SUBJECT - INVESTMENT MANAGEMENT AND FINANCIAL INSTITUTION

UNIT - 1	**Overview & Outline of Investments. Meaning & Types of Investments, Objectives of Investment, Process of Investment, Principles of Investment – Speculation, Gambling - Investment Process (Theory). Emerging, Dimensions in Online Investments Portals.**
UNIT - 2	**Mutual Funds overview- Meaning & Types of Mutual Funds, Asset Management Company (AMC), Trustees, Sponsor Company. Classification of Mutual Funds, Schemes as per SEBI Guidelines**
UNIT - 3	**Return: Meaning - Holding Period Return - Equivalent Annual Return - Expected Value of Return - Measuring Returns from Historical Data - Measuring Average Returns over Multiple Period - Arithmetic Average Geometric Average - Rupee Weighted Average Return (Including Problems).** **Risk: Meaning-Sources of Risk - Market Risk - Interest Risk Interest Rate Risk Purchasing Power Risk - Business Risk Financial Risk Types of Risk Systematic Risk Unsystematic Risk - Risk Aversion and Risk Premium - Measurement of Risk - Range as a Measure of Risk Standard Deviation as a Measure of Risk -ß as a Measure of Risk (Including Problems)**
UNIT - 4	**Portfolio Analysis: Meaning Traditional Vs Modern, Portfolio Analysis Return on Portfolio Risk on Portfolio Diversification of Investments - Reduction of Portfolio Risk through Diversification - Security Returns Perfectly Positively Correlated Perfectly Negatively Correlated Uncorrelated (Including Problems) Security Returns Security Returns**
UNIT - 5	**Financial Institutions in India: RBI,SEBI, IRDA, PFRDA, Corporate Governance and SEBI Role of central bank and commercial banks, Commercial Banking: Role of Banks, NPA, Risk Management in Banks, Basel Norms, Products offered by Banks and Fis, NBFCs and its types; comparison between Banks and NBFCs.**

UNIT 1

1. Overview & Outline of Investment

- **Investment Definition**: Investment refers to the allocation of money or resources in assets, ventures, or opportunities with the expectation of generating income or profit over time.
- **Purpose**: The primary purpose of investment is to grow wealth, manage risk, and secure financial stability over the long term.
- **Investment Types**: Investments are classified into different categories based on risk, return, and time horizon. The common categories are:
    - **Equities (Stocks)**
    - **Bonds**
    - **Real Estate**
    - **Commodities**
    - **Mutual Funds**
    - **Crypto currencies**
- **Outline of Investment Process**:

1. **Goal Setting**: Define investment objectives (growth, income, security).
2. **Risk Assessment**: Evaluate risk tolerance.
3. **Strategy Formulation**: Create an investment strategy.
4. **Asset Allocation**: Diversify investments across asset classes.
5. **Execution**: Make investments.
6. **Monitoring and Review**: Regularly track and review performance.

2. Meaning & Types of Investment

- **Meaning**: An investment is the act of committing money or capital to an asset, with the expectation of earning a return over time. This return could come in the form of income (dividends, interest) or capital appreciation (increase in asset value).
- **Types of Investments**:
    - **Equity Investments**: Purchase of company shares to earn dividends and capital gains.
    - **Debt Investments**: Purchase of bonds or lending money to governments or corporations for interest income.
    - **Real Estate**: Investing in physical property for rental income or capital appreciation.
    - **Commodities**: Investments in tangible assets like gold, oil, or agricultural products.
    - **Mutual Funds**: Pooled investment funds managed by professionals, consisting of stocks, bonds, or other assets.
    - **Cryptocurrency**: Digital currencies like Bitcoin and Ethereum are gaining popularity as speculative investments.

3. Objectives of Investment

- **Wealth Creation**: Build capital over time through dividends, interest, or appreciation of assets.
- **Income Generation**: Receive regular income from investments like dividends (stocks), interest (bonds), or rents (real estate).
- **Capital Preservation**: Minimize the risk of losing the original investment, especially in low-risk instruments like government bonds.
- **Tax Benefits**: Use tax-saving investment vehicles (e.g., tax-deferred retirement accounts) to reduce tax liability.
- **Liquidity**: Ensure easy access to funds when needed, depending on the type of investment (stocks, bonds, etc.).

4. Process of Investment

Steps in Investment Process**:**

1. **Goal Setting**: Determine what you want to achieve with the investment (e.g., retirement savings, buying a house).
2. **Risk Tolerance**: Assess how much risk you're willing to take. High-risk investments generally offer higher potential returns.
3. **Asset Allocation**: Diversify investments across different asset types to manage risk.
4. **Research**: Analyze different investment opportunities to find the best fit for your risk tolerance and goals.
5. **Execution**: Purchase or invest in selected assets.
6. **Monitoring and Review**: Continuously monitor your portfolio to ensure it aligns with your goals, and rebalance as necessary.

