DEPARTMENT OF MANAGEMENT STUDIES

II YEAR / III SEMESTER

BA4001 : SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT

Faculty In charge

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Anna University Chennai

Regulation 2021

JEPPIAAR ENGINEERING COLLEGE

DEPARTMENT OF MANAGEMENT STUDIES

VISION

To build Jeppiaar Engineering College as an institution of academic excellence in technology and management education, leading to become a world class university.

MISSION

- To excel in teaching and learning, research and innovation by promoting the principles of scientific analysis and creative thinking.
- To participate in the production, development and dissemination of knowledge and interact with national and international communities.
- To equip students with values, ethics and life skills needed to enrich their lives and enable them to contribute for the progress of society.
- To prepare students for higher studies and lifelong learning, enrich them with the practical skills necessary to excel as future professionals and entrepreneurs for the benefit of Nation's economy.

PROGRAMME EDUCATIONAL OBJECTIVES (PEOs):

MBA programme curriculum is designed to prepare the post graduate students

I. To have a thorough understanding of the core aspects of the business.

II. To provide the learners with the management tools to identify, analyze and create business opportunities as

well as solve business problems.

III. To prepare them to have a holistic approach towards management functions.

IV. To inspire and make them practice ethical standards in business

PROGRAMME OUTCOMES (POs)

- Ability to apply the business acumen gained in practice.
- Ability to understand and solve managerial issues.
- Ability to communicate and negotiate effectively, to achieve organizational and individual goals.
- Ability to understand one's own ability to set achievable targets and complete them.
- Ability to fulfill social outreach
- Ability to take up challenging assignments

COURSE OBJECTIVE:

Understand the nuances of stock market operations.

Understand the techniques involved in deciding upon purchase or sale of securities.

COURSE OUTCOME :

1. Understand the concept of investment and identify the investment alternatives to investors
2. Learn the nuances of fundamental analyses and technical analyses
3. Analyse and evaluate the value of securities
4. Explain how to construct an efficient portfolio
5. Explore the various methods through which portfolio evaluation could be done

CO -PO Matrix

Course Outcomes	Program Outcomes					
	PO1	PO2	PO3	PO4	PO5	PO6
CO1	3	3	0	0	0	3
CO2	3	3	0	0	0	3
CO3	3	3	0	0	0	3
CO4	3	3	0	0	0	2
CO5	3	3	0	0	0	3
Average	3	3	0	0	0	2.8

SYLLABUS

BA4001 SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT L T P C
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COURSE OBJECTIVES:

Enables student to

- Understand the nuances of stock market operations.
- Understand the techniques involved in deciding upon purchase or sale of securities.

UNIT I INVESTMENT SETTING 9

Financial and economic meaning of Investment – Characteristics and objectives of Investment – Investment process -Types of Investment – Investment alternatives – Choice and Evaluation – Risk and return concepts - Valuation of bonds and stock.

UNIT II FUNDAMENTAL ANALYSIS 9

Economic Analysis – Economic forecasting and stock Investment Decisions – Forecasting techniques. Industry Analysis : Industry classification, Industr y life cycle – Company Analysis Measuring Earnings – Forecasting Earnings – Applied Valuation Techniques – Graham and Dodds investor ratios.

UNIT III TECHNICAL ANALYSIS 9

Fundamental Analysis Vs Technical Analysis -- Dow theory – Charting methods - Chart Patterns Trend – Trend reversals – Market Indicators -Moving Average – Exponential moving Average Oscillators -RSI -ROC - MACD.

Efficient Market theory - Forms of market efficiency -weak, semi-strong, strong form - Empirical tests of market efficiency -its application.

UNIT IV PORTFOLIO CONSTRUCTION AND SELECTION 9

Portfolio analysis - Reduction of portfolio risk through diversification – Portfolio risk - Portfolio Selection - Feasible set of portfolios - Efficient set - Markowitz model - Single index model - Construction of optimum portfolio - Multi-index model.

UNIT V 9

Capital Asset Pricing model - Lending and borrowing - CML - SML - Pricing with CAPM - Arbitrage pricing theory– Portfolio Evaluation - Sharpe's index Treynor's index, Jensen's index – Mutual Funds – Portfolio Revision.

TOTAL :45 PERIODS

1. Donald E.Fischer& Ronald J.Jordan, Security Analysis & Portfolio Management, PHILearning., New Delhi, 8th edition, 2011.
2. Prasannachandra, Investment analysis and Portfolio Management, Tata McGraw Hill, 2011.
3. Reilly & Brown, Investment Analysis and Portfolio Management, Cengage Learning, 9th edition, 2011.
   S. Kevin , Securities Analysis and Portfolio Management , PHI Learning , 2012.
4. Punithavathy Pandian, Analysis & Portfolio Management, Vikas publishing house PVT LTD, second edition, 2013.
5. Bodi, Kane, Markus, Mohanty, Investments, 8th edition, Tata McGraw Hill, 2011.
6. V.A.Avadhan, Securities Analysis and Portfolio Management, Himalaya Publishing House, 2013.
7. V.K.Bhalla, Investment Management, S.Chand & Company Ltd., 2012

UNIT – I
INVESTMENT SETTING

Syllabus

- Financial and economic meaning of Investment
- Characteristics and objectives of Investment
- Types of Investment
- Investment alternatives – Choice and Evaluation
- Risk and return concepts

Introduction

- Investment activity involves the use of funds or savings for acquisition of assets & further creation of assets.
- Investment is an employment of funds on assets in the aim of earning income or capital appreciation.

Types of Investment

- Real Investment – Purchase of fixed assets
- Financial Investment – Purchase of securities

Definition-Economic sense

"Investment means the net additions to the economy's capital stock which consists of goods and services that are used in the production of other goods and services" (Capital formation)

Investment is the net addition made to the nation's capital stock that consists of goods and services that are used in the production process. A net addition to the capital stock means an increase in the buildings, equipments or inventories. These capital stocks are used to produce other goods & services

Definition–Financial sense

"Investment is a commitment / employment of funds made in the expectation of some positive rate of return. If the investment is properly undertaken, the return will commensurate with the risk that the investor assumes".

- Donald E. Fischer and Ronald J. Jordan

Financial investment is the allocation of money to assets that are expected to yield some gain over a period of time.

Characteristics of Investment

- Safety of principal (e.g. gilt edged securities)
- Liquidity (e.g. CPs and CDs)
- Income stability (e.g. Debentures)
- Capital appreciation (e.g. equity)
- Tangibility (e.g. land and buildings)

Objectives of Investment

- ✓ Maximization of return
- ✓ Minimization of risk
- ✓ Hedge against inflation (if the investment cannot earn as much as the rise in price level, the ‘real’ rate of return will be negative)
- ✓ Safety
- ✓ Liquidity
- ✓ Tax Benefit

Return

Rate of return could be defined as the total income the investor receives during the holding period expressed as a percentage of the purchasing price at the beginning of the holding period.

$$\text{Return} = \frac{\text{End period value} - \text{Beginning period value} + \text{Dividend}}{\text{Beginning period value}} \times 100$$

Risk

- Risk of holding securities is related with the probability of actual return becoming less than the expected return
- The word “risk” is synonymous with the phrase “variability of return”.
- Investment risk is just as important as measuring its expected rate of return…… because minimizing risk and maximizing the rate of return are interrelated objectives in the investment management.

Hedge against Inflation

- The rate of return should ensure a cover against the inflation.
- The return thus earned should assure the safety of the principal amount, regular flow of income and be a hedge against inflation

Safety

Investment done with Government assure more safety than with the private party

Tax Benefit

Investment may be undertaken to reduce the income tax burden. E.g. Savings bond, Provident Fund, Insurance etc.

Liquidity

- Marketability of the investment provides liquidity to the investment. The liquidity depends upon the marketing and trading facility.
- Stocks are liquid only if they command good market by providing adequate return through dividends and capital appreciation.

Types of Investment

A. Security Forms of Investment. (Marketable)

1. Corporate Bonds /Debentures

(a) Convertible

(b) Non-convertible.

2. Public Sector Bonds

(a) Taxable

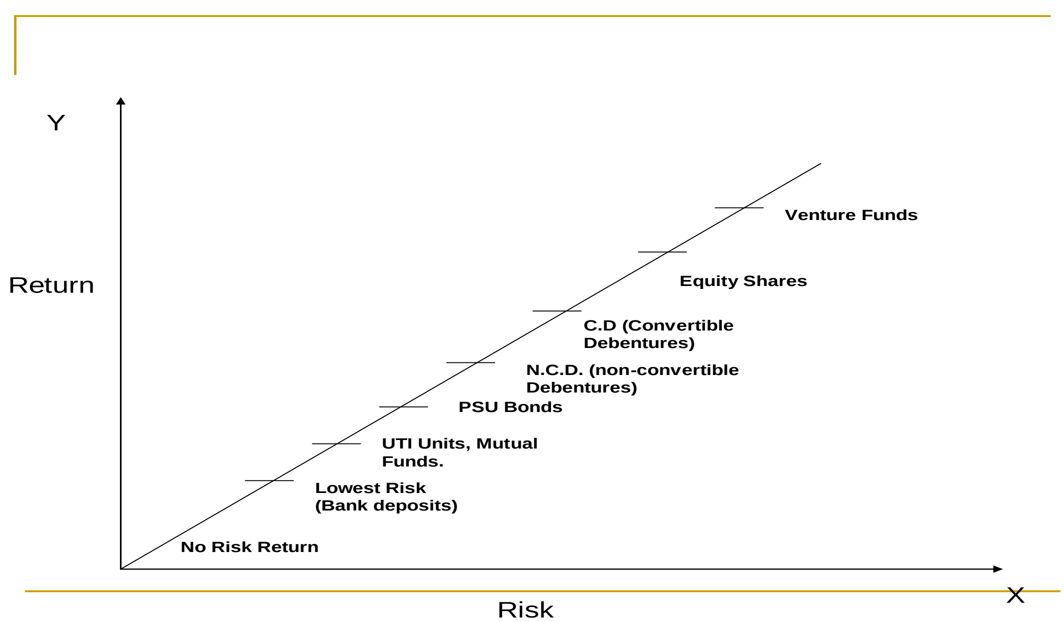
(b) Tax Free.

3. Preference Shares

4. Equity Shares - New issue, Rights Issue, Bonus Issue.

B. Non-Security Forms of Investment (non-marketable)

1. National Savings Schemes.
2. National Savings Certificates.
3. Provident Funds.
4. Corporate Fixed deposits.
5. Life Insurance Policies
6. Unit Schemes of unit Trust of India
7. Post Office Savings Bank Account.
8. Others-RD, Chit Funds.



Types of Financial investment

1. Bank Deposits
2. Govt. bonds
3. UTI units
4. Non-convertible debentures
5. Convertible debentures
6. Equity Shares
7. Deposits with non-banking financial companies

Classes of Instruments

Instruments traded can be classified on the following:

1. By ownership or debt nature of instruments.
2. By term period to maturity – **Short term, Medium-term and long-term.**
3. By the issuer's creditworthiness, government securities or private securities or Post Office certificate etc.

Investors Vs Speculators

- **Investors**
- Plans for longer time horizon
- Assumes moderate risk
- Likes to have moderate rate of return
- Considers fundamental factors & evaluates performance of company
- Uses its own fund
- **Speculators**
- Plans for very short period
- Believe to undertake high risk
- Like to have high returns
- Consider inside information and market behavior
- Uses borrowed funds

INVESTMENT ALTERNATIVES

1. **Direct Investment Alternatives**
   - Fixed principal investments (e.g. Savings a/c, government bonds)
   - Variable principal investments (e.g. Preference shares, equity shares)
   - Non-security investments (e.g. business ventures)
2. **Indirect investment alternatives** (e.g. PF, Insurance)

INVESTMENT ALTERNATIVES

- The investment alternatives range from financial securities to non-security investments.
- The financial securities may be negotiable or non-negotiable.
- The negotiable securities are transferable. Non-negotiable is not transferable also called as non-securitized financial investment.
- Deposit schemes offered by post office, banks, public provident fund, national savings scheme are non-securitized financial investments.

NEGOTIABLE SECURITIES

1. **Variable income securities**

Equity shares, growth shares, income shares, defensive shares, cyclical shares, speculative shares.

2. **Fixed income securities**

Preference shares, debentures, bonds, government, money market, treasury bills, commercial papers, certificate of deposit.

