take on more debt to finance expansion.
- **Control Considerations**: Issuing equity may dilute ownership, so firms may prefer debt to retain control.
- **Market Conditions**: Economic and financial market conditions influence the availability and cost of funds.
- **Cash Flow Position**: Stable cash flows allow firms to take on more debt comfortably.
- **Government Policies**: Regulations, subsidies, and tax policies can affect debt and equity decisions.
- **Industry Practices**: Industry norms and practices often guide the typical capital structure for firms.

2.3 Optimum Capital Structure

Definition

Optimum capital structure is the ideal mix of debt and equity that minimizes the overall cost of capital and maximizes the value of the firm.

Meaning

- It balances the risk and returns of the business.
- The goal is to achieve the lowest possible cost of capital while ensuring financial stability.
- Both too much debt and too little debt can be harmful; the optimum structure lies in between.
- Proper capital structure ensures long-term growth, profitability, and shareholder wealth maximization.

Characteristics of Optimum Capital Structure

- **Minimizes Cost of Capital**: The overall cost of debt and equity is as low as possible.
- **Maximizes Shareholder Wealth**: Increases the market value of the firm's shares.
- **Balanced Risk and Return**: Ensures adequate returns without taking excessive financial risk.
- **Flexibility**: Allows the firm to raise additional funds in the future if needed.
- **Financial Stability**: Maintains smooth operations without liquidity or solvency problems.

2.4 Capital Structure Theories

Meaning

Capital structure theories explain how a firm's mix of debt and equity affects its overall value and cost of capital.

Net Income (NI) Theory

The NI theory states that increasing the proportion of debt lowers the overall cost of capital.

According to this theory, more debt increases the firm's value because debt is cheaper than equity.

Net Operating Income (NOI) Theory

The NOI theory argues that capital structure does not affect the firm's value. The overall cost of capital remains constant regardless of the debt–equity mix.

Traditional Theory

The traditional theory suggests an optimal capital structure exists. A balanced combination of debt and equity minimizes the cost of capital and maximizes firm value.

Modigliani and Miller (MM) Theory – Without Taxes

MM theory states that capital structure is irrelevant in a perfect market without taxes.

The firm's value depends only on its earnings power, not on the financing mix.

Modigliani and Miller (MM) Theory – With Taxes

With corporate taxes included, MM argues that firm value increases with higher debt.

This is because interest is tax-deductible, creating a tax shield that benefits the firm.

Trade-Off Theory

Firms aim to balance the tax benefits of debt with the risk of financial distress. The optimal capital structure is reached when the marginal tax benefit equals the marginal cost of debt.

Pecking Order Theory

Firms prefer internal funds first, then debt, and issue equity only as a last resort. This is due to asymmetry of information between managers and investors.

Agency Cost Theory

This theory says conflicts between managers, shareholders, and debt-holders affect financing choices.

Debt can reduce agency costs by disciplining managers but may create costs for creditors.

Signaling Theory

Issuing debt is viewed as a positive signal because managers borrow only when they expect strong future earnings.

Issuing equity may be seen as a negative signal, implying shares are overvalued.

2.5 Computation of EBIT and EBT

Definition

- **EBIT (Earnings Before Interest and Tax)** is the profit earned by a business from operations before deducting interest and taxes.
- **EBT (Earnings Before Tax)** is the profit earned after deducting interest but before tax.

Purpose

- EBIT measures operating performance by excluding financing and tax effects.
- EBT shows the profitability of the business after financing costs but before tax.
- Both help in financial analysis and decision-making regarding operations, financing, and taxation.

Computation of EBIT

Formula 1 (from Sales & Expenses):
EBIT = Revenue – Operating Expenses (excluding interest and tax)

Formula 2 (from Net Profit):
EBIT = Net Profit + Interest + Tax

Example:

- Sales = ₹10,00,000
- Operating Expenses = ₹6,00,000
- Interest = ₹50,000
- Tax = ₹70,000

EBIT = 10,00,000 – 6,00,000 = ₹4,00,000

Computation of EBT

Formula:
EBT = EBIT – Interest

Example (continuing above):
EBT = 4,00,000 – 50,000 = ₹3,50,000

Analysis

- **EBIT Analysis**: Shows core operational efficiency. Higher EBIT indicates better control over operating costs.
- **EBT Analysis**: Indicates how financing decisions (like taking loans) affect profitability.
- Comparing EBIT and EBT helps assess the impact of interest and financial leverage on earnings.
- Both are essential for ratio analysis, such as Interest Coverage Ratio and Profitability Ratios.