5. Principles of Investment

- **Time Horizon**: The length of time you plan to hold an investment affects the types of investments you choose.
- **Diversification**: Spreading investments across various asset types to reduce risk.
- **Risk and Return**: Generally, the higher the potential return, the higher the associated risk.
- **Liquidity**: Choose investments based on how quickly you may need to convert them to cash.
- **Patience**: Investment is a long-term strategy. Resist the temptation to make quick decisions based on market fluctuations.

6. Speculation vs. Gambling

- **Speculation**:
  - Involves making high-risk investments with the hope of gaining higher returns.
  - Based on analyzing market trends, company performance, and other economic factors.
  - Example: Buying stocks with the expectation that the price will rise.

- **Gambling**:
  - Involves taking on risk without much knowledge or analysis.
  - It is often based on chance and luck rather than careful decision-making.
  - Example: Betting on a game or lottery.

Speculation	Gambling
Based on analysis & knowledge	Based on chance or luck
Risk with the possibility of return	Risk without calculated returns
Long-term potential growth	Short-term, instant gratification

7. Investment Process (Theory) Theoretical Framework:

1. **Capital Asset Pricing Model (CAPM)**: A model that determines the expected return on an asset based on its risk (beta) compared to the market as a whole.
2. **Modern Portfolio Theory (MPT)**: Focuses on maximizing return for a given level of risk by diversifying the investment portfolio.
3. **Efficient Market Hypothesis (EMH)**: Suggests that all information is already reflected in stock prices, and it's impossible to "beat the market."

8. Emerging Dimensions in Online Investment Portals

- **Growth of Online Platforms**: Technology has transformed how people invest. Online platforms (like Robo-advisors, stock trading apps, and cryptocurrency exchanges) have made investing more accessible.
- **Key Features of Online Investment Portals**:
  - **User-Friendly Interfaces**: Easy-to-navigate platforms with clear dashboards for investors.
  - **Low Fees**: Many online platforms have lower fees compared to traditional brokers.
  - **Automated Investing**: Robo-advisors use algorithms to create and manage a diversified portfolio based on an individual's risk profile.
  - **Cryptocurrency Investment**: Online portals like Coinbase allow easy access to the cryptocurrency market.
  - **Real-time Data and Analytics**: Investors can access live stock prices, real-time news, and analytics.
- **Risks**:
  - **Cybersecurity**: With the rise of online investing, there's an increased risk of hacking and fraud.

  - **Market Manipulation**: Online trading platforms can sometimes lead to speculative bubbles or market manipulation.
- **Examples**:
  - **Robo-Advisors**: Betterment, Wealthfront.
  - **Cryptocurrency Exchanges**: Binance, Kraken.
  - **Stock Trading Apps**: Robinhood, E*TRADE.

UNIT 2

1. Overview of Mutual Funds

- **Definition**: A mutual fund is a pool of funds collected from multiple investors, which is managed by a professional fund manager. The pooled funds are invested in a diversified portfolio of stocks, bonds, or other securities. The objective is to generate returns for investors based on the performance of these investments.
- **Structure**:
  - **Investors**: Individuals who invest in the mutual fund.
  - **Fund Manager**: A professional responsible for managing the fund's investments.
  - **Custodian**: A financial institution that holds the fund's assets in safekeeping.
- **Benefits of Mutual Funds**:
  - **Diversification**: Investment in a mix of assets to reduce risk.
  - **Professional Management**: Fund managers who have expertise in selecting and managing investments.
  - **Liquidity**: Most mutual funds allow investors to redeem their shares at any time.
  - **Affordability**: Investors can access large portfolios for small amounts of money.
  - **Regulated**: Mutual funds are regulated by authorities like SEBI in India, ensuring investor protection.

2. Meaning of Mutual Funds

- **Mutual Fund Definition**: A mutual fund is a financial vehicle that pools funds from various investors to invest in a diversified portfolio of stocks, bonds, or other securities. The value of the mutual fund depends on the market value of the securities in which it invests.
- **NAV (Net Asset Value)**: The NAV is the price at which mutual fund units are bought or sold. It is calculated as the total market value of the fund's assets minus liabilities, divided by the number of outstanding units.

  NAV=Outstanding UnitsTotal Assets−Total Liabilities

3. Types of Mutual Funds

Mutual funds are classified based on different parameters such as investment objectives, structure, and risk levels. Below are the common types:

- **Equity Mutual Funds**:

  - These funds invest primarily in stocks. They have the potential for high returns but come with higher risk.
  - **Examples**: Large-cap funds, mid-cap funds, small-cap funds, sectoral funds.

