

# SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT





# UNIT 1

- OVERVIEW OF INVESTMENT

# INVESTMENT

- **DEFINITION**
- Investment is the dedication of an asset to attain an increase in value over a period of time. Investment requires a sacrifice of some present asset, such as time, money, or effort. In finance, the purpose of investing is to generate a return from the invested asset.

# Different types of investments

- Growth investments
- Shares
- Property
- Defensive investments
- Cash
- Fixed interest



# FINANCIAL INVESTMENT

**Financial investment refers to putting aside a fixed amount of money and expecting some kind of gain out of it within a stipulated time frame.**



# ECONOMICAL INVESTMENT

The concept of economic investment means addition to the capital stock of the society. The capital stock of the society is the goods which are used in the production of other goods.



# INVESTMENT PROCESS

**Step 1- Understanding the client**

**Step 2- Asset allocation decision**

**Step 3- Portfolio strategy selection**


**Step 4- Asset selection decision**

**Step 5- Evaluating portfolio  
performance**






- **Step 1: Determine Your Investment Objectives and Risk Profile**

- Through personal consultations, we will develop a personal profile of your individual investment needs and objectives and time horizon. We will help you determine whether you need investments that generate income, offer growth potential, or a combination of both. It is also critical to understand risk, the types of risk that you potentially face, and your attitude toward these risks.
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- **Step 2- Asset allocation decision**

- This step involves decision on how to allocate the investment across different asset classes, i.e. fixed income securities, equity, real estate etc. It also involves decision of whether to invest in domestic assets or in foreign assets. The investor will make this decision after considering the macroeconomic conditions and overall market status.
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- **Step 3- Portfolio strategy selection**

- Third step in the investment process is to select the proper strategy of portfolio creation. Choosing the right strategy for portfolio creation is very important as it forms the basis of selecting the assets that will be added in the portfolio management process.
  - *There are two types of portfolio strategy.*
  - Active Management Process
  - Passive Management Process
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## • **Step 4- Asset selection decision**

- The investor needs to select the assets to be placed in the portfolio management process in the fourth step. Within each asset class, there are different sub asset-classes. For example, in equity, which stocks should be chosen? Within the fixed income securities class, which bonds should be chosen?
- Also, the investment objectives should conform to the investment policies because otherwise the main purpose of investment management process would become meaningless.

- **Step 5- Evaluating portfolio performance**
- This is the final step in the investment process which evaluates the portfolio management performance. This is an important investing process step as it measures the performance of the investment with respect to a benchmark, in both absolute and relative terms. The investor would determine whether his objectives are being achieved or not.

# CHARACTERISTICS OF INVESTMENT

**1 RISK FACTOR**

**2 RETURN**

**3 SAFETY**




**4 INCOME STABILITY**

**5 LIQUIDITY**

# OBJECTIVES OF INVESTMENT



# Investment Vs. Speculation

	INVESTMENT	SPECULATION
 TIME HORIZON	Long-term, saving for future	Generally a short timeline of less than one year
 LEVEL OF RISK	Moderate	High
 INVESTOR ATTITUDE	Cautious and conservative	Aggressive
 DECISION CRITERIA	Based on fundamental and basic factors	Based on technical charts, market psychology and individual opinion
 EXAMPLES	Stock market, bonds, mutual funds	Options, foreign currencies, cryptocurrencies

# CATEGORY OF INVESTMENT





# Risk and Return on investment

- **The risk-return tradeoff is an investment principle that indicates that the higher the risk, the higher the potential reward. To calculate an appropriate risk-return tradeoff, investors must consider many factors, including overall risk tolerance, the potential to replace lost funds and more.**

# Factors Influencing Risk

- **5 key factors that can affect your investment risk tolerance**
- Your investment time frame.
- Your risk capital.
- Your investment experience.
- Your investment objectives.
- The actual investment you're considering.

Economic growth

Confidence

Interest rates

Factors affecting Investment

Availability of finance

State of technology

# Measuring Risk and Return

- **How can you measure the risk?**
- The five measures include the **alpha, beta, R-squared, standard deviation, and Sharpe ratio**. Risk measures can be used individually or together to perform a risk assessment.  
When comparing two potential investments, it is wise to compare like for like to determine which investment holds the most risk.

- **What is return and how is it measured?**
- **Return on investment (ROI) is calculated by dividing the profit earned on an investment by the cost of that investment.** For instance, an investment with a profit of \$100 and a cost of \$100 would have a ROI of 1, or 100% when expressed as a percentage.

## Risk/Return Tradeoff



# Valuation of Equity

- The main purpose of equity valuation is to estimate a value for a firm or its security
- There are a number of different methods of value a company with one of the primary ways being the comparable approach.

# Valuation Multiples

Equity Multiples ← *2 types* → Enterprise Value Multiples

Comparable Company Analysis  
(\*Comps\*) ← *2 methods* → Precedent Transaction Analysis  
(\*Precedents\*)



# Dividend model

- The Dividend Discount Model (DDM) is a quantitative method of valuing a company's stock price based on the assumption that the current fair price of a stock equals the sum of all of the company's future dividends. The primary difference in the valuation methods lies in how the cash flows are discounted.

# Price/Earnings Approach.

- The price earnings compares the earnings per share reported by a company to the market price of its common stock. This multiple is used by investors to judge how expensive a share of the company's stocks.



# UNIT 2

- STOCK MARKETS
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# STOCK MARKET

- The stock market broadly refers to the collection of exchanges and other venues where the buying, selling, and issuance of shares of publicly held companies take place. Such financial activities are conducted through institutionalized formal exchanges or via over-the-counter (OTC) marketplaces that operate under a defined set of regulations.

# **STOCK MARKET DEFINITION**

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**Stock markets allow investors to buy and sell shares in publicly traded companies.**



# STOCK MARKET

V/S

# STOCK EXCHANGE

Without a stock market, trades would have no motivation to exist.

OTC, ECN, Stock Exchange

The stock market is all stock exchanging through different parkways

Stock market doesn't work as a clearing house.

**SYSTEM**

**TYPES**

**CONSIDERATION**

**CLEARING HOUSE**

Without a stock exchange, organizations would have no formal system on which to rundown offers

NSE, BSE, DOW JONES, NYSE

Discrete organizations that advance the precise stream of stock purchasing and offering.

Works as clearing house

# Financial Market

- A financial market is a market in which people trade financial securities and derivatives at low transaction costs. Some of the securities include stocks and bonds, raw materials and precious metals, which are known in the financial markets as commodities.