2.6 Analysis of EBIT and EBT

Definition

- **EBIT (Earnings Before Interest and Tax)** measures a company's operating profit before considering interest and taxes.
- **EBT (Earnings Before Tax)** measures profit after deducting interest but before tax.

Purpose of Analysis

- To assess operational efficiency and profitability.
- To understand the impact of financing (interest) on earnings.
- To help management make informed decisions about cost control, pricing, and financing.

Analysis of EBIT

- Indicates how well a company is generating profit from operations.
- High EBIT shows strong operational efficiency and effective cost management.
- Useful for comparing performance across periods or with competitors, ignoring financing and taxes.
- Helps calculate operational ratios like Operating Margin and Interest Coverage Ratio.
- Provides insight into business sustainability even before financing decisions.

Analysis of EBT

- Shows the effect of interest or financial leverage on profits.
- Lower EBT compared to EBIT may indicate high interest obligations.
- Helps in evaluating risk due to debt financing.
- Useful for calculating profitability ratios before tax, such as Pre-tax Profit Margin.

- Helps management plan for debt repayment and optimize financing strategies.

Comparison of EBIT and EBT

- EBIT focuses purely on operational performance, ignoring interest and taxes.
- EBT considers financing costs but still excludes taxes, showing profit available before tax obligations.
- The difference between EBIT and EBT equals interest expense, highlighting the impact of debt on profitability.

2.7 Earnings Per Share (EPS)

Definition

Earnings Per Share (EPS) is the portion of a company's profit allocated to each outstanding share of common stock. It indicates the profitability available to equity shareholders.

Purpose

- EPS shows the earnings generated per share and helps investors evaluate the company's financial performance.
- It is used to compare profitability across companies or periods.
- EPS is an important factor in investment decisions and stock valuation.

Computation of EPS

Formula:
EPS = (Net Profit – Preference Dividend) ÷ Number of Outstanding Ordinary Shares

Example:

- Net Profit = ₹10,00,000
- Preference Dividend = ₹1,00,000
- Ordinary Shares = 5,00,000

EPS = (10,00,000 – 1,00,000) ÷ 5,00,000 = ₹1.8 per share

Analysis

- Higher EPS indicates better profitability and more returns for shareholders.
- EPS trends over time help assess the company's growth.
- It is used in calculating Price/Earnings (P/E) ratio for stock valuation.
- EPS alone may not reflect the full financial health; it should be analyzed with other ratios like ROE, net profit margin, and cash flow.

2.8 EBIT–EPS Analysis

Meaning

EBIT–EPS analysis is a tool used to study how different financing options (debt or equity) affect a company's Earnings Per Share under various levels of EBIT.

Purpose

It helps choose the most suitable capital structure by comparing the impact of financing choices on shareholders' earnings.

Relation Between EBIT and EPS

EPS changes with EBIT because interest expenses from debt affect profits available to shareholders.

Higher debt increases financial leverage and can raise EPS if EBIT is high.

Steps in EBIT–EPS Analysis

Identify Financing Alternatives

Compare options such as issuing equity shares, raising debt, or a mix of both.

Estimate EBIT Levels

Prepare different possible EBIT levels, like low, medium, and high operating income.

Compute Interest for Each Alternative

Financing options involving debt will include interest expenses, while equity financing does not.

Calculate EBT

EBT = EBIT – Interest

This shows how financing choice changes taxable profit.

Compute Net Profit After Tax

Subtract taxes from EBT to find the profit available to equity shareholders.

Calculate EPS

EPS = Net Profit After Tax / Number of Equity Shares

This helps compare shareholder earnings under each financing plan.

Indifference Point

The EBIT level at which EPS remains the same for two different financing options is called the indifference point.

It indicates where neither option gives an advantage to shareholders.

Decision Rule

If expected EBIT is higher than the indifference point, debt financing is preferred because it increases EPS.