NON-NEGOTIABLE SECURITIES

- Deposits: it can earn rate of return

- Bank deposits, post office deposits,etc.
- Schemes of LIC.
- Tax benefits from life insurance.
- Mutual funds.
- Real assets.
- Real estate.
- Arts and antiques.

FINANCIAL ASSETS

- Equity shares
- Bonds
- Preference shares
- Non- marketable financial assets
- Money market instruments
- Mutual funds
- Life insurance
- Financial derivatives

EQUITY SHARES

- Represents ownership capital
  - They elect the board of directors and have a right to vote on every resolution placed before the company
  - They enjoy the preemptive right which enables them to maintain their proportional ownership
- Risk: residual claim over income
- Reward: partners in progress
- The amount of capital that a company can issue as per its memorandum represents *authorized capital*
- The amount offered by the company to the investors is called *issued capital*
- The part of issued capital that is subscribed to by the investors is called *subscribed capital / paid up capital*
- *Par / Face / Nominal value* of a share is stated in the memorandum and written on the share script
- Issue of shares at a value above its par value is called *issue at a premium*
- Issue of shares at a value below its par value is called *issue at a discount*
- The price at which the share currently trades in the market is called the *market value*
- Blue chip shares: Shares of large, well established and financially strong companies with impressive record of earnings and dividend
- Growth shares: Shares of companies having fairly strong position in the growing market and having an above average rate of growth and profitability
- Income shares: Shares of companies having fairly stable operations, limited growth opportunities and high dividend payouts
- Cyclical shares: Shares of companies performing as per the business cycles
- Defensive shares: Shares of companies relatively unaffected by the ups and downs in the general economic conditions

- Speculative shares: shares of companies whose prices fluctuate widely because of a lot of speculative trading being done on them
- Equity shares are commonly referred to as common stock or ordinary shares
- Share capital of a company is divided into a number of small units of equal value called shares.
- The "stock" is the aggregate of a member's fully paid up shares of equal value merged into one fund.
- The 'stock' is expressed in terms of money and not "as many" shares.

Sweat Equity: The Sweat Equity has two dimensions:

- Shares issued at a discount to employees and directors.
- Shares issued for consideration other than cash for providing know-how or making available rights or value additions.

Non-Voting Shares

- Non-voting shares carry no voting rights.
- The non-voting shares also can be listed and traded in the stock exchanges.
- The dividend on non-voting shares would have to be 20% higher than the dividend on the voting shares.

Right Shares

- Shares offered to the existing shareholders at a price by the company are called "right shares".
- If a public company wants to increase its subscribed capital by way of issuing shares after 2 years from its formation date or 1 year from the date of first allotment……the shares should be offered first to the existing shareholders in proportion to the capital paid up on the shares held by them at the date of such offer. This is called pre-emptive right.

DEBENTURES

- According to Companies Act 1956, "Debenture includes debenture stock, bonds and any other securities of company, whether constituting a charge on the assets of the company or not"
- Debentures are generally issued by the private sector companies as a long-term promissory note for raising loan capital

BONDS

- They are long term debt instruments issued for a fixed time period
- *Bonds* are debt securities issued by the government or PSUs
- *Debentures* are debt securities issued by private sector companies
- They comprise of periodic interest payments over the life of the instrument and the principal repayment at the time of redemption
- Debt securities issued by the central government, state government and quasi government agencies are referred to as *gilt-edged securities*
- *Callable bonds* are the ones that can be called for redemption earlier than their date of maturity. This right to call is available with the company

- *Convertible bonds* are the ones that can be converted into equity shares at a later date either fully or partly. This option is available with the bond holder
- *Coupon rate* is the nominal rate of interest fixed and printed on the bond certificate. It is calculated on the face value and is payable by the company till maturity

PREFERENCE SHARES

- Represents a *hybrid security* that has attributes of both equity shares and debentures.
- They carry a *fixed rate of dividend*. However it is payable only out of distributable profits
- Dividend on preference shares is generally *cumulative*. Dividend skipped in one year has to be paid subsequently before equity dividend can be paid
- Only *redeemable preference shares* can be issued

NON-MARKETABLE SECURITIES

These represent personal transactions between the investor and the issuer.

Bank deposits

- There are various kinds of bank accounts – current, savings and fixed deposit
- While a deposit in a current account does not earn any interest, deposit made in others earn an interest
- Liquidity, convenience and low investment risks are the common features of the bank deposits
- Deposits in scheduled banks are safe because of the regulations of RBI and the guarantee provided by the Deposit Insurance Corporation on deposits up to Rs 1,00,000 per depositor of the bank

Company deposits

- Deposits mobilized by companies are governed by the provisions of section 58A of Companies Act, 1956
- The interest offered on this fixed income deposits is higher than what investors would normally get from the banks
- Manufacturing and trading companies are allowed to pay a maximum interest of 12.5%.
- The rates vary depending on the credit rating of the company offering the deposit

Post Office Monthly Income Scheme

- Meant for investors who want to invest a lump sum amount initially and earn interest on a monthly basis.
- Minimum investment is Rs.1000 in multiples of Rs 1,000
- The maximum deposits in all the accounts taken together should not exceed Rs.4 lakhs in a single account and Rs.8 lakhs in a joint account
- The tenure of the MIS scheme is six years.

MONEY MARKET INSTRUMENTS

- Debt instruments which have a maturity of less than a year at the time of issue are called *money market instruments*
- These are highly liquid instruments

Treasury bills

- Issued by GOI
- They are of two durations – 91 days and 364 days
- Are negotiable instruments and can be rediscounted with GOI
- They are sold on an auction basis every week in certain minimum denominations by the RBI
- They do not carry an explicit interest rate. Instead they are issued at a discount to be redeemed at par. The implicit return is a function of the size of discount and the period of maturity
- They have zero default risk, assured return, are easily available

Certificate of deposits

- Negotiable instruments issued by banks / financial institutions with a maturity ranging from 3 months to 1 year
- These are bank deposits transferable from one party to another
- The principal investors are banks, financial institutions, corporates and mutual funds
- These carry an explicit rate of interest
- Banks normally tailor make their denominations and maturities to suit the needs of the investors

Commercial papers

- Issued in form of promissory notes redeemable at par by the holder on maturity
- Usually has a maturity period of 90 to 180 days
- They are sold at a discount to be redeemed at par
- CPs can be issued by corporates having a minimum net worth of Rs 5 crores and an investment grade from credit rating agencies
- Minimum issue size is Rs 25 lacs

MUTUAL FUNDS

- Also known as an instrument for collective investment
- Investment is done in three broad categories of financial assets i.e. stocks, bonds and cash
- *Depending on the asset mix*, mutual fund schemes are classified as: Equity schemes, hybrid schemes and debt schemes
- *On the basis of flexibility*, Mutual fund schemes may be: Open ended or Close ended
- – *Open ended schemes* are open for subscription & redemption throughout the year
- – *Close ended schemes* are open for subscription only for a specified period and can be redeemed only on a fixed date of redemption
- *On the basis of objective,* mutual funds may be growth funds, income funds, or balanced funds
- *NAV* of a fund is the cumulative market value of the assets of the fund net of its liabilities

FINANCIAL DERIVATIVES

- *Derivative* is a product whose value is derived from the value of the one or more underlying assets. These underlying assets may be equity, bonds, foreign exchange, commodity or any other asset
- Derivative does not have a value of its own. Rather its value depends on the value of the underlying asset.
- Derivatives initially emerged as hedging devices against fluctuations in commodity prices and commodity linked derivatives remained the sole form of such products. Financial derivatives emerged post 1970 period.
- *Financial derivatives* have various financial instruments as the underlying variables
- Futures and Options are two basic types of derivatives

Futures is a transferable contract between two parties to buy or sell an asset at a certain date in the future at a specified price

- It is a standardized contract with a standard underlying asset, a standard quantity and quality of underlying instrument and a standard timing of settlement
- It may be offset prior to its maturity by entering into an equal and opposite transaction
- It requires margin payments and follow daily movements

***Options* are of two types:**

- *Call option* gives the buyer of the option a right but not an obligation to buy a given quantity of the underlying asset, at a given price, on or before a given future date
- *Put option* gives the buyer of the option a right but not an obligation to sell a given quantity of the underlying asset, at a given price, on or before a given future date

REAL ASSETS

- ❑ Real estate
- ❑ Precious objects

Investment Process

Investment process involves a series of activities leading to the purchase of securities or other investment alternatives. The investment process can be divided into 5 stages

1. Investment policy
2. Valuation
3. Investment / Security analysis
4. Portfolio Construction
5. Portfolio Evaluation

1. **INVESTMENT POLICY**

The Government or the investor before proceeding into investment formulates the policy for systematic functioning

- Determination of Investible wealth (parting)
- Determination of portfolio objectives (returns/appreciation)
- Identification of potential investment assets (market analysis)
- Consideration of attributes of investment assets (risk, return)
- Allocation of wealth to asset categories (tentative)

i. Investible fund: The entire investment procedure revolves around the availability of investible funds. The fund may be generated thru savings or borrowings. If the funds are borrowed, the investor has to be extra careful in the selection of investment alternatives. The return should be higher than the interest he pays.

ii. The objectives are framed on the premises of the required rate of return, need for regularity of income, risk perception and the need for liquidity. The risk taker objective is to earn high rate of return in the form of capital appreciation.

iii. Knowledge: The knowledge about the investment alternatives and markets plays a key role in the policy formulation. The investment alternatives range from Security to Real Estate. The risk and return associated with the investment alternatives differ from each other. The investor should be aware of the stock market structure and functions of the brokers

3. **INVESTMENT VALUATION:**

The valuation helps the investor to determine the return and risk expected from an investment in the common stock, the intrinsic value of the share and price earning ratio.

Future Value: Future value of the securities could be estimated by using a simple statistical technique like trend analysis.

- Valuation of stocks
- Valuation of debentures and bonds
- Valuation of other assets

3. **INVESTMENT / SECURITY ANALYSIS**

- Economic analysis
- Technical analysis
- Efficient Market Approach

After formulating the investment policy, the securities to be bought have to be scrutinized through the market, industry & company analysis.

Market analysis: The stock market shows the general economic scenario.the growth in gross domestic product and inflation are reflected in the stock prices. The stock prices may be fluctuating in the short run but in the long run they move in trends.

Industry analysis: The industries that contribute to the output of the major segments of the economy vary in their growth rates and their overall contribution to economic activity. Some industries grow faster than the GDP and are expected to continue in their growth.

Company Analysis: The purpose of company analysis is to help the investors to make better decisions. The company's earnings, profitability, operating efficiency, capital structure and management have to be screened. These factors have a direct bearing on the stock prices and the return of the investors. Appreciation of the stock value is a function of the performance of the company.

4. **PORTFOLIO CONSTRUCTION**

- Determination of diversification level
- Consideration of investment timing (boom/depression)
- Selection of investment assets
- Allocation of investible wealth
- Evaluation of portfolio for feedback

A Portfolio is a combination of securities. The portfolio is constructed in such a manner to meet the investor's goals and objectives. The investor should decide how best to reach the goals with the securities available. Towards this end he diversifies his portfolio and allocates funds among the securities.

Diversification - The main objective of diversification is the reduction of risk in the loss of capital and income. There are several ways to diversify the portfolio.

- Debt and equity diversification - Both debt instruments and equity are combined to complement each other
- Industry diversification – Industries growth and their reaction to government policies differ from each other. Hence industry diversification is needed and it reduces risk.
- Company diversification – Securities from different companies are purchased to reduce risk.
- Selection: Based on diversification level, industry and company analyses, the securities have to be selected.

5. PORTFOLIO EVALUATION

The efficient management of portfolio consists of portfolio appraisal and revision

Appraisal: The return and risk performance of the security vary from time and time. The developments in the economy, industry and relevant companies from which the stocks are bought have to be appraised. The appraisal warns the loss and steps can be taken to avoid such losses.

Revision: Revision depends on the results of the appraisal. The low yielding securities with high risk are replaced with high yielding securities with low risk factor. To keep the return at a particular level necessitates the investor to revise the components of the portfolio periodically.

Securities

Security means "a document which represents the investments made by an investor".

There are two types:

- Creditorship Securities (e.g. Preference, bonds & debentures)
- Ownership Securities (e.g. Equity Shares)

INVESTMENT INFORMATION

- International affairs.
- National affairs.
- Industry information.
- Company information.
- Stock market information.