- **Debt Mutual Funds**:
  - These funds invest in fixed income securities such as government bonds, corporate bonds, or money market instruments. They are relatively safer but provide lower returns.
  - **Examples**: Short-term funds, long-term funds, corporate bond funds.
- **Hybrid Mutual Funds**:
  - A mix of both equity and debt instruments. These funds aim to balance the risk and return.
  - **Examples**: Balanced funds, target-date funds.
- **Index Funds**:
  - These funds replicate the performance of a specific index like the Nifty 50 or Sensex.
- **Sectoral/Thematic Funds**:
  - Focuses on a specific sector or theme such as technology, healthcare, or infrastructure.
- **Money Market Funds**:
  - Invest in short-term debt instruments like Treasury bills, commercial papers, etc. They are low risk with low returns.

4. Asset Management Company (AMC)

- **Definition**: An Asset Management Company (AMC) is a firm that manages mutual funds on behalf of investors. The AMC is responsible for collecting funds from investors, investing them in suitable securities, and managing the portfolio to achieve the fund's objectives.
- **Functions of AMC**:
  - **Fund Management**: The AMC hires fund managers who decide on which assets to buy and sell.
  - **Research and Analysis**: AMCs have research teams that analyze market conditions and economic factors.
  - **Compliance**: Ensure compliance with regulatory requirements like SEBI guidelines.
  - **Dissemination of Information**: Regular updates and reports on fund performance.
- **Examples of AMCs**: HDFC Asset Management, ICICI Prudential Asset Management, SBI Mutual Fund, etc.

5. Role of Trustees in Mutual Funds

- **Definition**: A trustee is a third-party body that ensures that the mutual fund is managed in accordance with the interests of the investors. The trustee is usually a financial institution or a trust company.
- **Functions of Trustees**:
  - **Oversight**: They monitor the AMC's activities to ensure that the fund's investments are in line with the objectives and regulations.
  - **Investor Protection**: Ensure that the fund is managed in the best interests of investors and that the assets are safeguarded.
  - **Compliance**: Ensure that the fund adheres to SEBI regulations and other legal requirements.
- **Trustee's Responsibilities**:
  - Safeguarding investors' interests.
  - Reviewing the performance of the AMC.
  - Ensuring that disclosures are made to investors.

6. Sponsor Company

- **Definition**: The sponsor company is the entity that initiates and sets up a mutual fund. It is typically a financial services company, bank, or any corporation with the necessary expertise in managing investment funds.
- **Responsibilities of Sponsor**:
  - **Initiating the Fund**: The sponsor provides the initial capital and sets up the fund structure.
  - **Appointing the AMC**: The sponsor appoints the asset management company (AMC) to manage the fund's operations.
  - **Establishing the Trust**: The sponsor helps in the creation of a trust, under which the mutual fund operates.
- **Examples of Sponsor Companies**:
  - HDFC Ltd. (HDFC Mutual Fund)
  - ICICI Bank (ICICI Prudential Mutual Fund)
  - SBI (SBI Mutual Fund)

7. Classification of Mutual Funds (as per SEBI Guidelines)

SEBI (Securities and Exchange Board of India) lays down guidelines for the classification of mutual funds in India. The classification helps investors understand the structure and objectives of various funds.

- **Based on Asset Class**:
  - **Equity Funds**: Invest primarily in equities (stocks).
  - **Debt Funds**: Invest in bonds and fixed-income instruments.
  - **Hybrid Funds**: A mixture of equity and debt.
- **Based on Structure**:

  - **Open-End Funds**: These funds allow investors to buy or sell units anytime.
  - **Close-End Funds**: These funds have a fixed tenure, and investors can only buy or sell units at specific intervals.
- **Based on Investment Objective**:
  - **Growth Funds**: Aim for long-term capital appreciation through equity investments.
  - **Income Funds**: Aim to provide regular income, usually through debt investments.
  - **Balanced Funds**: Invest in both equity and debt to provide growth and income.
- **Thematic/Sectoral Funds**: These funds focus on specific sectors or themes, such as technology or healthcare.
- **Tax-Saving Funds (ELSS)**: These funds offer tax benefits under Section 80C of the Income Tax Act.

8. Mutual Fund Schemes as per SEBI Guidelines

SEBI mandates the following classifications and requirements for mutual fund schemes in India:

- **Equity Scheme**: At least 65% of the fund's assets must be invested in equity and equity-related instruments.
- **Debt Scheme**: A fund that primarily invests in debt instruments such as bonds, debentures, and government securities.
- **Hybrid Scheme**: Invests in a combination of equity and debt, with a specified percentage for each. Examples include balanced funds, which invest 65% in equity and the rest in debt.
- **Money Market Fund**: Invests primarily in short-term money market instruments such as Treasury bills, certificates of deposit, etc.
- **Index Fund**: A passively managed fund that aims to replicate the performance of a specific index, such as the Nifty 50.
- **Exchange-Traded Funds (ETFs)**: These are traded on the stock exchange like stocks and track indices or commodities.
- **Sector-Specific Funds**: These funds concentrate on specific industries such as banking, infrastructure, or healthcare.
- **Tax-Saving Schemes (ELSS)**: Equity Linked Savings Schemes (ELSS) qualify for tax exemptions under Section 80C of the Income Tax Act. These funds have a lock-in period of 3 years.
- **Fund of Funds**: These funds invest in other mutual funds rather than directly in stocks, bonds, or other securities.
- **Liquid Funds**: These are short-term funds that invest in cash-equivalent instruments like Treasury bills and repurchase agreements. They are very low-risk, short-term investments.