If expected EBIT is lower, equity financing is safer because it avoids fixed interest obligations.

3.1 Cost of Capital – Concept

Definition

Cost of capital is the minimum rate of return a company must earn on its investments to satisfy its investors or lenders. It represents the cost of raising funds, whether through debt, equity, or other sources.

Meaning

- It is the required return that investors expect for providing funds to the business.
- It acts as a benchmark for evaluating investment projects.
- If a project earns more than the cost of capital, it creates value; if it earns less, it destroys value.
- Cost of capital helps in financial planning, capital budgeting, and deciding the optimal capital structure.

Components of Cost of Capital

- **Cost of Debt (Kd):** The effective interest rate paid on borrowed funds after tax.
- **Cost of Equity (Ke):** The return required by equity shareholders.
- **Cost of Preference Capital (Kp):** The fixed dividend rate on preference shares.
- **Weighted Average Cost of Capital (WACC):** The weighted average of all sources of finance.

3.2 Importance of Cost of Capital

Definition

Cost of capital is the minimum return a company must earn on its investments to satisfy its investors and lenders.

Importance

- **Investment Decision-Making**: Helps evaluate whether a project or investment will generate returns greater than the cost of funds.
- **Capital Budgeting**: Acts as a benchmark for selecting profitable projects and rejecting unprofitable ones.
- **Optimal Capital Structure**: Guides management in choosing the right mix of debt, equity, and other financing sources.
- **Risk Assessment**: Indicates the level of risk associated with financing and investment decisions.
- **Performance Measurement**: Used to assess whether the firm is earning adequate returns for shareholders.
- **Cost Control**: Encourages raising funds at the lowest possible cost to maximize profitability.

- **Wealth Maximization**: Ensures that investments generate returns exceeding the cost of capital, creating shareholder value.
- **Strategic Planning**: Helps management plan long-term growth and expansion based on available finance.
- **Financial Discipline**: Encourages efficient fund utilization and prevents overinvestment in low-return projects.

3.3 Types of Cost of Capital

Definition

Types of cost of capital refer to the different categories of funds a company uses, each having its own cost or required return.

Types

- **Cost of Debt (Kd)**:
  - The interest a company pays on borrowed funds, adjusted for tax benefits.
  - Formula: Kd = Interest × (1 – Tax Rate) ÷ Net Proceeds from Debt
- **Cost of Preference Shares (Kp)**:
  - The fixed dividend payable on preference shares.
  - Formula: Kp = Preference Dividend ÷ Net Issue Price of Preference Shares
- **Cost of Equity (Ke)**:
  - The return required by equity shareholders.
  - Formula: Ke = (Expected Dividend ÷ Market Price of Equity) + Growth Rate
- **Retained Earnings**:
  - The opportunity cost of using retained profits instead of paying them as dividends.
  - Treated similarly to the cost of equity.
- **Weighted Average Cost of Capital (WACC)**:
  - The average cost of all sources of finance, weighted according to their proportion in total capital.
  - Formula: WACC = (E/V) × Ke + (D/V) × Kd × (1 – Tax Rate) + (P/V) × Kp
  - Helps in evaluating overall financing cost for the firm.

3.4 Measurement of Cost of Capital

Definition

Measurement of cost of capital refers to the process of calculating the cost associated with different sources of finance, such as debt, equity, and preference capital.

Methods of Measurement

- **Cost of Debt (Kd)**:
  - Calculated as the effective interest rate paid on borrowed funds, adjusted for tax savings.
  - Formula: Kd = Interest × (1 – Tax Rate) ÷ Net Proceeds from Debt
- **Cost of Preference Capital (Kp)**:
  - Calculated as the fixed dividend on preference shares divided by the net issue price.
  - Formula: Kp = Preference Dividend ÷ Net Issue Price of Preference Shares
- **Cost of Equity (Ke)**:
  - Calculated using models like Dividend Capitalization Model or Capital Asset Pricing Model (CAPM).
  - Dividend Method: Ke = (Expected Dividend ÷ Market Price) + Growth Rate
  - CAPM Method: Ke = Risk-Free Rate + Beta × (Market Return – Risk-Free Rate)

- **Cost of Retained Earnings**:
    - Treated similarly to the cost of equity since it represents the opportunity cost of using profits instead of paying dividends.
- **Weighted Average Cost of Capital (WACC)**:
    - Combines all individual costs based on their proportion in total capital.
    - Formula: WACC = (E/V) × Ke + (D/V) × Kd × (1 – Tax Rate) + (P/V) × Kp

3.5 Weighted Average Cost of Capital (WACC)

Definition

Weighted Average Cost of Capital (WACC) is the average rate of return a company is expected to pay to all its sources of finance, weighted according to their proportion in the total capital.