RISK CONCEPT

RISK & RETURN

- Risk in holding securities is generally associated with the possibility that realized returns will be less than that were expected. Some risks are external to the firm & can't be controlled, thus affect large number of securities (Systematic Risk). Other influences are internal to the firm & are controllable to a large degree (Unsystematic Risk).

- **Systematic Risk** refers to that portion of total variability in return caused by factors affecting the prices of all securities. Economic, Political and sociological changes are the sources of systematic risk.

- **Unsystematic Risk** is the portion of total risk that is unique to a firm or industry. E.g. Factors such as management capability, consumer preferences, labour strikes etc.

SYSTEMATIC RISK (Types)

1. **Market Risk:-** This risk is caused due to changes in the attitudes of investors toward equities in general, or toward certain types or groups of securities in particular. Market risk is caused by investor reaction to tangible as well as intangible events. The tangible events include political, social and economic environment.

When the security index moves upward for significant period of time, it is known as ‘Bull market’. ‘Bear market’ is just a reverse to bull market…….from peak to market low point called ‘trough’ for a period of time

Intangible events are related to market psychology. Market risk is usually touched off by a reaction to real events leading to emotional instability of investors.

2. **Interest-Rate Risk:-** It refers to the uncertainty of future market values and of the size of future income, caused by fluctuations in the general level of interest rates. The root cause of interest rate risk is fluctuating yield on government securities.

3. **Purchasing-Power Risk:-** Purchasing power risk refers to the impact of inflation or deflation on an investment. Rising prices of goods & services are associated with inflation & that falling with deflation

UNSYSTEMATIC RISK

Unsystematic risk is that portion of total risk that is unique or peculiar to a firm or industry. Factors such as management capability, consumer preferences and labour strikes can cause unsystematic variability of returns for a company’s stock. This risk is classified into 2 types as Business Risk and Financial Risk

Business Risk

This risk is a function of the operating conditions faced by a firm and the variability these conditions inject into the operating income and expected dividends. Business risk can be divided into two broad categories- external & internal.

- **Internal Business Risk:-** This risk is largely associated with the efficiency with which a firm conducts it’s operations within the broader operating environment imposed upon it.
- **External Business Risk:-** It is the result of operating conditions imposed upon the firm by circumstances beyond it’s control. Govt. policies with regard to monetary & fiscal matters can affect revenues on the cost & availability of funds.

Financial Risk: This risk is associated with the way in which a company finances it’s activities. The substantial debt funds, preference shares in the capital structure of the firm create high fixed-cost commitments for it. This causes the amount of residual earnings available for common-stock dividends more stressed.

RETURN

- Investors want to maximize expected returns subject to their tolerance for risk. It is the motivating force and the principal reward in the investment process.
- **Realized Return:-** It is the return which is actually earned.
- **Expected Return:-** It is the return from an asset that investors anticipate they will earn over some future period.

Return Computation

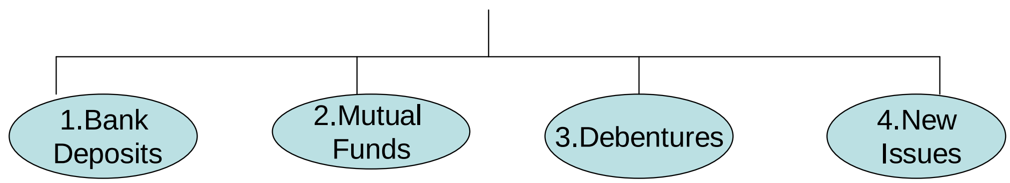
Return in a typical investment consists of two components. The basic component is the **periodic cash receipt** on the investment, either in the form of interest or dividends. The second component is **the change in the price of the asset** – commonly called capital gains or loss. This element of return is the difference between the purchase price and the price at which the asset can be sold.

Total Return = Income + Price Change

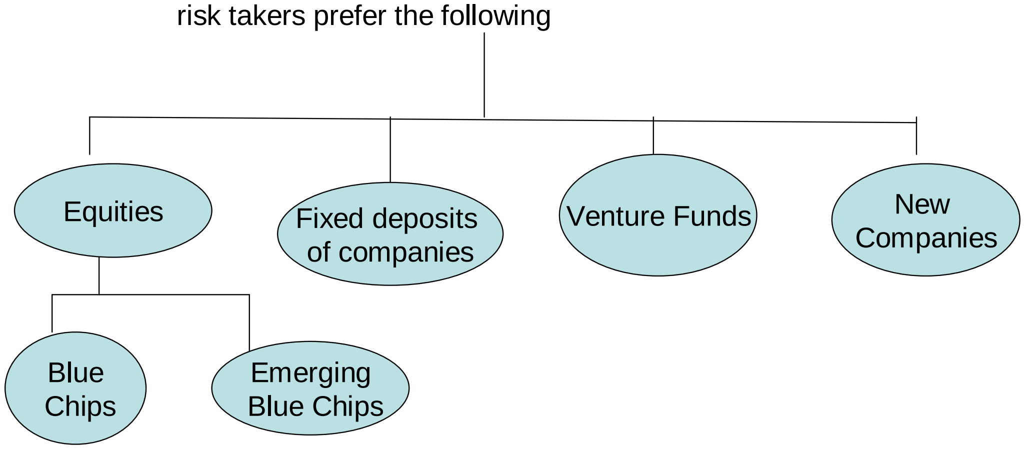
$$= \frac{\text{Cash payments received + Price change over the period}}{\text{Purchase price of asset}}$$

Total return can be either positive or negative.

(A) The Risk Averter prefers less risky avenues



(B) There are many degrees of risk taking but in general the risk takers prefer the following



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DEPARTMENT OF MANAGEMENT STUDIES
SECURITY ANALYSIS & PORTFOLIO MANAGEMENT
UNIT – II

SECURITIES MARKETS

Syllabus

- Financial Market – Segments, Types, Participants, Regulatory environment
- Primary Market – Methods of floating new issues, Book building, role and regulations
- Stock exchanges in India – BSE, OTCEI, NSE, ISE, regulations of stock exchanges, trading system, SEBI

FINANCIAL MARKET

- Mechanism that allows people to buy and sell financial securities (such as shares & bonds) and items of value at low transaction cost
- Markets work by placing many interested buyers and sellers at one place, thus making it easier for them to find each other

PARTICIPANTS IN FINANCIAL MARKET

- Borrower : Issues a receipt to lender promising to pay back capital
- Individuals – e.g. Bank loans, mortgages
- Companies - for short term or long term cash flows or future business expansion
- Government - for public expenditure, or on behalf of nationalized industries, municipalities or other public sector bodies
- Public corporations- e.g. postal services, railways and utility companies
- Lender: Will expect some compensation in form of interest or dividend, in return. Lender could be

- Individuals
- Companies
- Government

Segments of Financial Market

- The eight major market segments listed below can help fund-raisers differentiate financial behavior patterns of investors at various socio-economic levels:
- Wealth Market
- Upscale Retired
- Upper Affluent
- Lower Affluent
- Mass Market
- Mid scale Retired
- Lower Market
- Downscale Retired

Types of Financial Market

1. CAPITAL MARKET

- Stock Markets - which provide financing through issue of shares or common stock and enable subsequent trading
- Bond Markets - which provide financing through the issuance of bonds, enable subsequent trading
- Commodity Markets - which facilitate trading of commodities
- Money Markets - which provide short term debt financing and investment

- Derivative Markets – which provide instruments for the management of financial risk
- Insurance Markets - which facilitate redistribution of various risk
- Foreign Exchange Markets - which facilitate trading of foreign exchange

2. PRIMARY MARKET

NEW ISSUE MARKET

- Stocks available for the first time are offered through new issue market. The issuer may be a new company or an existing company.

The objectives of a capital issue are given below:

- To start a new company.
- To expand an existing company.
- To diversify the production.
- To meet the regular working capital requirements.
- To capitalize the reserves.

RELATIONSHIP BETWEEN THE PRIMARY & SECONDARY MARKET

- The new issue market cannot function without the secondary market. The secondary market or the stock market provides liquidity for the issued securities.
- The stock exchanges through their listing requirements, exercise control over the primary market.
- The primary market provides a direct link between the prospective investors and the company.
- The health of a primary market depends on the secondary market and vice versa.

ROLE / FUNCTIONS OF PRIMARY MARKET

- ORIGINATION: It deals with origin of the new issue. The proposal is analyzed in terms of the nature of the security, the size of the issue, timing of the issue and floatation method of issue.

- UNDERWRITING: It is a contract that makes the subscription of share predictable and removes the element of uncertainty in the subscription.

- DISTRIBUTION: It refers to the sale of securities to the investors. This is carried out with a help of the lead managers & brokers to the issue.

PARTIES INVOLVED IN NEW ISSUE

1. **Managers to the issue:** Lead Managers are appointed by the company to manage the public issue programs. Their main duties are

a. drafting of prospectus
b. preparing the budget of expenses related to the issue
c. suggesting the appropriate timings of the public issue
d. assisting in marketing the public issue successfully

e. advising the company in the appointment of registrars to the issue, underwriters, brokers, bankers to the issue, advertising agency etc.

f. directing the various agencies in the issue.

2. Registrar to the issue:

- After the appointment of the lead managers of the issue, in consultation with them, the registrar to the issue is appointed.
- The Registrar normally receives the share application from various collection centers

3. Underwriters:

- Underwriting is a contract by means of which a person gives an assurance to the issuer to the effect that the former would subscribe to the securities offered in the event of non-subscription by the person to whom they were offered. The person who assures is called an underwriter. The underwriters do not buy and sell securities. They stand as back-up supporters and underwriting is done for a commission.
- Underwriters are divided into 2 categories :

- Financial institutions and banks, &
- Brokers & approved investment companies

- Some of the underwriters are financial institutions, commercial banks, merchant bankers, members of the stock exchange, export & import bank of India, State Bank of India etc.

4. Bankers to the issue:

- They have the responsibility of collecting the application money along with the application form. The bankers to the issue generally charge a commission besides the brokerage of the issue.
- Depending on the size of the issue, more than one banker to the issue is appointed. When the size of the issue is large three or four bankers are appointed as bankers to the issue. The number of collection centers is specified by the central government.

5. Advertising agencies:

- Advertising plays a key role in promoting the public issue. The advertising agencies take the responsibility of giving publicity to the issue on the suitable media. The media may be news papers/ magazines/ hoardings/press release or a combination of all

6. Financial Institutions:

- Financial institutions generally underwrite the issue and lend term loans to the companies. Hence, normally they go through the draft of prospectus, study the proposed programs for the public issue and approve them.
- IDBI, IFCI and ICICI, LIC, GIC and UTI are some of the institutions that underwrite and give financial assistance

METHODS OF FLOATING A NEW ISSUE

Initial issues are floated through

1. Prospectus:

- According to the Companies Act - 1956, application forms for shares of a company should be accompanied by a prospectus.
- A prospectus document gives details regarding the company and invites offers for subscription or purchase of any shares and debentures from the public.

- The stock exchange scrutinizes the draft prospectus. The prospectus should contain details regarding the statutory provisions for issue, program of public issue, opening/closing dates, and capital structure.

2. Bought-out deals/Offer for sale:
   - In a bought-out deal an existing company off-loads a part of the promoters' capital to a wholesaler instead of making a public issue.

3. Private placement:
   - In this method, the issue is placed with a small number of financial institutions, corporate bodies and high net-worth individuals
4. Rights issue:
   - According to section 81, of the Companies Act 1956, if a public company wants to increase its subscribed capital by allotment of further shares after 2 years from the date of its formation or one year from the date of its first allotment, whichever is earlier should offer share at first to the existing share holders in proportion to the share held by them at the time of offer.

5. Book building:
   - It is a mechanism through which the Initial Public Offering (IPO's) take place in the USA. In this process, the price determination is based on orders placed and investors have an opportunity to place orders at different prices as practiced in International offerings.
   - Book building involves firm allotment of the instrument to a syndicate created by the lead managers, who sell the issue at an acceptable price to the public.

SECONDARY MARKET

- The market for long-term securities like Bonds, Equities, Stocks and Preferred stocks is divided into Primary and Secondary markets.
  - The primary market deals with the new issue securities.
  - Outstanding securities are traded in the secondary markets, which is commonly known as stock market or stock exchange market.
  - In the secondary market, investors can sell and buy securities.
  - Stock markets predominantly deal in the equity shares.
  - Debt instruments like bonds debentures are also traded in the stock market.
  - Growth of the primary market depends on the secondary market.