Key Points to Remember:

- **SEBI Guidelines** ensure transparency, proper disclosure, and protection of investors' interests in the mutual fund industry.
- **Types of Mutual Funds**: Equity, Debt, Hybrid, Sectoral, and Tax-Saving (ELSS).
- **Mutual Fund Management** involves different entities like AMC, Trustees, and Sponsors.
- **Role of AMCs** is crucial in managing, researching, and distributing funds.
- **NAV**: Key metric used to determine the value of a mutual fund.

UNIT 3

1. Meaning of Return

- **Return** is the profit or loss made on an investment relative to the initial amount invested. It can be expressed as a percentage and represents the earnings or losses an investor gains from their investment over a period.

2. Holding Period Return (HPR)

- **Definition**: Holding Period Return is the total return an investor earns from an investment over a specified period, including dividends, interest, and capital gains. It does not consider the frequency of cash flows but simply the gain or loss from holding an asset.

3. Equivalent Annual Return (EAR)

- **Definition**: Equivalent Annual Return is the return on an investment expressed as an annualized rate. It is used to compare investments with different holding periods on an equal basis.

4. Expected Value of Return

- **Definition**: The expected return is the weighted average of all possible returns, where the weights are the probabilities of each outcome occurring. It reflects the anticipated return from an investment considering all possible scenarios.

5. Measuring Return from Historical Data

- **Historical Return** refers to the past performance of an investment over a specific period. It is used to assess how the investment has performed historically, which can help in forecasting future returns.

6. Measuring Average Return Over Multiple Periods

To calculate the average return over multiple periods, we typically use **Arithmetic Average** or **Geometric Average**.

7. Arithmetic Average

- **Definition**: The arithmetic average return is the sum of returns over multiple periods divided by the number of periods. It is useful for assessing the average return of a series of investments.

8. Geometric Average (CAGR)

- **Definition**: The geometric average is the compounded average return over multiple periods. It accounts for the effect of compounding and is more accurate when returns fluctuate.

9. Rupee Weighted Average Return (RWRR)

- **Definition**: Rupee Weighted Average Return (also known as **Money-Weighted Return**) measures the return on an investment by considering the timing and amount of cash flows (e.g., additional investments or withdrawals). It is similar to the internal rate of return (IRR).

Summary of Key Concepts:

- **Return** is the gain or loss from an investment.
- **Holding Period Return (HPR)** measures returns over a specific period.
- **Equivalent Annual Return (EAR)** annualizes returns for different holding periods.
- **Expected Return** uses probabilities to estimate future returns.
- **Historical Return** reflects past performance.
- **Arithmetic Average** is the simple mean of returns.
- **Geometric Average (CAGR)** accounts for compounding over time.
- **Rupee Weighted Average Return** considers cash flows and is similar to IRR.

RISK

1. Meaning of Risk

- **Risk** refers to the possibility of an uncertain outcome or event that could impact the value of an investment. In finance, risk generally involves the potential for an investment's return to be different from the expected return, which could be either higher or lower.
- Risk is an inherent part of investing, and understanding it is crucial for making informed decisions.
- **Types of Risk**:
  - **Systematic Risk (Market Risk)**: The risk that affects the entire market or economy.

- **Unsystematic Risk (Specific Risk)**: The risk that affects a particular company or industry.

2. Sources of Risk

There are multiple sources from which risk arises, and these can impact the performance of investments. The most common sources include:

1. **Market Risk**:
   - Market risk, or **systematic risk**, affects the overall financial markets and cannot be eliminated through diversification. It includes risks like economic downturns, political instability, or changes in interest rates that impact all securities in the market.
   - **Types of Market Risks**:
     - **Equity Risk**: The risk associated with the price fluctuations of stocks.
     - **Interest Rate Risk**: The risk that changes in interest rates will affect the value of an investment.
     - **Currency Risk**: The risk of changes in exchange rates affecting the value of international investments.
     - **Commodity Risk**: The risk of price changes in commodities like oil, gold, etc.
2. **Interest Rate Risk**:
   - **Interest rate risk** is the potential impact of changes in interest rates on the value of an investment, especially for bonds and other fixed-income securities.
   - When interest rates rise, the value of existing bonds falls because newer bonds will pay higher yields, making older bonds less attractive.
   - This risk is particularly significant for investors in **long-term bonds**.
3. **Credit Risk (Default Risk)**:
   - Credit risk is the risk that a borrower will default on their obligations, meaning they will be unable to repay the debt they owe. This is especially relevant for bondholders and lenders.
   - **Example**: A company that defaults on its bonds or a government that defaults on its debt.
4. **Liquidity Risk**:
   - Liquidity risk arises when an asset cannot be bought or sold quickly enough in the market to prevent or minimize a loss. In less liquid markets, it may be difficult to sell an asset without affecting its price significantly.
   - This risk is more common in real estate or less frequently traded stocks.
5. **Inflation Risk**:
   - Inflation risk is the risk that the value of returns from an investment will be eroded by inflation, i.e., the purchasing power of the returns decreases over time.