Meaning

- WACC represents the overall cost of raising funds from debt, equity, and preference shares.
- It is used as a benchmark to evaluate investment projects.
- A project is considered profitable if its expected return exceeds the WACC.

Formula

WACC = (E/V) × Ke + (D/V) × Kd × (1 – Tax Rate) + (P/V) × Kp

Where:

- **E** = Market value of equity
- **D** = Market value of debt
- **P** = Market value of preference shares
- **V** = Total capital (E + D + P)
- **Ke** = Cost of equity
- **Kd** = Cost of debt
- **Kp** = Cost of preference shares

Importance

- Helps in evaluating investment and financing decisions.
- Assists in determining the optimal capital structure.
- Minimizes the overall cost of capital, increasing firm value.
- Ensures that returns exceed the cost of raising funds.
- Useful for financial planning and strategic decision-making.

3.6 Operating and Financial Leverages

Definition

- **Operating Leverage** refers to the degree to which a firm uses fixed costs in its operations to magnify the effect of sales on operating profit (EBIT).
- **Financial Leverage** refers to the use of fixed financial costs, like interest, to magnify the effect of operating profit on net earnings (EPS).

Operating Leverage (OL)

- Measures the impact of sales changes on EBIT.
- High fixed costs in operations increase operating leverage.
- Formula: Degree of Operating Leverage (DOL) = % Change in EBIT ÷ % Change in Sales
- Advantage: Higher OL can increase profits with a rise in sales.
- Risk: If sales decline, firms with high OL may experience large drops in profit.

Financial Leverage (FL)

- Measures the impact of EBIT changes on EPS.
- High interest or fixed financial charges increase financial leverage.
- Formula: Degree of Financial Leverage (DFL) = % Change in EPS ÷ % Change in EBIT

- Advantage: Can increase returns to shareholders when EBIT rises.
- Risk: High FL increases the risk of financial distress if EBIT falls.

Combined Leverage (CL)

- The effect of both operating and financial leverage together.
- Formula: Degree of Combined Leverage (DCL) = DOL × DFL = % Change in EPS ÷ % Change in Sales
- Shows total risk exposure due to fixed costs in operations and financing.

Importance

- Helps management understand the sensitivity of profits to changes in sales.
- Assists in planning cost structure and financing decisions.
- Supports decisions about expansion, pricing, and capital structure.
- Helps evaluate risk-return trade-offs in business operations and financing.

4.1 Capital Budgeting Process

Definition

Capital budgeting is the process of planning and evaluating long-term investment projects to determine their feasibility and profitability for the business.

Steps in Capital Budgeting Process

- **Identification of Investment Opportunities**:
  - Recognize potential projects such as new machinery, expansion, or product development.
- **Project Evaluation**:
  - Analyze the technical, commercial, and financial aspects of the project.
- **Estimation of Cash Flows**:
  - Determine expected inflows and outflows over the project's life.
  - Consider factors like revenues, operating costs, taxes, and working capital changes.
- **Assessment of Risk and Return**:
  - Evaluate the risk associated with the project and expected rate of return.
  - Techniques like sensitivity analysis and scenario analysis may be used.
- **Selection of Project**:
  - Choose projects that align with company goals and provide maximum value.
  - Compare projects using techniques like NPV, IRR, or Payback Period.
- **Financing the Project**:
  - Decide the source of funds, such as equity, debt, or retained earnings.
- **Implementation of Project**:
  - Execute the project according to plan, monitoring costs and timelines.
- **Monitoring and Control**:
  - Continuously track project performance against expected cash flows and budgets.
  - Make adjustments if actual results deviate from planned targets.