History of Stock Exchanges in India

- The origin of stock exchange in India can be traced back to the 19th century.
- After American civil war between1860-61, the number of brokers dealing in shares increased.
- The brokers organized an informal association in Mumbai named "The Native Stock and Share Brokers Association" in 1875.

- Securities and Contract Regulation Act 1956, (SCR) gave powers to the Central Govt. to regulate the stock exchanges.
- The stock exchanges in Mumbai, Kolkatta, Chennai, Ahmedabad, Delhi, Hyderabad and Indore were recognized by SCR Act.
- At present, we have 23 stock exchanges in India.

Volume of trade

- Volume expands along with the bull market and narrows down in the bear market
- Technical analyst use volume as excellent method of confirming the trend
- Large rise in price or large fall in price leads to large increase in volume
- Large volume with rise in price indicates bull market
- Large volume with fall in price indicates bear market

Breadth of the market

- The breadth of market is the term often used to study the advances and declines that have occurred in the stock market
- Advances mean the number of shares whose prices have increased from the previous day trading
- Decline indicates the number of shares whose prices have fallen from the previous day's trading
- The net difference between the number of stock advanced and declined during the same period is the breadth of the market

Carry-Forward Transactions

In a specified group, shares settlement is done in 3 ways:

- Delivery against payment.
- Squaring up of the transaction: A purchase is off-set by sales
- Carrying over the settlement to the next settlement period: If an investor sells shares and wants to carry forward, he gets profit when the share price falls and lose when it rises. He has to enter into a contract to re-sell the shares to the lender at the next settlement period and pay interest rate.

Share Groups: Listed shares are divided into 3 categories

- Group A shares (specified shares)
- B1 shares
- B shares (referred to clear securities or non-specified shares)
- In A group, shares are selected on the basis of equity, market capitalization and public holding & also should have good track record, dividend paying company and good growth potential.
- The trading volume and investor base is high in A group

STOCK EXCHANGES IN INDIA

1. BOMBAY STOCK EXCHANGE

- Is the oldest stock exchange in Asia
- BSE was established as "The Native Share & Stock Brokers' Association" in 1875
- BSE is the world's number 1 exchange in the world in terms of the number of listed companies (over 4900)

- It is the world's 5th most active in terms of number of transactions handled through its electronic trading system
- It is in the top ten of global exchanges in terms of the market capitalization of its listed companies (USD Trillion 1.28)
- BSE is the first exchange in India and the second in the world to obtain an ISO 9001:2000 certification
- It is also the first Exchange in the country and second in the world to receive Information Security Management System Standard BS 7799-2-2002 certification for its BSE On-Line trading System (BOLT)
- The BSE SENSEX, is India's first and most popular Stock Market benchmark index

2. OTCEI

- OTCEI was incorporated in 1990 as a Section 25 company under the Companies Act 1956 and is recognized as a stock exchange under Section 4 of the Securities Contracts Regulation Act, 1956
- The Exchange was set up to aid enterprising promoters in raising finance for new projects in a cost effective manner and to provide investors with a transparent & efficient mode of trading
- OTCEI introduced many novel concepts to the Indian capital markets such as screen-based nationwide trading, sponsorship of companies, market making & scripless trading.
- The Exchange today has 115 listings and has assisted in providing capital for enterprises that have gone on to build successful brands for themselves like VIP Advanta, Sonora Tiles & Brilliant mineral water etc
- Securities are traded on OTCEI through the 'OTCEI Automated Securities Integrated System' (OASIS), a state-of-art screen based trading system
- OTC Exchange of India has been co-promoted by the leading financial institutions of the country (ICICI, IFCI, IDBI, SBI etc)

3. NSE

- It is the 9th largest stock exchange in the world by market capitalization (US $ 1.59 trillion) and largest in India by daily turnover and number of trades, for both equities and derivative trading was incorporated in November 1992
- NSE is mutually-owned by a set of leading financial institutions, banks, insurance companies and other financial intermediaries in India
- Set up the first clearing corporation "National Securities Clearing Corporation Ltd." in India
- Co-promoting and setting up of National Securities Depository Limited, first depository in India
- The NSE's key index is known as the NSE NIFTY (National Stock Exchange Fifty)
- NSE pioneered commencement of Internet Trading in February 2000

4. ISE

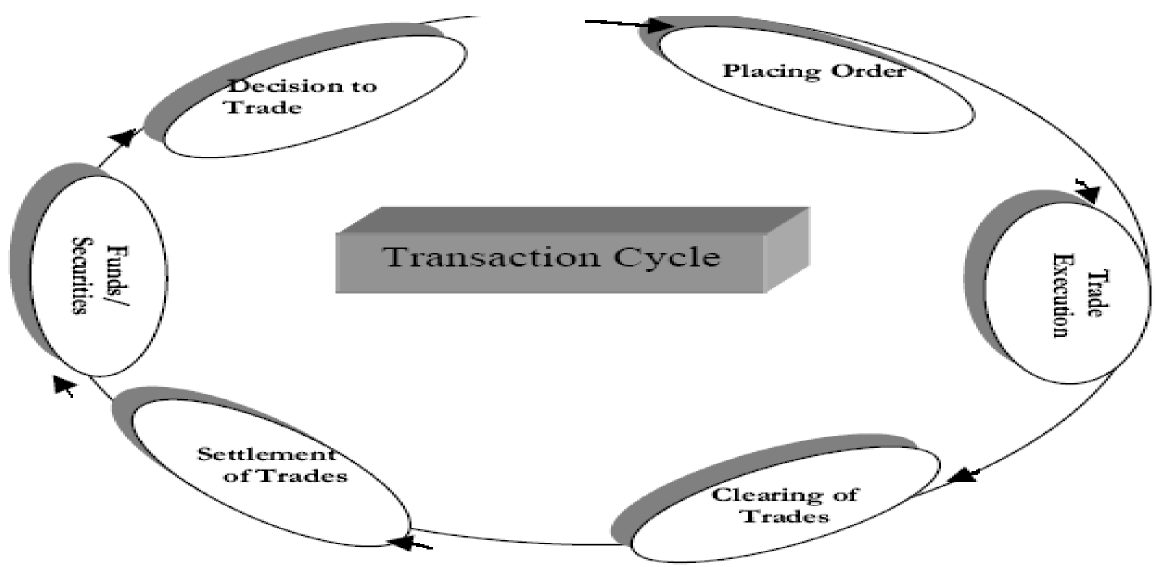
- Inter-connected Stock Exchange of India Limited (ISE) is a national-level stock exchange, providing trading, clearing, settlement, risk management and surveillance support to its Trading Members

- It has 841 Trading Members, who are located in 131 cities spread across 25 states. These intermediaries are administratively supported through the regional offices at Delhi, Kolkatta, Patna, Ahmedabad, Coimbatore and Nagpur, besides Mumbai
- ISE aims to address the needs of small companies and retail investors by harnessing the potential of regional markets, so as to transform them into a liquid and vibrant market using state-of-the art technology and networking
- Trading Members of ISE can access NSE and BSE by registering themselves as Sub-brokers of ISE Securities & Services Limited (ISS).
- ISS, thus provides the investors in smaller cities, a one-stop solution for cost-effective and efficient trading and settlement services in securities
- It also aims to make and build the professional careers of MBAs, post graduates and graduates, with a view to enabling them to work effectively in securities trading, risk management, financial management, corporate finance disciplines or function as intermediaries (viz. stock brokers, sub-brokers, merchant bankers, clearing bankers, etc.)

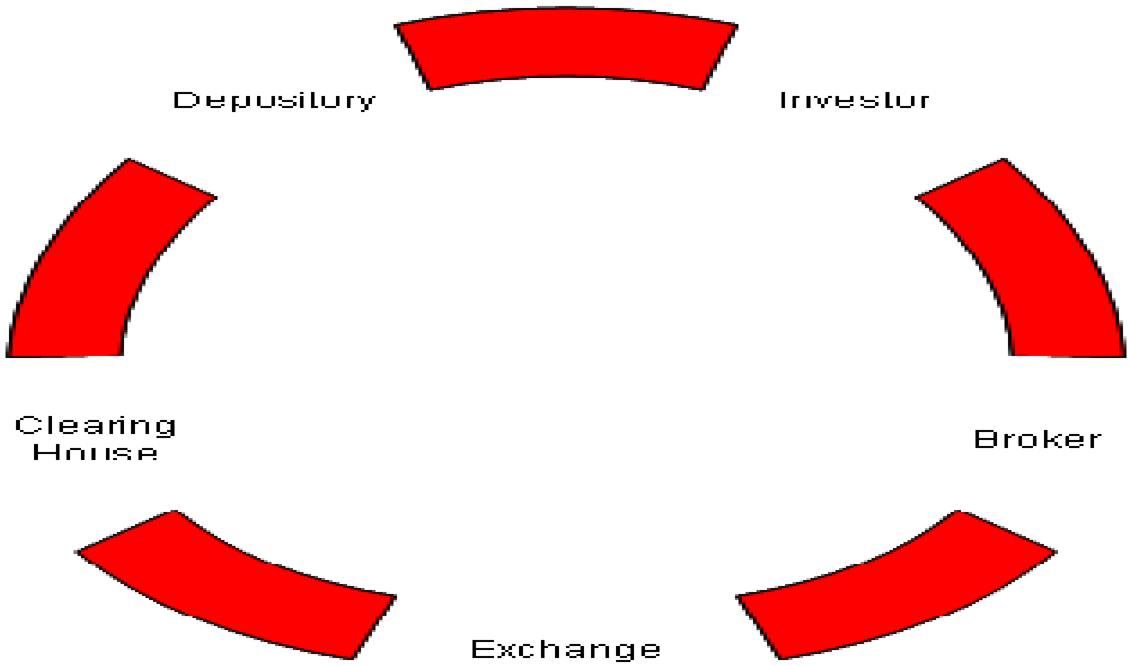
Trades settlement in Stock Market

- Fixed settlement system: The BSE had a settlement cycle of Monday to Friday and NSE from Wednesday to Tuesday.
- Transactions can be carried forward for 15 day period to a maximum of 90 days
- Rolling settlement system: The settlement takes place ‘n’ day’s after the trading day. The shares bought & sold are paid in for ‘n’ days after the trading day after a particular transaction.
- The rolling settlement cycle is noted by, t+n days

Transaction Cycle



Trading & Settlement Process



Market Participants

- Exchange – NSE/BSE
- Depository – National Securities Depository Limited (NSDL)
- Custodian
- Depository Participants
- Clearing Corporation – National Securities Clearing Corporation Ltd (NSCCL)
- Stock Broker: A broker is an intermediary who arranges to buy and sell securities on behalf of clients (the buyer and the seller) also known as CM – Clearing Member
- Sub – Broker
- Investors

Trading at NSE

- The trading on stock exchanges in India used to take place through open outcry
- NSE introduced a nation-wide on-line fully-automated screen based trading system – National Exchange for Automated trading (NEAT)
- Screen Based Trading System (SBTS) electronically matches orders on a strict price/time priority

Order Placement

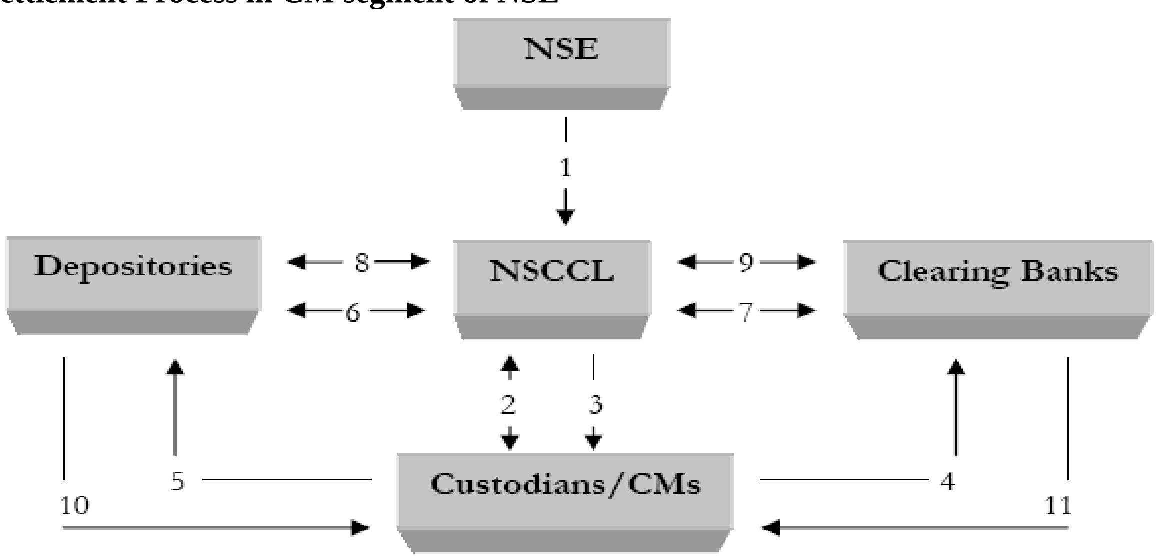
- NSE has main computer which is connected through Very Small Aperture Terminal (VSAT) installed at its office.
- Brokers have terminals installed at their premises which are connected through VSATs / leased lines / modems.
- An investor informs a broker to place an order on his behalf. The broker enters the order through his PC, which runs under Windows NT and sends signal to the Satellite via VSAT / leased line / modem. The signal is directed to mainframe
- The order confirmation message is immediately displayed on the PC of the broker.