# Types of financial markets

- **Stock Markets.**
- **Over-the-Counter Markets.**
- **Money Markets.**
- **Derivatives Markets.**
- **Forex Market.**
- **Commodities Markets.**
- **Cryptocurrency Markets.**



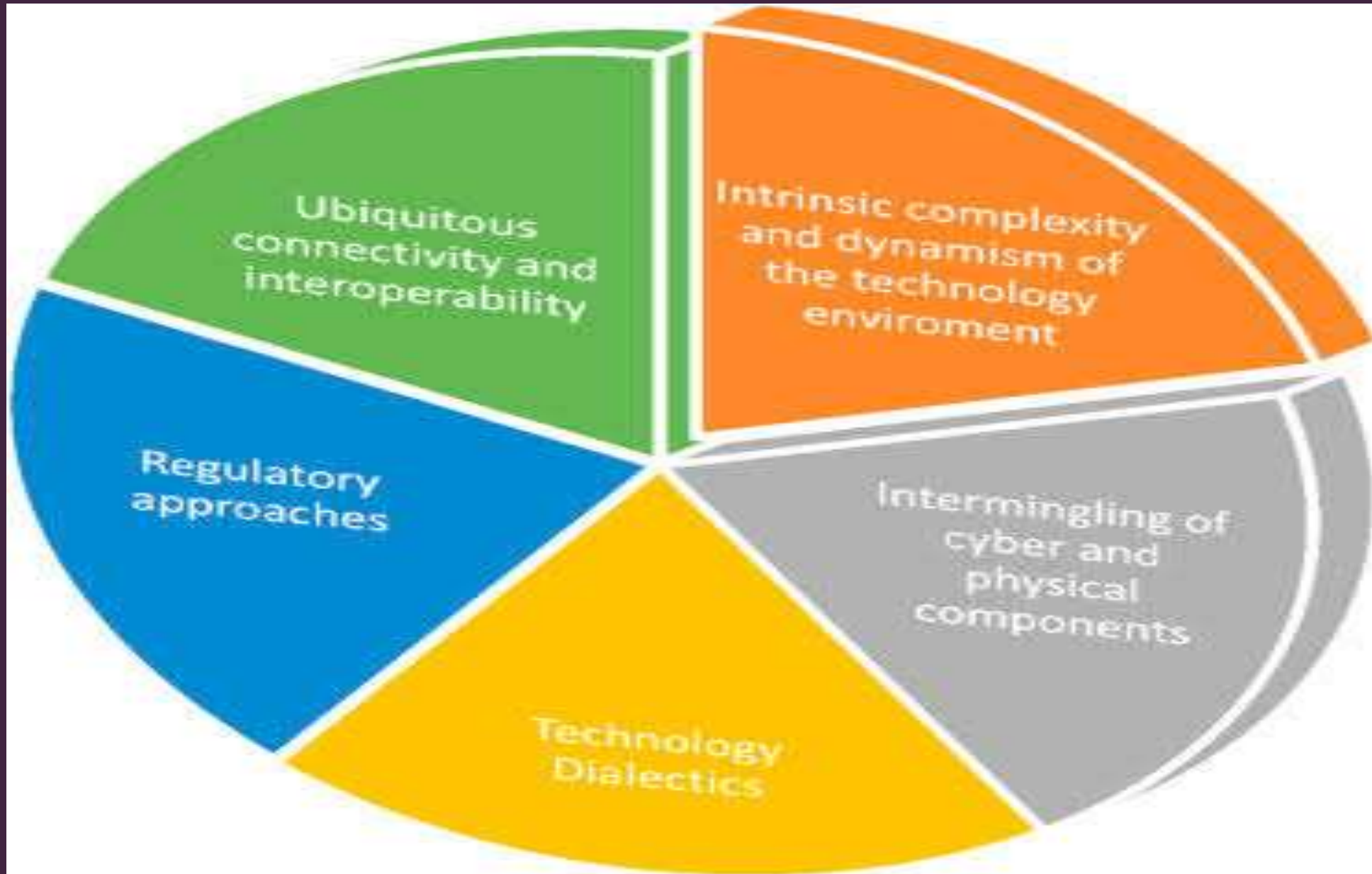
# Participants in financial Market

- Insurance Companies.
- Finance Companies.
- Banks.
- Merchant Banks.
- Companies/Firms.
- The Individual.
- Government.
- Regulators.



# Regulatory Environment,

- A regulated market is a market over which government bodies or, less commonly, industry or labor groups, exert a level of oversight and control. Market regulation is often controlled by the government and involves determining who can enter the market and the prices they may charge.



# PRIMARY MARKET

- The primary market is **where securities are created**. It's in this market that firms sell (float) new stocks and bonds to the public for the first time. An initial public offering, or IPO, is an example of a primary market.



# Primary Markets



# Methods of floating new issues

## Security Analysis And Portfolio Management

- Offer through prospectus.
- Bought out deals/offer for sale.
- Private placement.
- Right issue.
- Book building.

# METHODS OF FLOATING NEW ISSUES

The various methods which are used in the floating of securities in the new issue market are:

- Public issues
- Offer for sale
- Placement
- Right issues



# Role of primary market

- ① provides the channel for sale of new securities
- ② provides opportunity to issuers of securities; Government as well as corporates
- ③ capital formation



# Stock Exchanges in India

- numerous stock exchanges in India that were formed during the early 1990s. As of now, the most important stock exchanges in India are the Bombay Stock Exchange(BSE) and the National Stock Exchange(NSE). In this article, we will understand in detail the various stock exchanges registered with The Securities & Exchange Board of India.

# REGULATION OF STOCK EXCHANGE

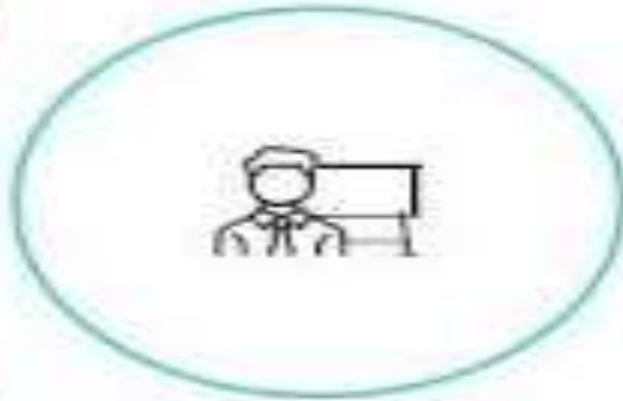
- **Securities & Exchange Board of India (SEBI)**
- The Securities and Exchange Board of India (SEBI) is the regulatory authority established under the SEBI Act 1992 and is the principal regulator for Stock Exchanges in India. SEBI's primary functions include protecting investor interests, promoting and regulating the Indian securities markets. All financial intermediaries permitted by their respective regulators to participate in the Indian securities markets are governed by SEBI regulations, whether domestic or foreign. Foreign Portfolio Investors are required to register with DDPs in order to participate in the Indian securities markets.

- **National Stock Exchange (NSE)**
- In the role of a securities market participant, NSE is required to set out and implement rules and regulations to govern the securities market. These rules and regulations extend to member registration, securities listing, transaction monitoring, compliance by members to SEBI / RBI regulations, investor protection etc. NSE has a set of Rules and Regulations specifically applicable to each of its trading segments. NSE as an entity regulated by SEBI undergoes regular inspections by them to ensure compliance.



# Trading system in stock exchanges.

- Trading system in the organized stock exchange is the floor trading under which trading took place through an open outcry system on the trading floor. In-floor trading buyers and sellers transact business face to face using a variety of signals.





# UNIT 3

- FUNDAMENTAL ANALYSIS
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# Economic analysis:

- An economic analysis is a process in which business owners gain a clear picture of the existing economic climate, as it relates to their company's ability to thrive. Economists, statisticians, and mathematicians often carry out this analysis on behalf of for-profit and nonprofit businesses.

# Macro economics

- Macroeconomics is a **branch of economics that deals with how an economy functions on a large scale**. It differs from microeconomics, which deals with how individual economic players, such as consumers and firms, make decisions.