Importance

- Ensures efficient allocation of resources to profitable projects.
- Helps in minimizing financial risk.
- Assists in long-term growth and wealth maximization.
- Provides a systematic framework for decision-making.

4.2 Project Appraisal Techniques

Definition

Project appraisal techniques are methods used to evaluate the feasibility, profitability, and risk of long-term investment projects to support decision-making.

Techniques of Project Appraisal

- **Payback Period (PBP)**:
    - Measures the time required to recover the initial investment from project cash inflows.
    - Shorter payback periods are generally preferred.
    - Simple but ignores time value of money and cash flows beyond the payback period.
- **Accounting Rate of Return (ARR)**:
    - Compares the average accounting profit of a project to the initial investment.
    - Formula: ARR = (Average Annual Accounting Profit ÷ Initial Investment) × 100
    - Easy to calculate but ignores time value of money.
- **Net Present Value (NPV)**:
    - Measures the present value of expected cash inflows minus the initial investment.
    - Formula: NPV = PV of Cash Inflows – Initial Investment
    - Positive NPV indicates a profitable project; considers time value of money.
- **Internal Rate of Return (IRR)**:
    - The discount rate at which the NPV of a project becomes zero.
    - Projects with IRR greater than the cost of capital are acceptable.
    - Considers time value of money and total cash flows.
- **Profitability Index (PI)**:
    - Ratio of present value of future cash inflows to the initial investment.
    - Formula: PI = PV of Cash Inflows ÷ Initial Investment
    - PI > 1 indicates a good project; useful when capital is limited.
- **Discounted Payback Period**:
    - Similar to payback period but considers the time value of money.
    - Time required to recover the initial investment in present value terms.
- **Sensitivity and Risk Analysis**:
    - Examines how changes in key variables like sales, costs, or interest rates affect project profitability.
    - Helps in understanding the risk associated with the project.

4.3 Importance of Project Appraisal Techniques

Meaning

Project appraisal is the process of evaluating a proposed project to judge its viability, profitability, and risks before investing.

Scientific Decision-Making

It provides a systematic and analytical base for choosing the most suitable project.

Profitability Assessment

Appraisal techniques help estimate whether a project can generate sufficient financial returns.

Time Value Consideration

Methods like NPV and IRR consider the time value of money, making evaluation more accurate.

Risk Reduction

It identifies technical, financial, and market risks early, reducing the chance of project failure.

Resource Allocation

Ensures optimal use of scarce resources such as funds, manpower, and machinery.

Project Comparison

Helps compare and prioritize multiple project alternatives based on returns and feasibility.

Budgeting and Cost Control

Provides realistic cost estimates and supports better budgeting before project execution.

Financial Planning

Assists in planning long-term financial needs and aligning investment decisions with business goals.

Lender Confidence

Banks and investors rely on appraisal reports to approve loans and funding.

Performance Monitoring

Offers benchmarks to compare actual performance with expected results during and after implementation.

Compliance Check

Ensures the project meets legal, environmental, and regulatory requirements.

Strategic Decision Support

Useful for decisions involving expansion, modernization, diversification, or asset replacement.

Social and Economic Impact

In large or public projects, it evaluates wider economic and social benefits.

Avoids Unviable Projects

Prevents investment in loss-making or high-risk projects, ensuring long-term value creation.

4.4 Calculation of Payback Period, NPV, IRR and Profitability Index

Payback Period

Payback Period measures the time required to recover the initial investment from the project's cash inflows.

Payback Period – Calculation

If annual cash inflows are equal, divide the initial investment by the annual inflow. If inflows are unequal, add the inflows year by year until the investment is recovered.

Payback Period – Decision Rule

A shorter payback period is preferred because it indicates quicker recovery and lower risk.

Net Present Value (NPV)

NPV is the present value of cash inflows minus the present value of cash outflows.

NPV – Calculation

Discount each future cash inflow using the discount rate and add them. Subtract the initial investment from this total present value.

NPV – Formula

$NPV = \Sigma (\text{Cash Inflow} / (1+r)^n) - \text{Initial Investment}$
Where r = discount rate and n = year.

NPV – Decision Rule

NPV > 0 means the project adds value and should be accepted.

Internal Rate of Return (IRR)

IRR is the discount rate at which NPV becomes zero.