- This order matches with the existing passive order (s); otherwise it waits for the active orders to enter the system.
- On order matching, a message is broadcast to the respective member.
- All orders received on the system are sorted with the best priced order getting the first priority for matching i.e. the best buy orders match with the best sell order.
- Similar priced orders are sorted on time priority basis, i.e. the one that came in early gets priority over the later one.
- Orders are matched automatically by the computer keeping the system transparent, objective and fair.
- Where an order does not find a match, it remains in the system and is displayed to the whole market, till a fresh order comes in or the earlier order is cancelled or modified**.**

Clearing & Settlement

- The clearing and settlement mechanism in Indian securities market has witnessed significant changes and several innovations during the last decade.
- T+2 rolling settlement has now been introduced for all securities. The members receive the funds/securities in accordance with the pay-in/pay-out schedules notified by the respective exchanges.
- The obligations of members are downloaded to members/custodians by the clearing agency
- The members/custodians make available the required securities in their pool accounts with depository participants (DPs) by the prescribed pay-in time for securities.
- The depository transfers the securities from the pool accounts of members/custodians to the settlement account of the clearing agency.
- The securities are transferred on the pay-out day by the depository from the settlement account of the clearing agency to the pool accounts of members/custodians

Settlement Process in CM segment of NSE



Process

(1) Trade details from Exchange to NSCCL (real-time and end of day trade file).

(2) NSCCL notifies the consummated trade details to CMs/custodians who affirm back. Based on the affirmation, NSCCL applies multilateral netting and determines obligations.
(3) Download of obligation and pay-in advice of funds/securities.
(4) Instructions to clearing banks to make funds available by pay-in time.
(5) Instructions to depositories to make securities available by pay-in-time.
(6) Pay-in of securities (NSCCL advises depository to debit pool account of custodians/CMs and credit its account and depository does it).
(7) Pay-in of funds (NSCCL advises Clearing Banks to debit account of custodians/CMs and credit its account and clearing bank does it).
(8) Pay-out of securities (NSCCL advises depository to credit pool account of custodians/CMs and debit its account and depository does it).
(9) Pay-out of funds (NSCCL advises Clearing Banks to credit account of custodians/CMs and debit its account and clearing bank does it).
(10) Depository informs custodians/CMs through DPs.
(11) Clearing Banks inform custodians/CMs.

The Securities and Exchange Board of India (SEBI)
Was established on April 12, 1992 in accordance with the provisions of the Securities and Exchange Board of India Act, 1992
PREAMBLE
"…..to protect the interests of investors in securities and to promote the development of, and to regulate the securities market and for matters connected therewith or incidental thereto"
SEBI is headquartered in the business district of Bandra-Kurla complex in Mumbai, and has Northern, Eastern, Southern and Western regional offices in New Delhi, Kolkata, Chennai and Ahmedabad . Upendra Kumar Sinha was appointed chairman on 18 February 2011 replacing C. B. Bhave

Functions and responsibilities of SEBI
SEBI has to be responsive to the needs of three groups, which constitute the market:
- the issuers of securities
- the investors
- the market intermediaries.

• SEBI has three functions rolled into one body: quasi-legislative, quasi-judicial and quasi-executive
• It drafts regulations in its legislative capacity
• It conducts investigation and enforcement action in its executive function and
• It passes rulings and orders in its judicial capacity
• Though this makes it very powerful, there is an appeal process to create accountability.
• There is a Securities Appellate Tribunal which is a three-member tribunal and is presently headed by a former Chief Justice of a High court - Mr. Justice NK Sodhi.
• A second appeal lies directly to the Supreme Court
• SEBI has also been instrumental in taking quick and effective steps in light of the global meltdown and the Satyam fiasco
• It had increased the extent and quantity of disclosures to be made by Indian corporate promoters.

- More recently, in light of the global meltdown, it liberalized the takeover code to facilitate investments by removing regulatory structures. In one such move, SEBI has increased the application limit for retail investors to Rs 2 lakh, from Rs 1 lakh at present

Powers of SEBI

- to approve by-laws of stock exchanges.
- to require the stock exchange to amend their by-laws.
- inspect the books of accounts and call for periodical returns from recognized stock exchanges.
- inspect the books of accounts of financial intermediaries.
- compel certain companies to list their shares in one or more stock exchanges.
- levy fees and other charges on the intermediaries for performing its functions.
- grant license to any person for the purpose of dealing in certain areas.
- delegate powers exercisable by it.
- prosecute and judge directly the violation of certain provisions of the Companies Act.

Regulations of Stock Exchanges

- SEBI has been empowered to conduct inspection of stock exchanges once every year
- During these inspections, a review of the market operations, organizational structure and administrative control of the exchange is made to ascertain whether:
  - the exchange provides a fair, equitable and growing market to investors
  - the exchange's organization, systems and practices are in accordance with the Securities Contracts (Regulation) Act (SC(R) Act), 1956 and rules framed there under
  - the exchange has implemented the directions, guidelines and instructions issued by the SEBI from time to time

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DEPARTMENT OF MANAGEMENT STUDIES

SECURITY ANALYSIS & PORTFOLIO MANAGEMENT

UNIT – III

FUNDAMENTAL ANALYSIS

Syllabus

- Economic Analysis – Economic forecasting and stock investment decisions – Forecasting techniques
- Industry analysis – Industry classification, Industry life cycle
- Company analysis – Measuring earnings – Forecasting earnings – Applied Valuation Techniques – Graham and Dodds investor ratios

FUNDAMENTAL ANALYSIS

- The intrinsic value of an equity share depends on a multitude of factors.
- The earnings of the company, the growth rate and risk exposure of the company have a direct bearing on the price of a share.
- The factors are:
- Economy
- Industry and
- Company
- Fundamental Analysis seeks to determine a company's outlook based on factors related to the company itself
  - Fundamental analysis includes:
    - Company Analysis
      - Evaluation of the business model
      - Financial Statement Analysis
        - Ratio Analysis
      - Cash Flow Analysis
      - Management Analysis
    - Industry Analysis
    - Economic Analysis
    - Economic Forecasts and Trends

Who Performs Fundamental Analysis?

- Equity Research Analysts

  - Produce fundamental analysis to generate investment recommendations
- Investors
  - Portfolio Managers make decisions based on the recommendations of research analysts

Fundamental Analysis Process

- Prior to making an investment recommendation, an Equity Analyst conducts fundamental research on a particular company
- This process includes
  - Gathering Data
  - Building Models and Analyzing Data
  - Determining the Business Outlook and Value
  - Developing a Recommendation

Data Gathering

- The first step in fundamental analysis is data gathering.
  - Data sources include:
    - Company specific publications
      - SEC Filings (e.g. 10K i.e. Annual Report)
      - Company press releases
      - Company website
    - Media
      - Industry specific publications (e.g. Banking journals)
      - General Media
        - » Economic Times
        - » Business World
        - » Business Line

EIC FRAMEWORK

- It is an analysis of national economy, as evaluation of the industry in which the company is a member firm and an audit of the financial performance and prospects of the company concerned.
- The economy fundamentals, industry fundamentals, and company fundamentals have to be considered while analyzing a security.

ECONOMIC ANALYSIS

- The performance of the company depends on the performance of the economy.
- If the economy is booming, income rise, demand for goods increases, and hence industries & companies tend to be prosperous.

KEY ECONOMIC VARIABLES

1. Growth rate of national income
    - The central theme in economic forecasting is to forecast the national income with its various components, gross national product or GNP is a measure of the national income.
    - It is a total value of the final output of goods and services produced in the economy.
    - Depression.
    - Recovery.
    - Boom & Recession.
2. Inflation
3. Interest rates.
4. Government, Revenue, Expenditure & Budget deficit.
5. Exchange rates.
6. Infrastructure.
7. Monsoon and performance of agriculture
8. Economic& Political Stability.

ECONOMIC FORECASTING

- Economic forecasting may be carried out for short term periods (up to 3 yrs)
- For intermediate term periods (3-5 yrs)
- Long term periods (more than 5 yrs)
- An investor more concerned about short term economic forecasts for periods ranging from a quarter or three years.

ECONOMIC INDICATORS

- The economic indicators are factors that indicate the present status, progress or slow down of the economy.
- They are capital requirements, business profits, money supply, GNP, interest rates, unemployment rate etc.
- The economic indicators are grouped into leading, coincidental & lagging indicators.
- The indicators should have Economic significance and Statistical adequacy
  The leading indicators indicate what is going to happen in the economy
- The popular indicators are the fiscal policy, monetary policy, productivity, rainfall, capital investment and the stock indices.
- The coincidental indicators state what the economy is. They are gross national product, industrial production, interest rates & reserve funds.
- GDP is the aggregate amount of goods and services produced in the national economy.

STOCK INVESTMENT DECISIONS

- To start with look out for modest returns

- Buy more shares when the prices are low and fewer when they are high
- Avail the services of a broker
- Give the correct information about your objectives, personal finances, net worth and your previous investment experience to the broker
- Give in writing that the broker is the authority to take decisions
- Never invest in a share about which you have no knowledge and avoid guesswork
- Invest for profits, not to lose money
- The past performance of a company is no guarantee for future success
- Be wary about inside information
- Limit the transactions
- Let portfolio take care of different segments of the industry
- Analyze systematic/market risk viz. inflation risk and interest rate risk
- Labor intensive technology would lead to high income to employees, leading to high disposable income, high savings and high investment

FORECASTING TECHNIQUES

- Judgmental forecasting: blend several forecasters' judgments together to produce a forecast. "Delphic" methodologies are used to integrate inputs from people experienced in forecasting
- Indicator forecasts: requires that economic indicators be used to estimate the behavior of related variables
- Time-series technique: use trend projections of past economic activity to extend into the future
- Structural models: captures the interrelationships among many variables, using statistical analysis to estimate the historic patterns

Combinations of methodologies are perhaps more commonly used in formulating forecasts

INDUSTRY ANALYSIS

INDUSTRY PRACTICES

Distribution, pricing, promotion, methods of selling, service/field support, R&D, legal tactics
FMCG - reliance on carrying & forwarding agent (C&A) - Industry practice
Textiles - Wholesalers - Semi wholesalers - retailers + retail showrooms (few players)

EMERGING TRENDS

Product life cycle, rate of growth, changes in buyer needs, innovations in products/ processes, entry & exit of firms, changes in regulatory environment governing the industry

Factors to be considered:

- The investor has to analyze some factors:

- Growth of the industry.
- Cost structure & profitability.
- Nature of the product.
- Nature of the competition.
- Government policy.
- Labor.
- Research & development.

INDUSTRY CLASSIFICATION

GROWTH INDUSTRY

- The growth industries have special features of high rate of earnings & growth in expansion, independent of the business cycle.
- The expansion of the industry mainly depends on the technological change.

CYCLICAL INDUSTRY

- The growth and the profitability of the industry move along with the business cycle.
- During the boom period they enjoy growth and during depression they suffer a set back.

DEFENSIVE INDUSTRY

- Defensive industry defies the movement of the business cycle.
- For e.g.: Food & shelter are the basic requirements of humanity.
- The stocks of the defensive industries can be held by the investor for income earning purpose.
- They expand & earn income in the depression period too, under the govt 's umbrella of protection & counter- cyclical in NATURE.