3. Market Risk

- **Definition**: Market risk, also known as **systematic risk**, refers to the risk of losses due to factors affecting the overall performance of financial markets. This type of risk is linked to broad economic factors and cannot be diversified away.
- **Types of Market Risk**:
    1. **Equity Risk**: Risk of price fluctuations in the stock market.
    2. **Interest Rate Risk**: As interest rates change, the value of bonds and other fixed-income securities may fluctuate.
    3. **Currency Risk**: For international investments, changes in currency exchange rates can affect the value of the investment.
    4. **Commodity Risk**: Risk due to fluctuations in commodity prices, such as oil, metals, or agricultural products.
- **Measurement of Market Risk**:
    - **Beta Coefficient**: Beta is a measure of an asset's sensitivity to market movements. A beta greater than 1 indicates that the asset is more volatile than the market, while a beta less than 1 indicates less volatility.

4. Interest Rate Risk

- **Definition**: **Interest rate risk** refers to the risk that changes in interest rates will affect the value of an investment, particularly for fixed-income securities like bonds.
- **How Interest Rate Risk Affects Different Securities**:
    1. **Bonds**: When interest rates rise, the value of existing bonds falls. This is because new bonds are issued with higher interest rates, making older bonds with lower rates less attractive.
    2. **Stocks**: Interest rate changes can affect a company's cost of borrowing, which in turn impacts its profitability. Higher interest rates can lead to lower profits, which may negatively affect stock prices.
- **Types of Interest Rate Risk**:
    - **Price Risk**: The change in the market price of bonds due to interest rate fluctuations.
    - **Reinvestment Risk**: The risk that the income from an investment cannot be reinvested at the same rate as the original investment.
- **Measurement of Interest Rate Risk**:
    - **Duration**: Duration measures the sensitivity of a bond's price to interest rate changes. A higher duration means greater sensitivity to interest rate movements.
    - **Modified Duration**: A more refined version of duration, it directly measures price sensitivity to interest rate changes.

5. Financial Risk

- **Definition**: Financial risk refers to the risk associated with the financial structure and decisions of an entity, such as the risk of a company being unable to meet its financial obligations (e.g., debt payments).
- **Sources of Financial Risk**:
  1. **Leverage Risk**: Companies with higher leverage (more debt) are at greater risk of financial distress if they cannot meet their debt obligations.
  2. **Liquidity Risk**: The inability to meet short-term financial obligations due to a lack of liquid assets.
  3. **Credit Risk**: The risk that a company will default on its debt payments.
  4. **Operating Risk**: Risks associated with the operational management of the company, including costs and revenue streams.
- **Measurement of Financial Risk**:
  - **Debt-to-Equity Ratio**: Measures the financial leverage of a company. A higher ratio indicates higher financial risk.
  - **Interest Coverage Ratio**: Measures a company's ability to meet interest payments on its debt.

6. Measurement of Risk

Risk measurement involves evaluating the degree of uncertainty in the return of an investment or portfolio. There are various methods to measure risk, and the two most commonly used methods are **Standard Deviation** and **Value at Risk (VaR)**.

1. **Standard Deviation**
   - **Definition**: Standard deviation measures the degree of variation or dispersion of returns from the mean (expected return).
   - **Formula**: σ=1n∑i=1n(Ri−R¯)2\sigma = \sqrt{\frac{1}{n}\sum_{i=1}^n (R_i - \bar{R})^2}σ=n1i=1∑n(Ri−R¯)2 where:
     - RiR_iRi is the return in the iii-th period,
     - R¯\bar{R}R¯ is the average return,
     - nnn is the number of periods.
   - A higher standard deviation means higher volatility and risk.
2. **Value at Risk (VaR)**
   - **Definition**: VaR is a statistical technique used to measure the risk of loss on an investment over a specified period for a given confidence interval. It estimates the maximum loss that is not exceeded with a given probability.
   - **Formula**: VaR=Portfolio Value×Standard Deviation of Returns×Z\text{VaR} = \text{Portfolio Value} \times \text{Standard Deviation of Returns} \times ZVaR=Portfolio Value×Standard Deviation of Returns×Z where **Z** is the Z-score corresponding to the desired confidence level (e.g., 1.96 for 95% confidence).