# Key Macroeconomic Factors.

- Interest rates.
- Inflation.
- Fiscal policy.
- Gross domestic product (GDP)
- National income.
- Employment.
- Economic growth rate.
- Industrial production.



# Industry analysis:

- Industry analysis is a tool that facilitates a company's understanding of its position relative to other companies that produce similar products or services. Understanding the forces at work in the overall industry is an important component of effective strategic planning.





Review Available  
Information

Get an Idea  
About  
Right Industry



## Industry Analysis



Competition

Are You Able to  
Forecast  
Future Demand  
& Supply?



WallStreetMojo

# Industry Life Cycle Analysis.

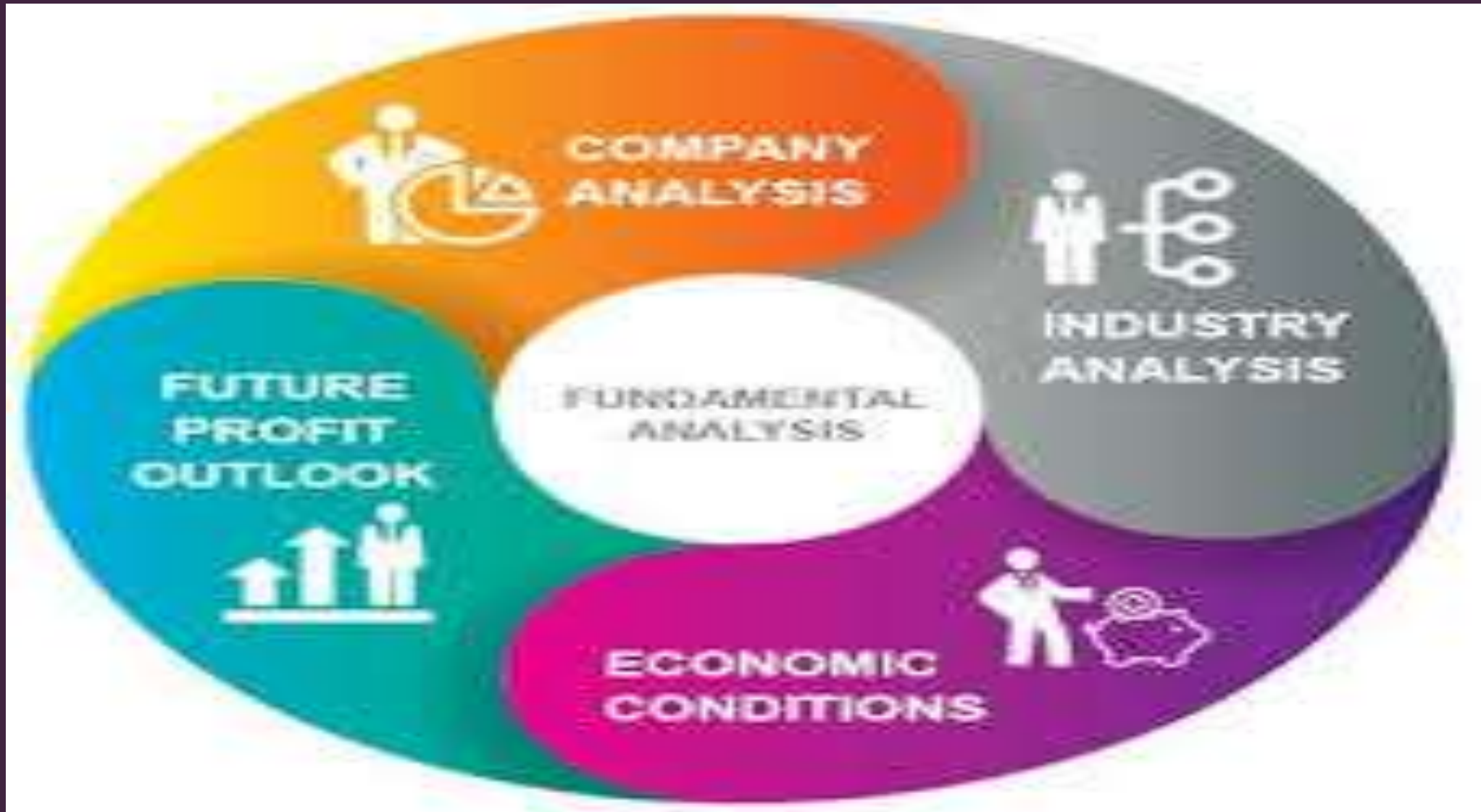
- **What Is Industry Life Cycle Analysis?**
- Industry life cycle analysis is part of the fundamental analysis of a company involving the examination of the stage an industry is in at a given point in time. There are four stages in an industry life cycle: expansion, peak, contraction, trough.

# STAGE OF INDUSTRIAL LIFECYCLE

- **5 Main Stages of Product Life Cycle**
- (i) Introduction
- (ii) Growth Stage
- (iii) Maturity Stage
- (iv) Saturation Stage
- (v) Decline Stage

# Analyzing the Structure of an industry

- Understand the company.
- Study the financial reports of the company.
- Check the debt.
- Find the company's competitors.
- Analyse the future prospects.
- Review all the aspects time to time.



# Analysis the characteristic of an industry

- An industry analysis consists of three major elements: the underlying forces at work in the industry; the overall attractiveness of the industry; and the critical factors that determine a company's success within the industry.

# Analyzing an Industry

- Segmentation (BO path 4) → Customer Characteristics:
- Age, gender, income, level of use
- Employee characteristics, (Pop Copy)
- Competitors:
  1. leader
  2. Challenger
  3. Follower
  4. Nichers

# Profit Potential of Industries

- The relative bargaining power between an industry's competitors and its suppliers helps shape the profit potential of the industry. If suppliers have greater leverage over the competitors than the competitors have over the suppliers, then suppliers can increase their prices over time.





# Company Analysis

- Company analysis is a process carried out by investors to evaluate securities, collecting info related to the company's profile, products and services as well as profitability. It is also referred as fundamental analysis.



# Analyse the financial statement

- Financial statement analysis evaluates a company's performance or value through a company's balance sheet, income statement, or statement of cash flows. By using a number of techniques such as horizontal, vertical, or ratio analysis, investors may develop a more nuanced picture of a company's financial profile