CYCLICAL GROWTH INDUSTRY

- This is a new type of industry that is cyclical and at the same time growing.
- The changes in technology & introduction of new models help the automobile industry to resume their growth path.
- For e.g.: The automobile industry experiences periods of stagnation, decline but they tremendously.

INDUSTRY LIFE CYCLE

- The industry life cycle theory is generally attributed.
- The life of the industry is separated into four stages:

*Pioneering stage.
*Rapid growth stage
*Maturity & stabilization stage
* Declining stage.

PIONEERING STAGE

- The prospective demand for the product is promising in this stage& the technology of the product is low.
- The demand for the product attracts many producers to produce the particular product.
- The producers try to develop brand name, differentiate, the product & create a image.
- The severe competition often leads to the change of position of the firms in terms of market share & profit.

RAPID GROWTH STAGE

- This stage starts with the appearance of surviving firms from the pioneering stage.
- The technology of the production have improved resulting in low cost of production & good quality products.
- The companies have stable growth rate in this stage & they declare dividend to the shareholders. e.g: power industry, telecommunications.

MATURITY & STABILISATION STAGE

- In this the growth rate tends to moderate & the rate of growth would be more or less equal to the industrial growth rate or the gross domestic product growth rate.
- Technology innovations in the production process & products should be introduced.
- The investors have to closely monitor the events that take place in the maturity stage of the industry.

DECLINING STAGE

- In this stage, demand for the particular product & the earnings of the companies in the industry decline.
- Innovation of new products & changes in consumer preferences lead to this stage.
- The specific feature of this stage, is even in the boom period the growth of the industry would be low & decline at a higher rate during the recession.
- It is better to avoid investing in the shares of the low growth industry even in the boom period.
- Investment in the shares of these types of companies leads to erosion of capital

GROWTH OF THE INDUSTRY

- The performance of the industry in terms of growth & profitability should be analyzed.
- Industry wise growth is published periodically by the centre for Monitoring Indian Economy.
- Looking into the past growth of the industry, the analyst can predict the future.

COST STRUCTURE & PROFITABILITY

- The cost structure, .i.e. the fixed & variable cost, affects the cost of production & profitability of the firm.
- Higher the fixed cost component, greater sales volume is required to reach the firm’s break even point.
- Once the break even point is reached and the production is on the track, the profitability can be increased by utilizing the capacity full.
- Once the maximum capacity is reached, again capital has to be invested in the fixed equipment.
- Hence the lower the fixed cost, adjustability to the changing demand and reaching the break even points are comparatively easier.

NATURE OF THE PRODUCT

- The products produced by the industries are demanded by the consumers and other industries.
- If industrial goods like iron sheet& coils are produced, the demand for them depends on the construction industry.
- The investor has to analyze the condition of related goods producing industry and the end user industry to find out the demand for industrial goods.
- In case of consumer goods industry, the change in the consumer’s preference, technological innovations & substitute products affect the demand. e.g. Ink pen affected by the ball point pen with change in the consumer preference towards the usage of pen.

NATURE OF THE COMPETITION

- Nature of the competition is an essential factor that determines the demand for the particular product, its profitability and the price of the concerned company scrip's.
- The supply may arise from indigenous producers & multinationals.

GOVERNMENT POLICY

- The government policies affect the very nerve of the industry and the effects differ from industry to industry.
- Government regulates the size of the production and the pricing of certain products.
- For e.g. control& decontrol of sugar price affects the profitability of sugar industry.
- Liberalization and delicensing have brought immense threat to the existing domestic industries in several sectors.

LABOUR

- The analysis of labor scenario in a particular is of great importance.

- Textile industry is known for its trade unions.
- If the trade unions are strong and strikes occur frequently, it would lead to fall in the production.
- RESEARCH AND DEVELOPMENT:
- For any industry, to survive the competition in the national and international markets, product and production process have to be technologically competitive.
- This depends on the R&D in the particular company or industry.

POLLUTION STANDARDS

- Pollution standards are high and strict in the industrial sector.
- For some industries it may be heavier than others.
- For ex: in leather, pharmaceutical and chemical industries the industrial effluents are more.

SWOT ANALYSIS

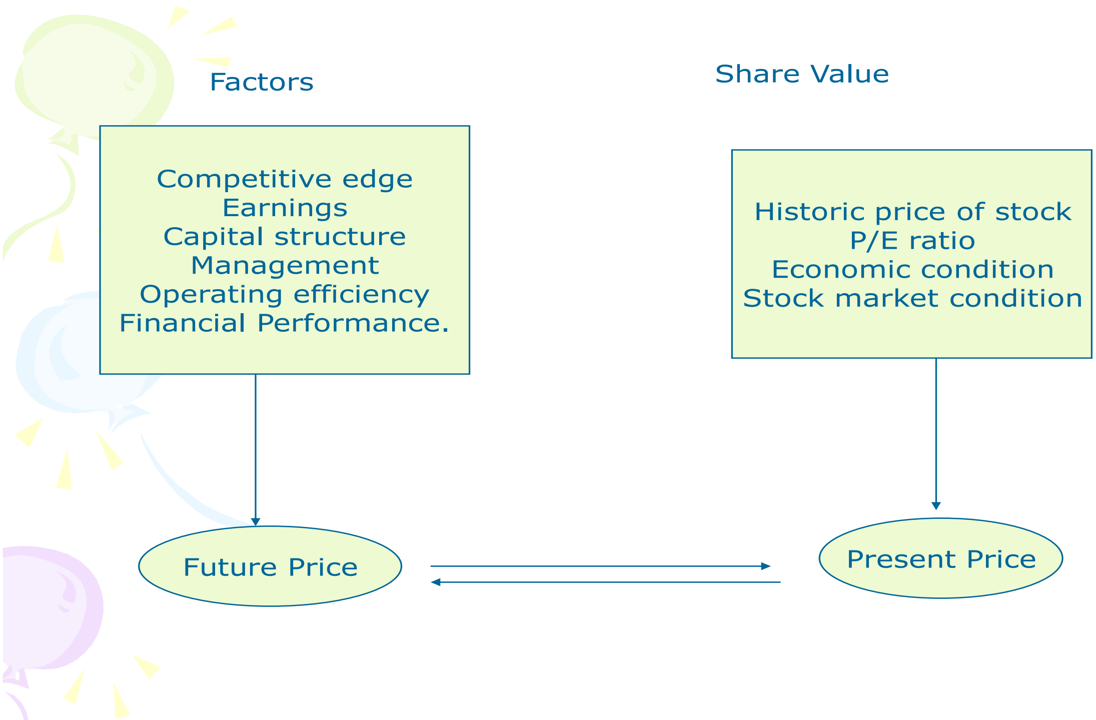
- The factors we above would become strength, weakness, opportunity and threat for the industry.
- The investor should carry out a SWOT analysis for the chosen industry.
- For ex: increase in demand of a product becomes its strength and presence of numerous players in the market becomes a threat.

INTRINSIC PRICE

- Fundamentalists believe in the intrinsic value of true & inherent worth of each investor will consider a different intrinsic price of share according to his own judgment
- No two investors will be able to agree on what the intrinsic worth of a share should be.
- The intrinsic price is based on personal judgment , likes dislikes other psychological ,emotional reasons and inactive in nature.
- The P/BV,P/E ratios are good indicators for finding out the intrinsic values of shares. The intrinsic value of a share should consider not only the present value of a share value of the share.

COMPANY ANALYSIS

- In the company analysis the investor assimilates the present and future values of the stock.
- The risk and return associated with the purchase of the stock is analyzed to take better investment decisions.



Valuation

- In finance, valuation is the process of estimating what something is worth. Items that are usually valued are a financial asset or liability.
- Valuations can be done on assets (for example, investments in marketable securities such as stocks, options, business enterprises, or intangible assets such as patents and trademarks) or on liabilities (e.g., bonds issued by a company).
- Valuations are needed for many reasons such as investment analysis, capital budgeting, merger and acquisition transactions, financial reporting, taxable events to determine the proper tax liability, and in litigation.
- Valuation of financial assets is done using one or more of these types of models:
- Absolute value models that determine the present value of an asset's expected future cash flows.
- These kinds of models take two general forms: multi-period models such as discounted cash flow models or single-period models such as the Gordon model.
- These models rely on mathematics rather than price observation.
- Relative value models determine value based on the observation of market prices of similar assets.
- Option pricing models are used for certain types of financial assets (e.g., warrants, put options, call options, employee stock options, investments with embedded options such as a callable bond) and are a complex present value model.
- The most common option pricing models are the Black-Scholes-Merton models and lattice models.
- Common terms for the value of an asset or liability are fair market value, fair value, and intrinsic value.
- The meanings of these terms differ.
- For instance, when an analyst believes a stock's intrinsic value is greater (less) than its market price, an analyst makes a "buy" ("sell") recommendation.

MEASURING EARNINGS

The most immediately recognizable effect of economic and industry influences on a specific company is probably the impact on revenues. The relationship of revenues and expenses to economic and industry changes and the resulting earnings is the focal point of company analysis.

Earnings of a company can be measured by obtaining data regarding revenues about the company viz.

1. **INTERNAL INFORMATION**

Data made public by firms concerning their operations. E.g. interim and annual reports i.e. firm's financial statements, public and private statements of the officers and managers of the company

2. **EXTERNAL INFORMATION**

Information generated independently outside the company

INTERNAL INFORATION

Role of financial statements: (Income Statement & Balance sheet)

Financial Statements are proxies of real process.

Requisites: 1. Correct
2. Complete
3. Consistent
4. Comparable (Intra & Inter)

I. Income Statement

It has two accounts

1. Trading Account
2. P/L account

Hall-marks:

1. Earnings from Regular Operations
2. Earnings from Extra ordinary items
3. Matching principle
4. Provision for intangible assets
5. Pension (PF) Costs- Allocation
6. Inventory Costing methods
7. Depreciation Accounting
8. Provision for Income Taxes
9. EPS

Balance sheet:

Hall – Marks:

1. Cost principle
2. Contingent Liabilities
3. Statement of cash flows

Uses of Cash flow statement to Analyst

- Knowledge on cash generated from operations
- Knowledge on dividends paid in spite of Loss
- Knowledge on cash flow problems in spite of Large problems
- Knowledge on additions of fixed assets & ways of financing it
- Knowledge on additional Debt financing
- Knowledge on changes in Working Capital

4. Accounting for foreign currency
5. Deferred Income Taxes
6. Liquidity Position

EXTERNAL INFORMATION

Information about the company are obtained through Investment services, Brokerage firms and Agencies like chambers of commerce.

COMPANY ANALYSIS – FORECASTING EARNINGS

'Chemistry' of Earnings
Ingredients of financial statements is analyzed to visualize the critical aspects of firm's operations that dictate the level, trend and stability of earnings

Traditional Methods
for assessing revenues, expenses and earnings of the firm

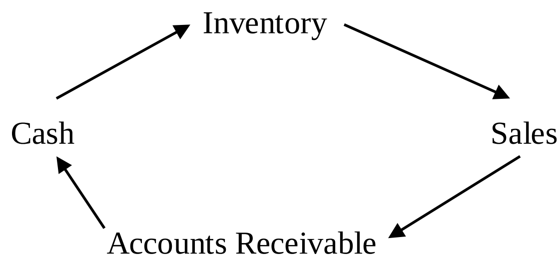
- ROI Approach
- Market share/ Profit margin Approach
- Subjective Approach

Chemistry / Ingredients of Earnings:

1. Asset productivity and earnings:

Return on Assets: EBIT / Assets (or) Turnover * Margin

2. Operating cycle:



3. Earnings and Role of financing (Debt Financing)

* Effective Interest rate: Interest Expenses / Total Liabilities
* Benefits of borrowed money: Return on assets – Effective Interest rate

* Debt / Equity = Total Liabilities / Equity
* EBT = EBIT – Interest
* Assets value per share = Assets / No. of equity shares
* Dividend payout rate = DPS / EPS
* Retention rate = 1.00 – Dividend payout rate
* Growth in EBIT = Retention rate * Return on assets

Where:
EBIT → Earnings before Interest & Taxes
EBT → Earnings Before Taxes
DPS → Dividend / share
EPS → Earnings / Share

To know the financial leverage of a firm, all the above has to be collected.