3. **Beta**
   - **Definition**: Beta measures the volatility of an asset in relation to the overall market. It indicates the degree to which an asset's returns move in relation to market returns.
   - **Formula**:
     β=Covariance between asset and marketVariance of market returns\beta = \frac{\text{Covariance between asset and market}}{\text{Variance of market returns}}β=Variance of market returnsCovariance between asset and market
     - A **beta of 1** means the asset moves in line with the market.
     - A **beta greater than 1** indicates more volatility than the market.
     - A **beta less than 1** indicates less volatility than the market.

Conclusion:

Understanding the various types and sources of risk, such as **market risk**, **interest rate risk**, and **financial risk**, is essential for making informed investment decisions. Measuring risk using tools like **standard deviation**, **VaR**, and **beta** helps investors assess the level of uncertainty and make better risk-adjusted returns. Managing these risks involves strategies such as diversification, hedging, and proper asset allocation.

UNIT 4

Introduction to Portfolio Analysis

Portfolio analysis refers to the process of evaluating and selecting the best combination of investments (or assets) to achieve a specific investment objective while managing risk. A **portfolio** is a collection of different investments, such as stocks, bonds, mutual funds, and other securities.

The primary goal of portfolio analysis is to maximize the return for a given level of risk or to minimize risk for a given level of return. This process involves evaluating the **return** and **risk** associated with different assets, and constructing a diversified portfolio that balances the two.

2. Traditional vs. Modern Portfolio Analysis

Traditional Portfolio Analysis

- **Definition**: Traditional portfolio analysis is based on the concept of investing in individual assets to achieve a desired return. It focuses on the analysis of each asset independently rather than on the overall portfolio of assets.
- **Key Features**:
    1. **Asset Selection**: It emphasizes choosing individual assets based on their expected return, risk, and individual characteristics.
    2. **Risk and Return**: In traditional portfolio analysis, each asset is considered independently, without much consideration for the correlation between assets.
    3. **Emphasis on Diversification**: The theory focuses more on investing in a variety of assets to spread risk, but does not incorporate the concept of correlation and covariance in a rigorous manner.
    4. **Investor's Objective**: The primary objective is to achieve the highest return with the least amount of risk based on the investor's risk tolerance.
- **Limitations**:
    - Traditional portfolio theory ignores the interactions (correlation) between assets.
    - It does not fully consider how the combination of assets in a portfolio can reduce risk.

Modern Portfolio Theory (MPT)

- **Definition**: Modern Portfolio Theory, developed by **Harry Markowitz** in the 1950s, revolutionized portfolio management by introducing the concept of diversification to

reduce risk. MPT focuses on **portfolio optimization**, where both the expected return and risk (volatility) of a portfolio are considered.

- **Key Features**:
  1. **Risk and Return on a Portfolio**: Unlike traditional analysis, MPT takes into account the correlation and covariance between assets in the portfolio, which helps in reducing risk through diversification.
  2. **Efficient Frontier**: MPT introduces the **efficient frontier**, a graphical representation that shows the best possible combination of risk and return. Portfolios on the efficient frontier provide the highest return for a given level of risk.
  3. **Diversification**: Diversification is a core principle of MPT. By combining assets with low or negative correlations, investors can reduce the overall risk of the portfolio.
  4. **Optimal Portfolio**: MPT uses mathematical models to find the optimal portfolio that maximizes return for a given level of risk or minimizes risk for a given level of return.
  5. **Use of Covariance and Correlation**: MPT emphasizes the use of **covariance** and **correlation** to determine how assets interact in a portfolio and how their returns can offset each other.
- **Key Concepts in MPT**:
  1. **Expected Return**: The weighted average of the returns of the assets in the portfolio.
  2. **Risk (Volatility)**: The standard deviation of the portfolio's return, taking into account the variance and covariance between the assets in the portfolio.
  3. **Correlation**: The degree to which two assets move in relation to each other. A negative correlation between assets reduces portfolio risk.
- **Limitations**:
  - MPT assumes that investors are rational and always make decisions based on the mean and variance of returns.
  - It relies on historical data to predict future performance, which may not always be accurate.
  - It assumes markets are efficient and investors can diversify without transaction costs.

3. Return and Risk on a Portfolio

The **return** and **risk** of a portfolio are determined by the combined effects of the individual assets in the portfolio.

Return on a Portfolio

The return on a portfolio is the **weighted average** of the returns on the individual assets in the portfolio.