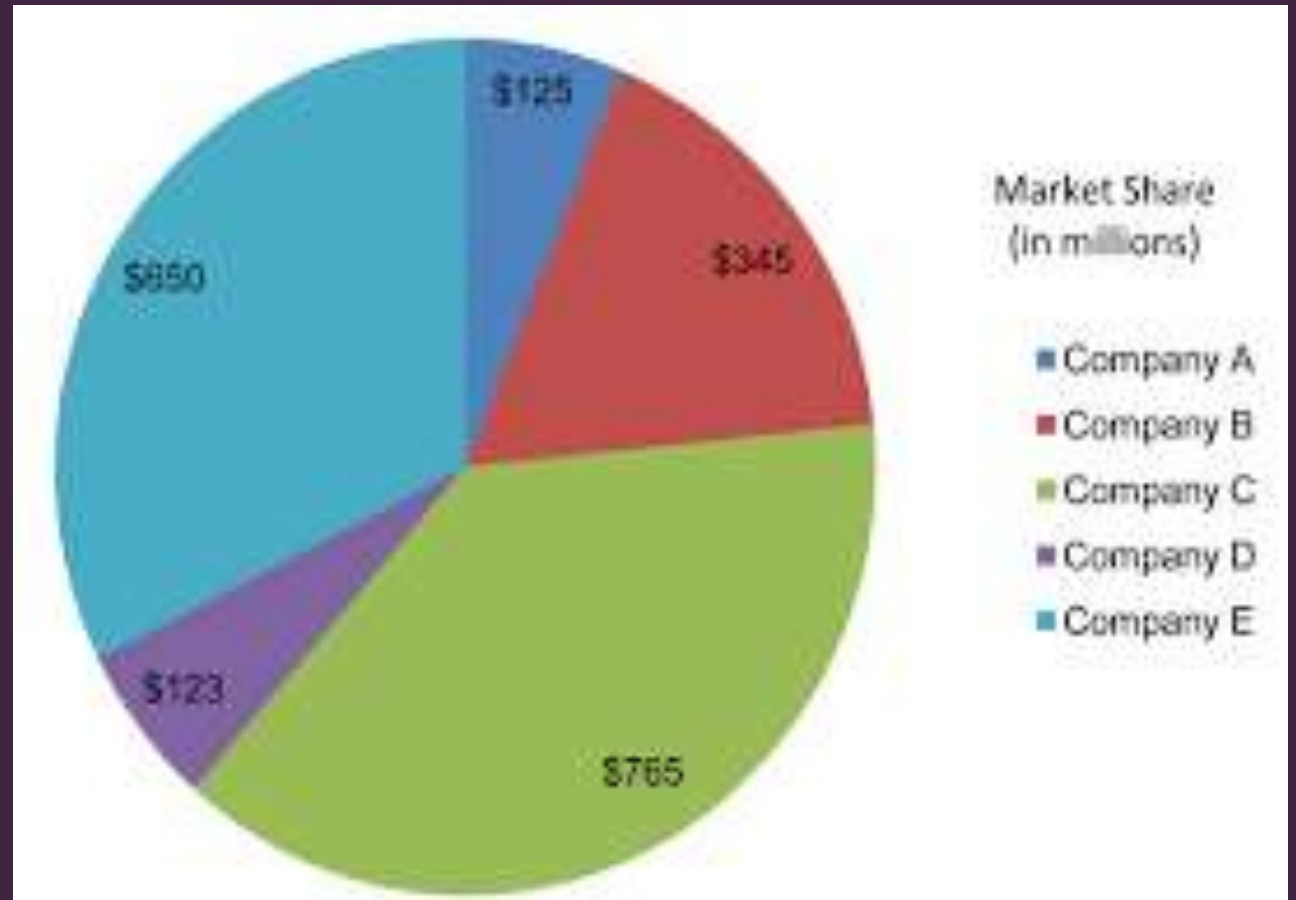
# How do you analyze financial statements of a company?

- Identify the industry economic characteristics.
- Identify company strategies.
- Assess the quality of the firm's financial statements.
- Analyze current profitability and risk.
- Prepare forecasted financial statements.
- Value the firm.

# Market Share Approach

- Market share is the percent of total sales in an industry generated by a particular company. Market share is calculated by taking the company's sales over the period and dividing it by the total sales of the industry over the same period. This metric is used to give a general idea of the size of a company in relation to its market and its competitors. The market leader in an industry is the company with the largest market share.

# Market share example



# Profit margin

- Profit margin is one of the commonly used profitability ratios to gauge the degree to which a company or a business activity makes money. It represents what percentage of sales has turned into profits.



**Profit Margin**

```
graph TD; A[Profit Margin] -.-> B["Gross Profit Margin  
(Gross Profit / Revenue)"]; A -.-> C["Net Profit Margin  
(Net Profit / Revenue)"];
```

**Gross Profit Margin**  
(Gross Profit / Revenue)

**Net Profit Margin**  
(Net Profit / Revenue)

# Forecasting Earnings

- A cash flow forecast estimates the amount of money you expect to flow in and out of your business, including projected income and expenses. A forecast is usually done over a 12 month period but could also cover a shorter period, such as a month.

# Graham and Dodds investor ratios

- The Graham & Dodds Price to Earnings Ratio, commonly known as CAPE or Shiller P/E, is a valuation measure usually applied to stocks or equity markets. It is defined as price divided by the average of ten years of earnings.



# UNIT 4

- TECHNICAL ANALYSIS



# Technical Analysis

- Technical analysis is a trading discipline employed to evaluate investments and identify trading opportunities in price trends and patterns seen on charts. Technical analysts believe past trading activity and price changes of a security can be valuable indicators of the security's future price movements.

# Main Types of Technical Analysis

All traders use either of these methods, or a combination of them.



## Classical Charting

- Plotted manually
- Includes swing counts, S/R, trendlines, channels, price patterns

## Price Action

- Study movement of price
- Understand why prices move
- Includes candlestick patterns



## Technical Indicators

- Applies math formulas
- Includes moving averages, MACD, Stochastics, Bollinger Bands