4. Effects of Taxes
T = Effective Tax rate : Tax expenses / EBT

5. Earnings and Dividends per share:
EPS = EAT / No. of shares
DPS = (1-B) (EPS)
Where
B = Retention rate (1 - Dividend payout rate)

TRADITIONAL METHODS

1. ROI Approach
ROI = EAT

2. Market share or profit–Margin Approach:
i) Projection of sales / Market share
Example:
Textile Industry Sales → Rs. 10 Million
Bombay Dyeing Captured 10% of this market in 2010 i.e. Rs. 1 million sales.
Analyst forecasts a 20% increase in 2011 sales for the industry and expects Bombay Dyeing share will increase to 12 %

Projected sales of Bombay Dyeing:
Now in 2011, Industry sales = 10 + 20/100 of 10
= Rs. 12 million
Bombay Dyeing's Share = 12%
(or)
Sales of Bombay Dyeing = 12/100 *12 = Rs. 1.44 million

ii) Net Income Profit Margin = Net Income After Taxes / sales

iii) BEA: BEP = Fixed Cost / Contribution per unit

3. Subjective Approach

Earnings = Revenues – Expenses

EPS = Net Earnings / No. of outstanding Equity Shares

Price of share = EPS * P/E

COMPANY ANALYSIS – APPLIED VALUATION TECHNIQUES

GRAHAM & DODDS EQUITY ANALYSIS: It has 3 approaches

1. Anticipation approach:

Selecting and recommending that equity shares 'out perform' the market over a period of 12 months.

2. Market contrast Approach:

Finding out the value of the share / intrinsic value / indicated value / Central Value / normal Value / Investment value / reasonable value / fair value / appraised value

If Intrinsic value > Market price → Invest & vice versa

3. Relative value approach:

Considers the prevailing market prices and analyses how far the share is attractive at correct market prices

GRAHAM & DODDS INVESTORS RATIOS:

1. EPS = (PAT – Preference dividends) / No. of Equity shares

2. P/E ratio = M.P per Share / EPS

3. Dividend Yield = (Dividend per share / Market price per share) *100

4. Cover for equity Dividends = (EAT – Preference Dividends) / Total Amount for equity dividends

5. Pay out ratio = Dividend per equity share / EPS

6. Book Value / Share = (Equity Share capital + Reserves) / Total no. of equity shares

Conclusion: How to select / pickup growth shares in Blue chips

1. Check the knowledge & experience of management
2. Check the market share of the company.
3. Check the company's diversification strategies
4. Check the company's policies of expansion
5. Check the company's dividend policy
6. Check the company's services to investors
7. Check the company's demand for its goods / services

JEPPIAAR ENGINEERING COLLEGE

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DEPARTMENT OF MANAGEMENT STUDIES

SECURITY ANALYSIS & PORTFOLIO MANAGEMENT

UNIT – IV
TECHNICAL ANALYSIS (TA)

INTRODUCTION

TA helps in the decision, when to buy and when to sell. Timing determines the spreads in the Trade.
Spread: Margin between buy & sell prices.

Basic Tenets: are three viz.

1- All Fundamental factors has a reflection on stock prices
2- Price trends are either upwards or downwards depending on sentiments – psychology and emotion of investors / traders
3- Present trends are influenced by past trends and future trends are based on past and present trends

TOOLS of Technical Analysis:

1. Daily fluctuation or Volatility: High, Low open and close prices are quoted. An early high low indicates the possible levels with in a range that the price may move which helps to locate entry and exit points.

2. Floating stock and Volume of Trade: Floating Stock is the total number of shares available for trading with public and volume of trade is any part of that total floating stock.

3. Price trends and volume trends: the chartist method and Moving average method can be used to depict these trends.

4. Rate of Change (ROC) of Prices and Volumes or the ROC Method: This is useful like the moving average method to indicate more clearly the buy and sell signals. The Chartist method is useful to indicate the directions and the trend reversals. ROC is calculated by dividing the today's price by the price five days back or few days back.

5. Japanese Candlestick Method: There are three main types of Candlesticks with each day's trade being shown in the form of candlesticks. Each stick has the body of the candle and a shadow. The body shows the open and close prices while the shadow shows the high and low prices. The three main types are as follows:

a) Closing price is higher than open price (White Candlestick)
b) Closing price is lower than open price (Black stick)
c) Open and Close are at the same level (Doji candlestick)

This method will indicate any likely changes in trends in the short-run.

6. Dow Theory: There are three major trends in this theory. Minor, Intermediate and Major trends representing daily or weekly, monthly and yearly trends in prices respectively comparing the price trends to waves, tides and ripples.

7. Elliot Wave Theory: The market is unfolded by a basic rhythm or pattern of 5 waves up to be corrected by three waves down with a total of 8 waves – a philosophy of price trends.

8. Theory of Gaps: Gaps in price between any two days causing a discontinuity is called a gap. The high of one day may be lower than the low of the previous day when prices are falling. Gaps indicate the likely acceleration of the trend or reversal

Gaps are of different categories, namely:

a) Common gaps – when prices move in a narrow range, a gap can occur in prices
b) Break out gaps – When price trend is likely to change, a gap can occur in either direction. This gives a break to congestion in any direction.
c) Runaway gaps – These gaps occur continuously in a downward phase or an upward phase, accelerating or decelerating the trends.
d) Exhaustion gaps – Occur when the rally is getting exhausted. When the runaway gap is coming to an end, there can be exhaustion gap to indicate the likely completion of the uptrend.

9. Advance Decline Line or Spread of the Market: The ratio between advances to declines will indicate the relative strength of upward or downward phases. When the advances are increasing over declines, it is an upward phase and the reverse indicates the downward phase.

10. Relative Strength Index (RSI) of wells wilder: It is an oscillator used to identify the inherent strength or weakness of particular scrip.

Thus RSI = 100 – (100/(1+RS)) where

RS = Average gain per day / Average loss per day

R.S.I. is calculated for one scrip while RSC or the relative strength comparative, is the ratio of two prices of two different scrips, used for comparison of two or more scrips. RSI can be calculated for any number of days say 5 or 10 etc. to indicate the strength of price trend.

ASSUMPTIONS

1) The market value of the scrip is determined by the interaction of supply and demand
2) The market discounts everything. The price of the security quoted represents the hopes, fears and inside information received by the market players
3) The market always moves in trend. The trend may be either increasing or decreasing.
4) The market technicians assume that past prices predict the future.

HISTORY OF TECHNICAL ANALYSIS

The technical analysis is based in the doctrine given by Charles H. Dow in1984, in the Wall Street Journal. He wrote a series of articles in the Wall Street Journal. A.J. Nelson, a close friend of Charles Dow formalized the Dow theory for economic forecasting. The analysts used charts of individual stocks and moving averages in the early 1920's. Later on, with the aid of calculators and computers, sophisticated techniques came into vogue.

TECHNICAL TOOLS

Generally used technical tools are, Dow theory, volume of trading, short selling, odd lot trading, bars and line charts, moving averages and oscillators.

DOW THEORY

Dow developed his theory to explain the movement of the indices of Dow Jones Averages

Hypotheses

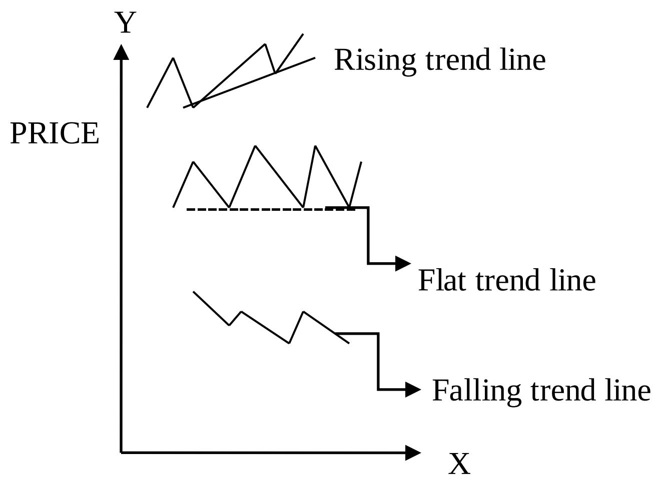
1- No single individual or buyer ca influence the major trend of the market
2- The market discounts every thing. Even natural calamities such as earthquake, plague and fire also get quickly discounted in the market.
3- Theory is not infallible. It is not a tool to beat the market but provides a way to understand it better.

THE THEORY

According to Dow theory the trend is divided into primary, intermediate and short term trend. The primary trend may be the broad upward or downward movement that may last for a year or two. The intermediate trends are corrective movements, which may last for three weeks to three months. The primary trend may be interrupted trend. The short term refers to the day to day price movement. It is also known as oscillations or fluctuations. These three types of trends are compared to tide, waves and ripples of the sea.

Trend

Trend is the direction of movement. The share prices can either increase or fall or remain flat. The three directions of the share price movements are called as rising, falling and flat trends. The share prices move in zigzag manner. The trend lines are straight lines drawn connecting either the tops or bottoms of the share price movement. To draw a trend line, the technical analyst should have at least two tops or bottoms. The following figure shows the trend lines



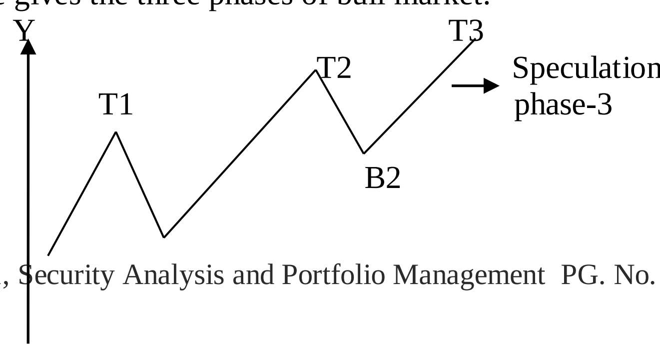
Days

Trend reversal

The rise or fall in share price cannot go on forever. The share price movement may reveres its direction. Before the change of direction, certain pattern in price movement emerges. The change in the direction of the trend is shown by violation of the trend line. Violation of the trend line means the penetration of the trend line. If a scrip price cuts the rising trend line from above, it is a violation of trend line and signals the possibility of fall in price. Like-wise if the scrip pierces the trend line from below, this signals the rise in price.

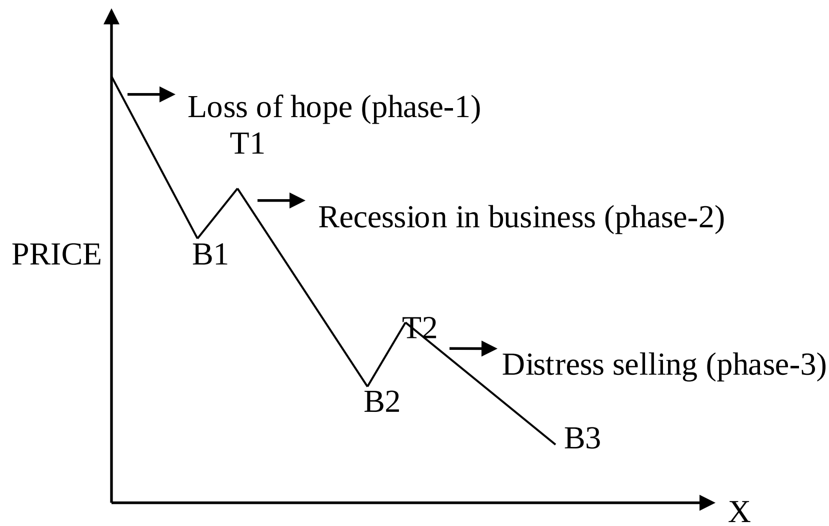
PRIMARY TREND

The security price trend may be either increasing or decreasing. When the market exhibits the increasing trend, it is called bull market. The bull market shows three clear-cut peaks. Each peak is higher than the previous peak. The bottoms are also higher than the previous bottoms. The reactions following the peak used to halt before the previous bottoms. The phases leading to the three peaks are revival, improvement in corporate profit and speculation. The revival period encourages more and more investors to buy scrips, their expectations about the future being high. In the second phase, increased profits of corporate would result in further price rise. In the third phase, prices advance due to inflation and speculation. The figure gives the three phases of bull market.