- **Formula**:

  Rp=∑i=1nwi·RiR_p = \sum_{i=1}^n w_i \cdot R_iRp=i=1∑nwi·Ri

  Where:

  - RpR_pRp = Portfolio return
  - wiw_iwi = Weight of asset iii in the portfolio
  - RiR_iRi = Return of asset iii
  - nnn = Number of assets in the portfolio

  Example: Suppose a portfolio has two assets:

  - Asset A: 60% weight, return of 8%
  - Asset B: 40% weight, return of 12%

  Portfolio return:

  Rp=(0.60×8%)+(0.40×12%)=9.6%R_p = (0.60 \times 8\%) + (0.40 \times 12\%) = 9.6\%Rp=(0.60×8%)+(0.40×12%)=9.6%

Risk on a Portfolio

The risk of a portfolio is measured by the **standard deviation** of its return, which is influenced by the individual risks of the assets and how they interact with each other.

Key Points:

- When assets in the portfolio are negatively correlated, the overall risk can be reduced, as the poor performance of one asset may be offset by the good performance of another.
- Diversification reduces risk but does not eliminate it completely. The overall portfolio risk depends on the correlation between the assets.

4. Efficient Frontier and Capital Market Line (CML)

Efficient Frontier

- The **Efficient Frontier** is a graph that shows the optimal portfolios that provide the highest return for a given level of risk or the lowest risk for a given level of return.
- Portfolios that lie on the efficient frontier are considered **efficient** because they maximize returns for the least amount of risk.

Capital Market Line (CML)

- The **Capital Market Line (CML)** is a line on the risk-return graph that represents the best possible portfolio of risky assets combined with a risk-free asset.
- It shows the **optimal trade-off between risk and return** for a portfolio that includes both risky assets and a risk-free asset (e.g., government bonds).
- The slope of the CML represents the **Sharpe ratio**, which is the ratio of excess return to the total risk of the portfolio.

5. Diversification and Its Benefits

- **Diversification** refers to the practice of spreading investments across different assets or asset classes to reduce risk. By holding a variety of assets that are not perfectly correlated, the overall portfolio risk is reduced.
- **Benefits of Diversification**:
    1. **Risk Reduction**: By combining assets with low or negative correlations, the overall portfolio risk can be reduced without sacrificing returns.
    2. **Improved Returns**: A diversified portfolio can potentially lead to more consistent returns by smoothing out the volatility of individual assets.
    3. **Lower Volatility**: Diversification helps in lowering the volatility of the portfolio compared to individual asset risk.

6. Conclusion

- Portfolio analysis is a crucial tool for managing investments and balancing risk and return. Understanding the differences between **traditional** and **modern** portfolio analysis allows investors to make better decisions in constructing their portfolios.
- **Modern Portfolio Theory (MPT)** provides a more rigorous approach to optimizing portfolios by considering diversification and the relationships between assets, while **traditional portfolio analysis** focuses on individual asset evaluation.
- Diversification is essential in reducing risk, and investors should aim for the **efficient frontier** to achieve the best trade-off between risk and return. Through careful portfolio construction, it is possible to maximize returns while minimizing risks.

Unit - 5

1. Introduction to Financial Institutions in India

Financial institutions are entities that provide financial services, such as capital, credit, and risk management to individuals, businesses, and governments. In India, these institutions play a critical role in supporting economic development, facilitating investments, and ensuring the smooth functioning of the financial markets. They include **banks**, **non-banking financial companies (NBFCs)**, **insurance companies**, **mutual funds**, **pension funds**, and more.

2. Types of Financial Institutions in India

A. Banks

Banks are the most prominent financial institutions in India. They accept deposits and provide loans to individuals, businesses, and government entities. They are regulated by the **Reserve Bank of India (RBI)**.

- **Commercial Banks**: These include **public sector banks** (e.g., State Bank of India, Punjab National Bank), **private sector banks** (e.g., HDFC Bank, ICICI Bank), and **foreign banks** (e.g., Citibank, Standard Chartered).
    - **Role**: Provide a wide range of financial products including savings accounts, loans, credit cards, and more.
    - **Products**:
        - **Loans**: Home loans, personal loans, business loans, educational loans, etc.
        - **Deposits**: Fixed deposits, savings accounts, recurring deposits.
        - **Credit Cards & Debit Cards**.
        - **Wealth Management & Investment**: Mutual funds, insurance products.
- **Cooperative Banks**: These are banks organized on a cooperative basis, generally operating at a local level, serving specific communities or groups.
    - **Role**: Promote savings and provide financial credit facilities to their members.
    - **Products**: Saving accounts, agricultural loans, short-term loans, and microfinance services.

B. Non-Banking Financial Companies (NBFCs)

NBFCs are financial institutions that provide a wide variety of financial services but cannot take deposits like banks. They are regulated by the **Reserve Bank of India (RBI)**.

- **Role**: NBFCs provide services such as asset financing, loans, investment products, and wealth management.
- **Types of NBFCs**:
  - **Asset Finance Companies (AFCs)**: Provide loans for buying vehicles, equipment, etc.
  - **Loan Companies (LCs)**: Provide loans for a variety of needs such as personal loans and business loans.
  - **Investment Companies (ICs)**: Deal in investments in shares and securities.
  - **Microfinance Institutions (MFIs)**: Provide micro loans to individuals, mainly in rural areas.
- **Products**:
  - **Loans**: Personal loans, vehicle loans, business loans, etc.
  - **Lease Financing**: Asset leasing options for businesses.
  - **Investment Products**: Mutual funds, share investments.
  - **Factoring Services**: Financing against receivables.