# Technical Analysis

## Qualitative Analysis

- Supports and resistances
- Change in polarity principals
- Chart patterns

## Quantitative Analysis

- Identify market trends
- Moving averages
- Momentum indicators

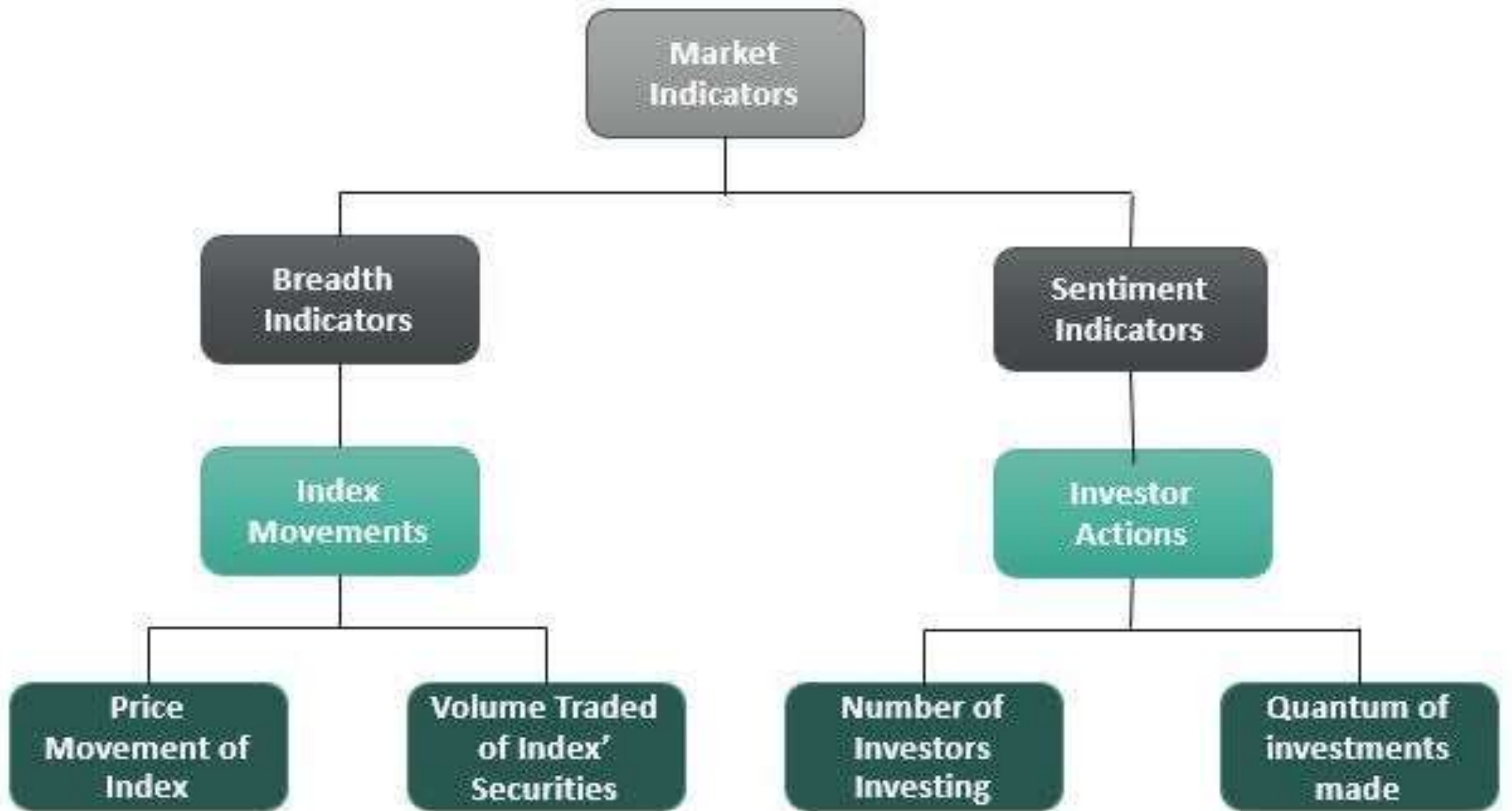
# charting method

- The charting method is a note-taking method that uses charts to condense and organize notes. It involves splitting a document into several columns and rows which are then filled with summaries of information. This results in a note format that enables efficient comparisons between different topics and ideas.



# MARKET INDICATOR

- Market indicators are quantitative in nature and seek to interpret stock or financial index data in an attempt to forecast market moves. Market indicators are a subset of technical indicators and are typically comprised of formulas and ratios. They aid investors' investment/trading decisions.



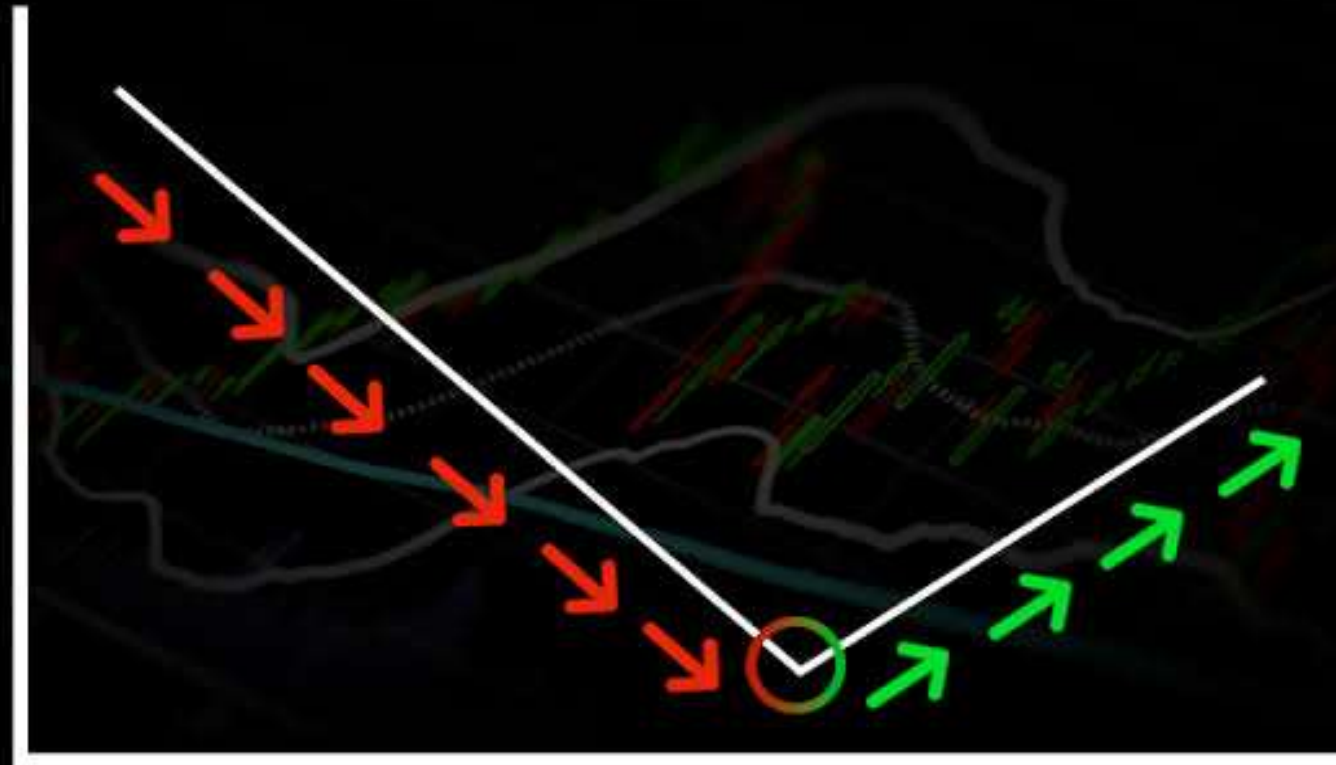
# Trends

- Trend is defined as to go in a general direction or to have a tendency to go in a certain way. An example of trend is for a plain to stretch westward across a state. An example of trend is when the number of murders in a city reduce downward.  
verb. A fad or fashion style.