IRR – Calculation

Try different discount rates and find the rate where present value of inflows equals the initial investment.

Interpolation may be used between two rates that give positive and negative NPVs.

IRR – Decision Rule

A project is acceptable if IRR is higher than the firm's required return.

Profitability Index (PI)

Profitability Index shows the ratio of present value of inflows to the initial investment.

PI – Calculation

PI = Present Value of Future Cash Inflows / Initial Investment

PI – Interpretation

PI > 1 means the project is profitable and should be accepted.

4.5 Net Present Value (NPV) and Internal Rate of Return (IRR)

Definition

- **NPV (Net Present Value)**: The difference between the present value of cash inflows and the initial investment of a project.
- **IRR (Internal Rate of Return)**: The discount rate at which the NPV of a project becomes zero.

Net Present Value (NPV)

- Formula: **NPV = PV of Cash Inflows – Initial Investment**
- Positive NPV indicates the project is profitable.
- Negative NPV indicates the project may result in a loss.
- Considers the time value of money, making it a reliable investment appraisal tool.
- Helps compare projects of different sizes and durations.

Internal Rate of Return (IRR)

- IRR is the rate of return at which **NPV = 0**.
- If IRR > Cost of Capital, the project is acceptable.
- If IRR < Cost of Capital, the project should be rejected.
- Useful for ranking multiple projects based on their profitability.
- Considers the total cash flows and the time value of money.

Comparison of NPV and IRR

- Both consider the time value of money.
- NPV provides the absolute value of expected wealth addition.
- IRR provides the percentage return of the investment.
- NPV is more reliable when comparing projects with different scales or timing of cash flows.
- IRR is easier for managers and investors to interpret as a rate of return.

5.1 Concept of Working Capital

Definition

Working capital refers to the difference between a company's current assets and current liabilities. It represents the short-term financial health and operational efficiency of a business.

Meaning

- Indicates the company's ability to meet its short-term obligations.
- Shows the liquidity position of the firm.
- Helps in maintaining smooth business operations without interruptions.
- Adequate working capital ensures timely payment of debts, salaries, and other operational expenses.

Types of Working Capital

- **Gross Working Capital**: Total investment in current assets such as cash, inventory, and receivables.

- **Net Working Capital**: Difference between current assets and current liabilities.
    - Positive NWC: Current assets > Current liabilities; healthy liquidity.
    - Negative NWC: Current liabilities > Current assets; potential liquidity issues.

Importance

- Ensures smooth day-to-day operations by maintaining liquidity.
- Helps in avoiding financial crises due to shortage of funds.
- Facilitates better credit management and timely payments to suppliers.
- Allows the company to take advantage of trade discounts and market opportunities.
- Supports efficient inventory and cash management.

5.2 Liquidity vs. Profitability

Definition

- **Liquidity**: The ability of a business to meet its short-term obligations using current assets.
- **Profitability**: The ability of a business to earn profit over a period by efficiently utilizing resources.

Key Differences

- **Objective**:
    - Liquidity focuses on solvency and cash availability.
    - Profitability focuses on earning maximum returns.
- **Time Frame**:
    - Liquidity is concerned with short-term financial health.
    - Profitability is concerned with long-term wealth creation.
- **Measurement**:
    - Liquidity is measured using ratios like Current Ratio and Quick Ratio.
    - Profitability is measured using ratios like Net Profit Margin, ROE, and EPS.
- **Trade-off**:
    - High liquidity may reduce profitability because excess cash earns no returns.
    - High profitability may reduce liquidity if funds are tied in inventory or receivables.
- **Risk**:
    - Low liquidity increases the risk of insolvency.
    - Low profitability reduces shareholder wealth and growth potential.

5.3 Need and Importance of Working Capital

Definition

Working capital is the difference between current assets and current liabilities, representing the short-term financial strength and operational efficiency of a business.

Need of Working Capital

- **Smooth Operations**: Ensures the firm can run day-to-day operations without interruptions.
- **Meeting Short-Term Obligations**: Helps pay salaries, bills, and other immediate liabilities on time.
- **Inventory Management**: Provides funds to maintain adequate inventory for continuous production.
- **Creditworthiness**: Maintains good relationships with suppliers by ensuring timely payments.
- **Opportunity Utilization**: Enables taking advantage of trade discounts and sudden business opportunities.