C. Insurance Companies

Insurance companies in India provide risk management through various products like life insurance, health insurance, general insurance, and more.

- **Role**: Protect individuals and businesses against financial loss from risks like accidents, health issues, or property damage.
- **Products**:
  - **Life Insurance**: Term life, endowment, ULIPs (Unit Linked Insurance Plans), pension plans.
  - **Health Insurance**: Mediclaim, critical illness insurance, family floater plans.
  - **General Insurance**: Car insurance, property insurance, travel insurance.

D. Mutual Funds

Mutual funds pool money from several investors and invest in a diversified portfolio of stocks, bonds, and other securities.

- **Role**: Offer a way for individuals to invest in diversified portfolios and access professional management.
- **Products**:
  - **Equity Funds**: Invest primarily in equities (stocks).
  - **Debt Funds**: Invest in bonds and fixed-income securities.
  - **Hybrid Funds**: Combine both equity and debt.
  - **Index Funds and ETFs (Exchange-Traded Funds)**: Passively managed funds that track an index.

E. Pension Funds

Pension funds in India manage the retirement savings of individuals and provide a regular income to retirees.

- **Role**: Help people save for retirement and provide them with steady income after retirement.
- **Products**:
  - **National Pension Scheme (NPS)**: A government-sponsored retirement savings scheme.
  - **Private Pension Plans**: Provided by various insurance companies and mutual funds.

F. Development Financial Institutions (DFIs)

DFIs are institutions set up by the government or private entities to promote the economic development of various sectors.

- **Role**: Provide long-term capital to promote infrastructure, industries, and agricultural development.
- **Products**:
  - **Project Financing**: Financing for long-term capital projects.
  - **Term Loans**: Loans for industrial and infrastructure projects.
  - **Equity Financing**: Investment in equity for growth-oriented companies.
- **Examples**: Industrial Finance Corporation of India (IFCI), Small Industries Development Bank of India (SIDBI).

G. Venture Capital (VC) and Private Equity (PE) Firms

VC and PE firms provide funding to startups and businesses in exchange for equity stakes.

- **Role**: Help promote new businesses by providing funds for growth and expansion.
- **Products**:
  - **Venture Capital Funds**: Focus on early-stage investments in high-growth companies.
  - **Private Equity Funds**: Invest in more mature businesses, often through buyouts or significant equity stakes.

3. Role of Financial Institutions in India

- **Capital Formation**: Financial institutions channelize savings into investments, thus contributing to capital formation in the economy.

- **Economic Growth**: By providing loans and financing to businesses and industries, these institutions support economic growth and development.
- **Risk Management**: Institutions like insurance companies help in spreading and mitigating risk.
- **Investment Vehicles**: Mutual funds, pension funds, and other institutions help people and institutions invest in diversified portfolios.
- **Financial Inclusion**: Through various products such as microfinance and low-cost insurance, financial institutions contribute to improving financial inclusion, especially in rural areas.

4. Difference Between Banks and NBFCs

Feature	Banks	NBFCs (Non-Banking Financial Companies)
Regulation	Regulated by **RBI** and follow banking regulations.	Regulated by **RBI**, but not governed by the same banking regulations as banks.
Deposit Acceptance	Can accept deposits from the public.	Cannot accept deposits from the public.
Lending	Provide loans and credit services to individuals and businesses.	Provide loans and credit, but at a limited scale compared to banks.
Financial Services	Offer a wide range of services like savings accounts, loans, payment services, etc.	Offer loans, asset management, leasing, factoring, etc.
Types of Products	Savings accounts, current accounts, fixed deposits, loans, etc.	Loans, asset financing, leasing, microfinance, etc.
Deposit Insurance	Deposits are insured under **DICGC** (Deposit Insurance and Credit Guarantee Corporation).	Deposits are **not** insured.
Reserve Requirements	Must maintain **Cash Reserve Ratio (CRR)** and **Statutory Liquidity Ratio (SLR)**.	Not required to maintain CRR and SLR.
Scope of Operation	Can operate in a wide range of financial sectors.	Primarily engaged in specific services like loans, leasing, etc.

5. Conclusion

Financial institutions in India play a crucial role in supporting economic growth, providing various products and services such as loans, insurance, investments, and wealth management. While **banks** are more regulated and offer a broad range of financial products (including deposits and credit), **NBFCs** offer specialized services, often with a focus on loans, leasing, and asset financing. Understanding the distinction between banks and NBFCs, along with their roles and products, is essential for making informed financial decisions.