# Trend reversal

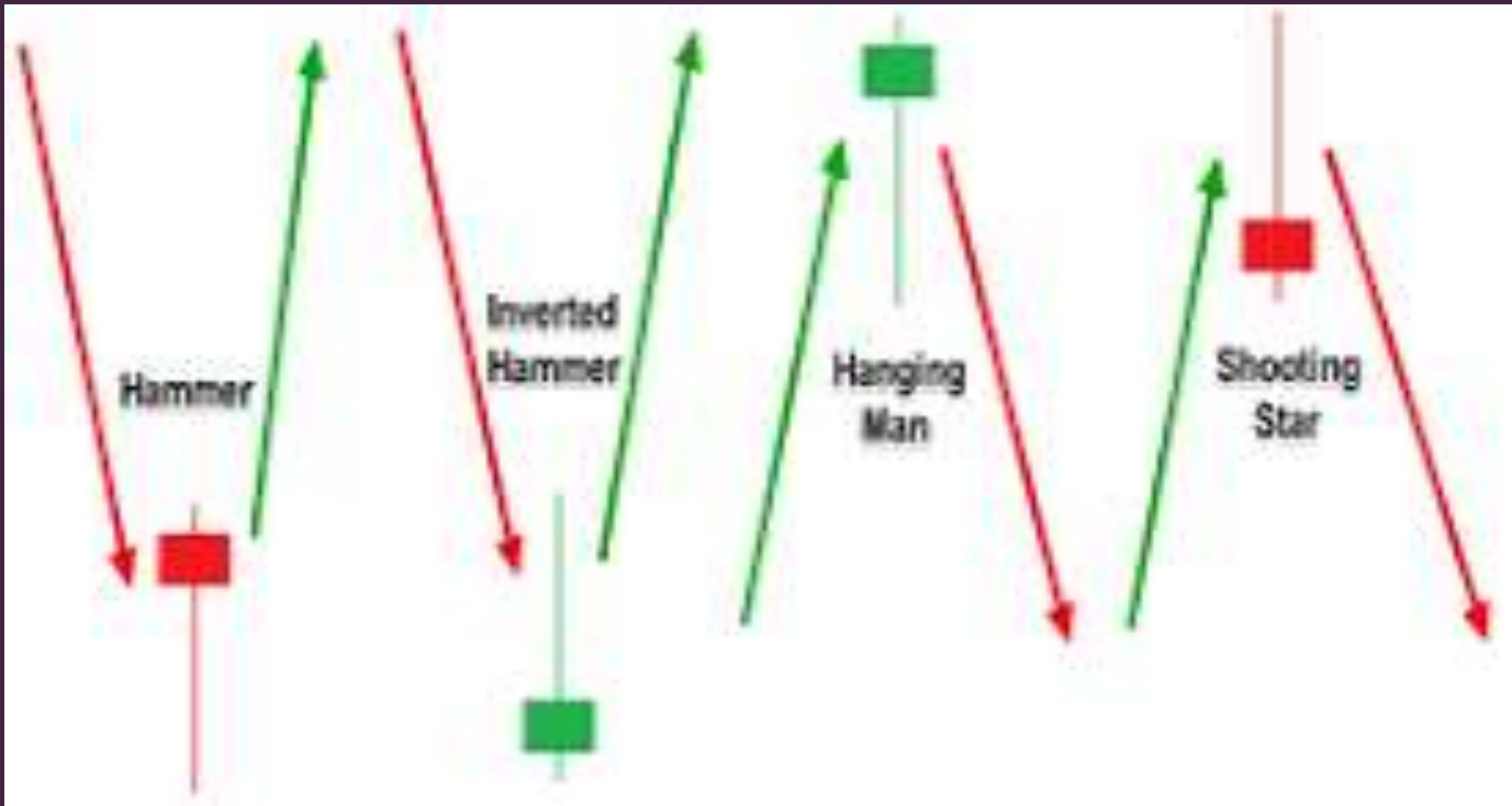
- A reversal is a trend change in the price of an asset. A pullback is a counter-move within a trend that doesn't reverse the trend. An uptrend is created by higher swing highs and higher swing lows.

# Trend Reversals



# Reversal patterns

- Reversal Patterns. A price pattern that signals a change in the prevailing trend is known as a reversal pattern. These patterns signify periods where either the bulls or the bears have run out of steam.



# Moving average

- Moving average is a simple, technical analysis tool. Moving averages are usually calculated to identify the trend direction of a stock or to determine its support and resistance levels. It is a trend-following—or lagging—indicator because it is based on past prices.



# Simple Moving Average



# exponential moving average

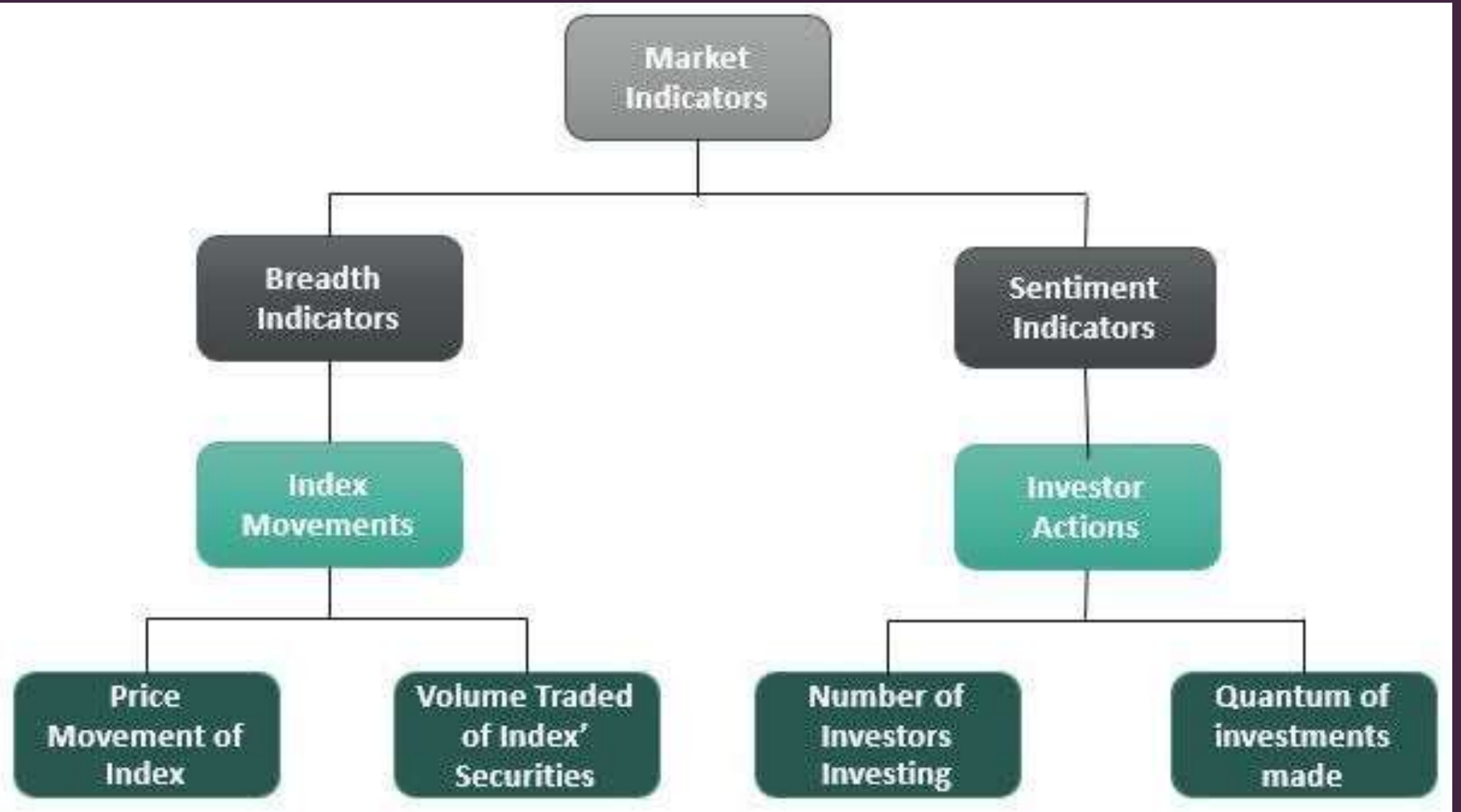
- An exponential moving average (EMA) is a type of moving average (MA) that places a greater weight and significance on the most recent data points. The exponential moving average is also referred to as the exponentially weighted moving average.

# oscillator

- An oscillator is a mechanical or electronic device that works on the principles of oscillation: a periodic fluctuation between two things based on changes in energy. Computers, clocks, watches, radios, and metal detectors are among the many devices that use oscillators.

# market indicators

- Market indicators are quantitative in nature and seek to interpret stock or financial index data in an attempt to forecast market moves. Market indicators are a subset of technical indicators and are typically comprised of formulas and ratios.