Importance of Working Capital

- **Liquidity Management**: Ensures sufficient cash availability to meet short-term obligations.
- **Financial Stability**: Positive working capital indicates a healthy financial position.
- **Profitability**: Proper working capital management avoids overstocking or cash shortages, reducing unnecessary costs.
- **Operational Efficiency**: Smooth flow of funds improves production and sales efficiency.
- **Risk Reduction**: Minimizes the risk of insolvency and financial crises.
- **Supports Growth**: Adequate working capital helps finance expansion and new projects without liquidity strain.

5.4 Determinants of Working Capital

Definition

Determinants of working capital are the factors that influence the amount of current assets and current liabilities a business needs to maintain for smooth operations.

Key Determinants

- **Nature of Business**:
  - Manufacturing firms usually need more working capital than trading or service firms due to higher inventory and receivables.
- **Size of Business**:
  - Larger businesses require more working capital to support higher sales and operations.
- **Business Cycle**:
  - During expansion phases, working capital needs increase; during recession, it may decrease.
- **Production Cycle**:
  - Longer production periods require more funds tied in raw materials, WIP, and finished goods.
- **Credit Policy**:
  - Liberal credit to customers increases accounts receivable, raising working capital requirements.
  - Credit allowed by suppliers reduces the need for working capital.
- **Operating Efficiency**:
  - Efficient management of inventory, receivables, and payables reduces working capital needs.
- **Availability of Raw Materials**:
  - Seasonal or scarce materials require higher working capital to maintain buffer stock.
- **Profit Level**:
  - Higher profits increase retained earnings, reducing dependence on external funds for working capital.
- **Seasonal Factors**:
  - Businesses with seasonal demand may need extra working capital during peak periods.
- **Inflation and Price Levels**:
  - Rising costs increase the working capital required to maintain the same level of operations.

5.5 Components of Working Capital

Definition

Components of working capital are the elements that constitute current assets and current liabilities, forming the basis of short-term financial management.

Components of Current Assets

- **Cash and Cash Equivalents**: Funds available for immediate use to meet day-to-day obligations.

- **Accounts Receivable (Debtors)**: Money owed by customers for goods sold or services rendered on credit.
- **Inventory**: Raw materials, work-in-progress (WIP), and finished goods held for production and sales.
- **Marketable Securities**: Short-term investments that can be converted into cash quickly.
- **Prepaid Expenses**: Payments made in advance for services or goods to be received later.

Components of Current Liabilities

- **Accounts Payable (Creditors)**: Money owed to suppliers for purchases made on credit.
- **Short-Term Borrowings**: Loans or credit taken for meeting immediate operational needs.
- **Accrued Expenses**: Expenses incurred but not yet paid, like salaries or taxes.
- **Unearned Revenue**: Advance payments received from customers for goods/services not yet delivered.

5.6 Computation of Working Capital

Definition

Working capital is the difference between a company's current assets and current liabilities, representing short-term financial health.

Formula

- **Net Working Capital (NWC) = Current Assets – Current Liabilities**
- **Gross Working Capital** refers to the total value of current assets.

Steps to Compute Working Capital

1. **Identify Current Assets**:
    - Cash, accounts receivable, inventory, marketable securities, and prepaid expenses.
2. **Identify Current Liabilities**:
    - Accounts payable, short-term borrowings, accrued expenses, and unearned revenue.
3. **Subtract Current Liabilities from Current Assets**:
    - NWC = Current Assets – Current Liabilities

Example

- Current Assets: Cash = ₹50,000, Receivables = ₹1,00,000, Inventory = ₹80,000
- Current Liabilities: Payables = ₹70,000, Short-term Loan = ₹50,000

NWC = (50,000 + 1,00,000 + 80,000) – (70,000 + 50,000) = ₹1,30,000

Interpretation

- **Positive NWC**: Current assets exceed current liabilities; good liquidity.
- **Negative NWC**: Current liabilities exceed current assets; risk of insolvency.
- **Zero NWC**: Current assets equal current liabilities; adequate liquidity but no buffer.