# forecasting individual stock performance

- **Forecasting individual stock**
- Stock Forecast can refer to: Stock forecasts based on human experience: Human traders based on their experience in terms of stock price patterns, volume changes, and market news/rumors regarding a particular stock.



- **Forecasting stock performance**

- Forecasting performance measures can be classified into two types: directional and size. The bias is the primary measure that evaluates the direction of the error and hence the degree by which a forecasting model yields forecasts which either over or under estimate the actual values.
- 

# Random Walk Efficient Market theory.

- **What Is the Random Walk Theory?**
- Random walk theory suggests that changes in stock prices have the same distribution and are independent of each other. Therefore, it assumes the past movement or trend of a stock price or market cannot be used to predict its future movement. In short, random walk theory proclaims that stocks take a random and unpredictable path that makes all methods of predicting stock prices futile in the long run.



- **Understanding Random Walk Theory**
- Random walk theory believes it's impossible to outperform the market without assuming additional risk. It considers technical analysis undependable because chartists only buy or sell a security after an established trend has developed. Likewise, the theory finds fundamental analysis undependable due to the often-poor quality of information collected and its ability to be misinterpreted.

- Efficient Markets are "A Random Walk Down Wall Street."<sup>1</sup> The book popularized the efficient market hypothesis (EMH), an earlier theory posed by University of Chicago professor William Sharp. The efficient market hypothesis states that stock prices fully reflect all available information and expectations, so current prices are the best approximation of a company's intrinsic value.
- This would preclude anyone from exploiting mispriced stocks consistently because price movements are mostly random and driven by unforeseen events.

# Random Walks & Efficient Markets

- Random Walk Hypothesis
  - ◆ The theory that stock price movements are unpredictable
    - In the short term, yes, they appear random
    - In the long term, no (*We hope – Failure is not an option!*)
- Efficient Market Hypothesis
  - ◆ A market in which securities reflect all possible information quickly and accurately
  - ◆ If there are large numbers of knowledgeable investors who react quickly to new information, security prices will adjust quickly and accurately
    - The New York Stock Exchange is an efficient market



# UNIT 5

## • PORTFOLIO MANAGEMENT



# Portfolio management

- Portfolio management is the selection, prioritisation and control of an organisation's programmes and projects, in line with its strategic objectives and capacity to deliver. The goal is to balance the implementation of change initiatives and the maintenance of business-as-usual, while optimising return on investment.



# Portfolio construction

- To plan for the portfolio investment, you must take an in-depth look at all current assets, investments, and debts if any. Now, you can define your financial goals for the short and long terms.
- To establish a risk-return profile, you have to decide on the extent of risk and volatility you're willing to take, and what returns you want to generate.

Analysis of Constraints

```
graph TD; A[Analysis of Constraints] --> B[Determination of Objectives]; B --> C[Selection of Portfolio (Bonds, Stocks)]; C --> D[Assesment of Risk & Return]; D --> E[Diversification];
```

Determination of Objectives

Selection of Portfolio (Bonds, Stocks)

Assesment of Risk & Return

Diversification



# Portfolio analysis

- Portfolio Analysis is the process of reviewing or assessing the elements of the entire portfolio of securities or products in a business. The review is done for careful analysis of risk and return.

```
graph TD; A((Reasons For Portfolio Analysis)) --- B((Formulate Growth Strategy)); A --- C((Decision Regarding Product Retention)); A --- D((Analysis));
```

**Reasons  
For  
Portfolio  
Analysis**

**Formulate  
Growth  
Strategy**

**Decision  
Regarding  
Product  
Retention**

**Analysis**

# Effects of combining securities

- Reduction of portfolio Risk through diversification: The process of combining securities in a portfolio is known as diversification. The aim of diversification is to reduce total risk without sacrificing portfolio return.

# Combining individual securities

- Individual Security Return and Risk
- Portfolio Expected Rate of Return
- Portfolio Variance
- Combination Lines
- Combination Line Between a Risky Asset and a Risk-Free Asset

# Markowitzs Mean-Variance model

- Harry Markowitz conceptualized the Mean-Variance Portfolio Theory, also known as The Modern Portfolio Theory.
- Through the concepts presented in theory, investors can draw practical guides into constructing investment portfolios that maximize their expected return based on a given level of risk.

## *The Markowitz's Mean-Variance model*

The unknown variables in the model are proportions of stocks in portfolio  $\pi_i$ ,  $i \in \{1, 2, \dots, N\}$ , or portfolio investor's vector  $\pi$ .

The question is: What is the proportion of each stock in portfolio such that, with given level of risk, portfolio's return reaches maximum.

# Portfolio selection

- Portfolio selection aims to assess a combination of securities from a large quantity of available alternatives. It aims to maximize the investment returns of investors. According to Markowitz , investors must make a trade-off between return maximization and risk minimization.

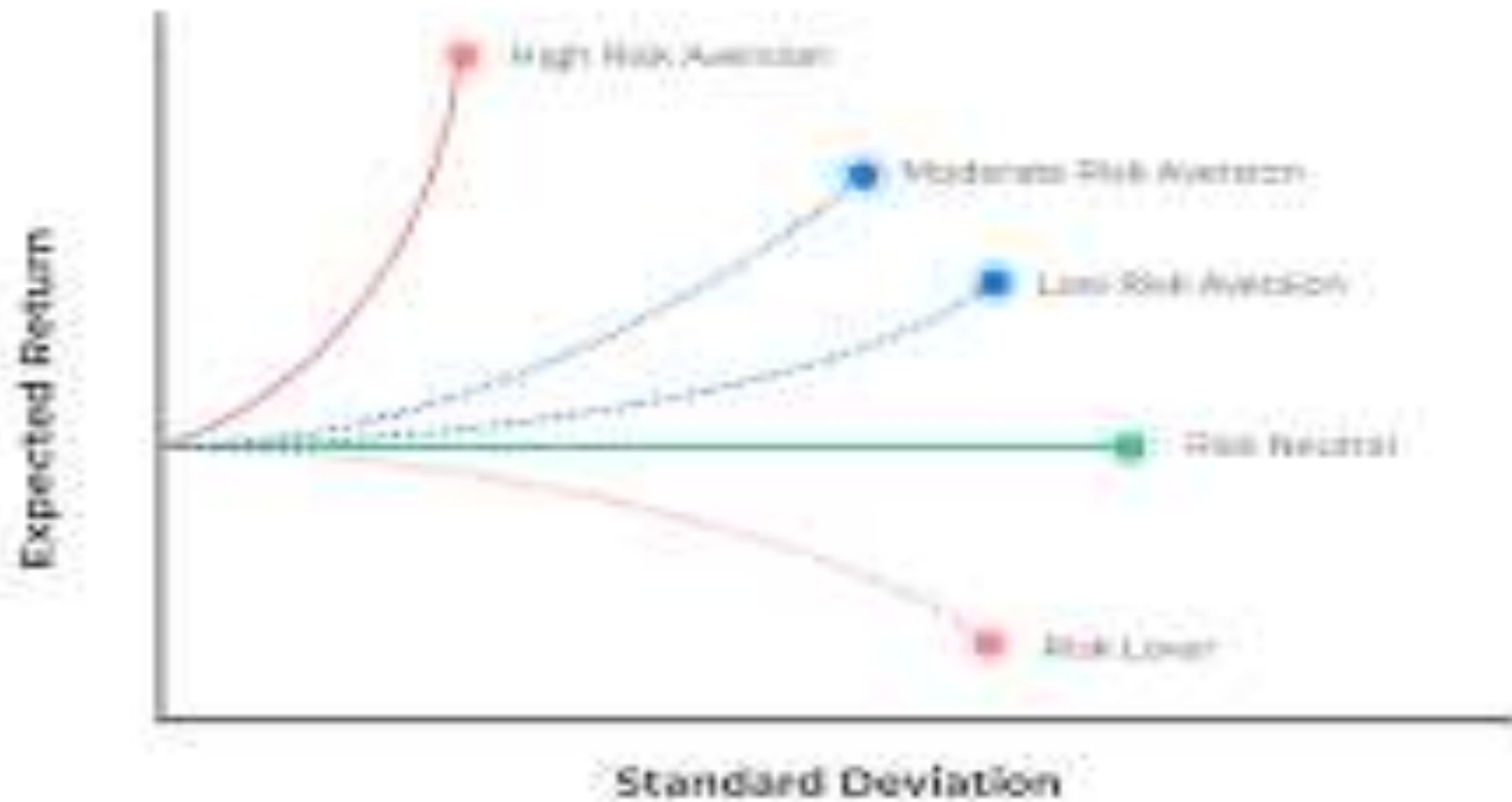
# Risk and investor Preferences

- Risk preference refers to the attitude people hold towards risks, which is a key factor in studies on investors' decision-making behavior. Standard financial theory assumes that investors are rational and believes that when making investment decisions they tend to have invariant risk preferences-risk averse.





## Risk Aversion for Different Types of Investors



# Constructing the portfolio

- Decide on your attitude to risk.
- Decide on your objectives.
- Decide on your asset allocation.
- Choose the specific investments.
- Make the investments.



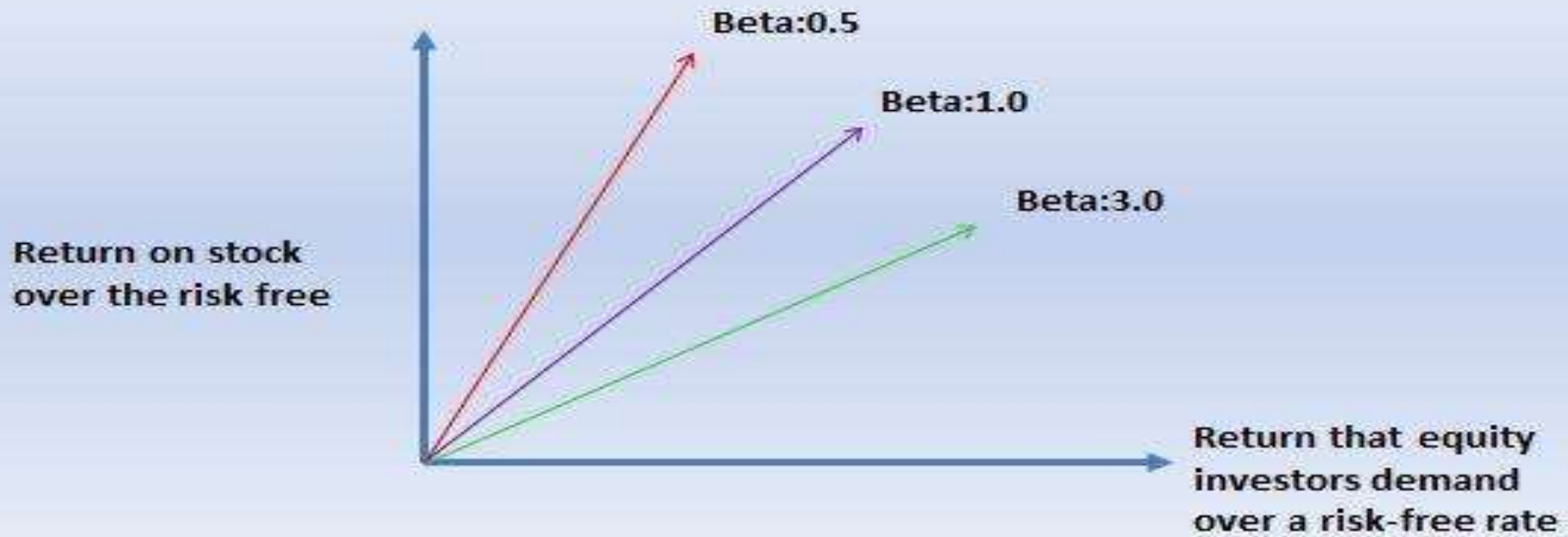
# Significance of beta in the Portfolio

- Significance of beta in portfolioBeta is a measure of the volatility—or systematic risk—of a security or portfolio compared to the market as a whole. Beta is used in the capital asset pricing model (CAPM), which describes the relationship between systematic risk and expected return for assets.

# Capital Asset Pricing Model

- The goal of the CAPM formula is to evaluate whether a stock is fairly valued when its risk and the time value of money are compared to its expected return.

# CAPM(capital asset pricing model)



# Portfolio Revision

- The process of addition of more assets in an existing portfolio or changing the ratio of funds invested is called as portfolio revision. The sale and purchase of assets in an existing portfolio over a certain period of time to maximize returns and minimize risk is called as Portfolio revision.



# Portfolio Revision

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- ✦ The investor should have competence and skill in the revision of the portfolio.
- ✦ The portfolio management process needs frequent changes in the composition of stocks and bonds.
- ✦ Mechanical methods are adopted to earn better profit through proper timing.
- ✦ Such type of mechanical methods are Formula Plans and Swaps.



# Portfolio Evaluation

- Portfolio evaluating refers to the evaluation of the performance of the investment portfolio. It is essentially the process of comparing the return earned on a portfolio with the return earned on one or more other portfolio or on a benchmark portfolio.

Treynor's  
Measures

Sharpe's  
Measures

Jensen's  
Measures

Measures

```
graph TD; A[Treynor's Measures] --> C((Measures)); B[Sharpe's Measures] --> C; D[Jensen's Measures] --> C;
```

# Mutual Funds

- A mutual fund is a pool of money managed by a professional Fund Manager. It is a trust that collects money from a number of investors who share a common investment objective and invests the same in equities, bonds, money market instruments and/or other securities.



# Benefits Outweigh Risks in Mutual Funds

## Benefits

- Regulatory Oversight
- Transparency
- Diversification
- Liquidity

## Risks

- Fund Manager Risk
- Market Risk
- Interest Rate Risk



# Types of mutual fund

- Money Market Funds.
- Fixed Income Funds.
- Equity Funds.
- Balanced Funds.
- Index Funds.
- Specialty Funds.



# **TYPES OF MUTUAL FUNDS IN INDIA**

# Why Mutual Fund?

Diversification of Risk

Professionally Managed Funds

Low Cost Return

Tax Benefits

Range of Schemes

Convenience

Transparency



# Regulatory Environment

- A regulated environment is basically **any controlled environment**. Rules state which conditions must be met by a company to produce valid results or goods of a guaranteed level of quality.

# Regulatory Environment

- The regulatory environment exists to set the guard rails for our industry, to prevent those not blessed with an overabundance of scruples from engaging in unfair or unsavory business practices, and to protect consumers using the goods and services in question.