The reverse is true with the bear market. Here, the first phase of fall starts with the abandonment of hopes. The chances of prices moving back to the previous high level seemed to be low. This would result in the sale of shares. In the second phase, companies are reporting lower profits and dividends. This would lead to selling pressure. The final phase is characterized by the distress sale of shares. During the bear phase of 1996, in the Bombay stock Exchange more than 2/3 of stocks was inactive. Most of scrips were sold below their par values. The figure gives the bear market.

Bear Market

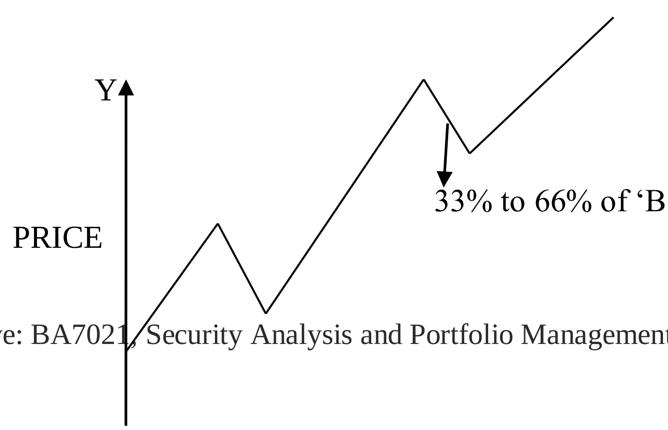


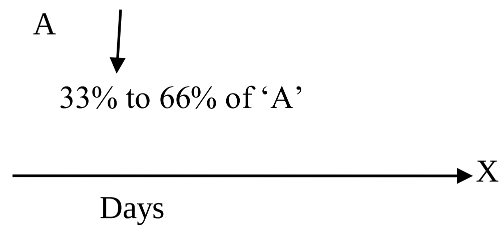
Days

THE SECONDARY TREND

The secondary trend or the intermediate trend moves against the main trend and leads to correction. In the bull market the secondary trend would result in the fall of about 33-66%of the earlier rise. In the bear market, the secondary trend carries the price upward and corrects the main trend. The correction would be 33% to 66% of the earlier fall. Intermediate trend corrects the overbought and oversold condition. It provides the breathing space to the market. Compared to the time taken for the primary trend, secondary trend is swift and quicker. The following figure shows the secondary movement.

Secondary corrections





MINOR TRENDS / SHORT-TERM TRENDS

Minor trends or tertiary moves are called random wriggles. They are simply the daily price fluctuations. Minor trend tries to correct the secondary trend movement. It is better for the investors to concentrate on the primary or secondary trends than on the minor trends. The chartist plots the scrip’s price or the market index each day to trace the primary and secondary trend.

SUPPORT AND RESISTANCE LEVEL

A support level exists at a price where considerable demand for that stock is expected to prevent further fall in the price level. The fall in the price may be halted for the time being or it may result even in price reversal. In the support level, demand for the particular scrip is expected.

In the resistance level, the supply of scrip would be greater than the demand and further rise in price is prevented. The selling pressure is greater and the increase in price is halted for the time being.

INDICATORS

Technical indicators are used to find out the direction of the overall market. The overall market movements affect the individual share price. Aggregate forecasting is considered to be more reliable than the individual forecasting. The indicators are price and volume of trade. The volume of trade is influenced by the behavior of price.

Volume of trade

Dow gave special emphasis on volume. Volume expands along with the bull market and narrows down in the bear market. If the volume falls with rise in price or vice-versa, it is a matter of concern for the investor and the trend may not persist for a longer time. Technical analyst used volume as an excellent method of confirming the trend. The market is said to be bullish when small volume of trade and large volume of trade follow the fall in price and the rise in price.

The breadth of the market

The breadth of market is the term often used to study the advances and declines that have occurred in the stock market. Advances mean the number of shares whose prices have increased from the previous day’s trading. Declines indicate the number of shares whose prices have fallen from the previous day’s trading. This is easy to plot and watch indicator because data are available in all business dailies.

The net difference between the number of stock advanced and declined during the same period is the breadth of the market. A cumulative index of net differences measures the market breadth.

Short Sales

Short selling is a technical indicator known as short interest. Short sales refer to the selling of shares that are not owned. The bears are the short sellers who sell now in the hope of purchasing at a lower price in the future to make profits. The short sellers have to cover up their positions.

ODD LOT TRADING

Shares are generally sold in a lot of hundred. Shares, sold in smaller lots, fewer than 100 are called odd lot. Such buyers and sellers are called odd lotters. Odd lot purchases to odd lot sales (Purchase % Sales) is the odd lot index. The increase in odd lot purchase results in an increase in the index. Relatively more selling leads to fall in the index. It is generally considered that the professional investor is more informed and stronger than the odd lotters. When the professional investors dominate the market, the stock market is technically strong. If the odd lotters dominate the market, the market is considered to be technically weak. The notion behind is that odd lot purchase is concentrated at the top of the market cycle and selling at the bottom. High odd lot purchase forecasts fall in the market price and low purchases / sales ratios are presumed to occur toward the end of bear market.

MOVING AVERAGE

The market indices do not rise or fall in straight line. The upward and downward movements are interrupted by counter moves. The underlying trend can be studied by smoothening of the data. To smooth the data moving average technique is used.

The word moving means that the body of data moves ahead to include the recent observation. If it is five day moving average, on the sixth day of the body of data moves to include the sixth day observation eliminating the first day’s observation. Likewise it continues. In the moving average calculation, closing price of the stock is used.

Day	**Price**	**Average**
Feb 4	255	-
6	261	-
7	269	266.2
8	273	270.8
11	273	272.8
12	278	273.2
13	271	274.0
14	271	273.8

Calculation of Five-Day Moving Average for Reliance’s Stock

The moving averages are used to study the movement of the market as well as the individual scrip price. The moving average indicates the underlying trend in the scrip.

The period of average determines the period of the trend that is being identified. For identifying short-term trend, 10 day to 30 day moving averages are used. In the case of medium trend 50 day to 125 day are adopted. 200 day moving average is used to identify long term trend.

INDEX AND STOCK PRICE MOVING AVERAGE

Individual stock price is compared with the stock market indices. The moving average of the stock and the index are plotted in the same sheet and trends are compared. If NSE or BSE index is above stock's moving average line, the particular stock has bullish trend. The price may increase above the market average. If the Sensex or Nifty is below the stock's moving average, the breadth market can be expected for the particular stock.

If the moving average of the stock penetrates the stock market index from above, it generates sell signal. Unfavorable market condition prevails for the particular scrip. If the stock line pushes up through the market average, it is a buy signal.

OSCILLATORS

Oscillators indicate the market momentum or scrip momentum. Oscillators shows the share price movement across a reference point from one extreme to another. The momentum indicates:

-Overbought and oversold conditions of the scrip or the market.

-Signalling the possible trend reversal

-Rise or decline in the momentum

Generally, oscillators are analysed along with the price chart. Oscillators indicate trend reversals that have to be confirmed with the price movement of the scrip. Changes in the price should be correlated to changes in the momentum, and then only buy and sell signals can be generated. Actions have to be taken only when the price and momentum agree with each other. With the daily, weekly or monthly closing prices oscillators are built. For short term trading, daily price oscillators are useful.

Relative strength index (RSI)

RSI was developed by Wells Wilder. It is an oscillator used to identify the inherent technical strength and weakness of a particular scrip or market. RSI can be calculated for a scrip by adopting the following formula.

RSI = 100-(100/(1+Rs))

Rs= AverageGain Per day / AverageLoss Per Day

The RSI can be calculated for any number of days depending on the wish of the technical analyst and the time frame of trading adopted in a particular stock market. RSI is calculated for 5,7,9 and 14 days. If the time period taken for calculation is more, the possibility of getting wrong signals is reduced. Reactionary or sustained rise or fall in the price of scrip is foretold by the RSI.

Calculation of Day RSI for ACC

Date	Price	Gain	Loss
Feb 4	300	-	-
6	304	4	-
7	319	15	-
8	317	-	2
11	319	2	-
12	333	14	-
13	331	-	2
14	332	1	-
18	348	16	-
19	346	-	2
		52/6=8.67	6/3=2

$$
\begin{aligned}
RSI &= 100 - (100/(1+4.335) \\
&= 100-18.74 \\
&= 81.26
\end{aligned}
$$

The broad rule is , if the RSI crosses seventy there may be downturn and it is time to sell. If the RSI falls below thirty it is time to pick up the scrip.

RATE OF CHANGE

Rate of change indicator or the ROC measures the rate of change between the current price and the price 'n' number of days in the past. ROC helps to find out the overbought positions in a scrip. It is also useful in identifying the trend reversal. Closing prices are used to calculate the ROC. Daily closing prices are used for the daily ROC and weekly closing prices for weekly ROC. Calculation of ROC for 12 week or 12 month is most popular.

Procedure

ROC can be calculated by two methods. In the first method, current closing price is expressed as a percentage of the twelve days or weeks in past. Suppose the price of AB company's share is Rs. 12 and price twelve days ago was Rs. 10 then the ROC is obtained by using the equation: 12/10*100 = 120%. In the second method, the percentage variation between the current price and the price twelve days in the past is calculated. It is 12/10*100-100=20%. By this method both positive and negative values can be arrived.

ROC=(Today's price / Price 'n' days back)* 100
ROC=(Today's price / Price 'n' days back)* 100 -100

CHARTS

Charts are the valuable and easiest tools in the technical analysis. The graphic presentation of the data helps the investor to find out the trend of the price without any difficulty. The charts also have the following uses

-Spots the current trend for buying and selling
-Indicates the probable future action of the market by projection
-Shows the past historic movement
-Indicates the important areas of support and resistance.

The charts do not lie but interpretation differs from analyst to analyst according to their skills and experience. A leading technician, James Dines said, “ charts are like fire or electricity. They are brilliant tools if intelligently controlled and handled but dangerous to a novice”.

Point and Figure Charts
Technical analyst to predict the extent and direction of the price movement of a particular stock or the stock market indices uses point and figure charts. This PF charts are one-dimensional and there is no indication of time or volume. The price changes in relation to previous prices are shown. The change of price direction can be interpreted. The charts are drawn in the ruled paper. The following figure shows the P and F chart.

Point and Figure Chart

	59							
P	57	X		X				
R	55	X	O	X	O			
I	53	X	O	X	O			
C	51		O		O	X		
E	49				O			
	47							
	45							

↑ ↓ ↑ ↑ ↑

Movement

The prices are given in the left of the figure as shown. The numbers represent the price of the stock at 2-point interval. The interval of price changes can be 1,2,3,5 or 10 points. It depends on the analyst’s preference. Further, it depends upon the stock price movement. Higher points are chosen for high priced stocks and vice-versa. Only whole number prices are entered. In figure, the initial price 53 was entered in column 1 as X. the next mark X will be made only if the stock moves up to 55. As long as the price moves up, the Xs are drawn in the vertical column. Here the stock price has moved to 57. When the stock price declines by two points or more the chartist records the change by placing the ‘o’ in the next column. Then the movements are interpreted. The trend reversals can be spotted easily.

Bar Charts

The bar chart is the simplest and most commonly used tool of a technique analyst. To build a bar a dot is entered to represent the highest price at which the stock is traded on that day, week or month. Then another dot is entered to indicate the lowest price on that particular date. A line is drawn to connect both the points a horizontal nub is drawn to mark the closing price. Line charts are used to indicate the price movements. The line chart is a simplification of the bar chart.

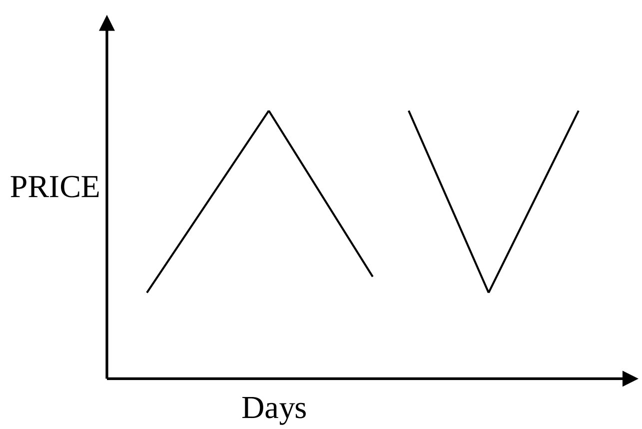
Chart patterns

Charts reveal certain patterns that are of predictive value. Chart patterns are used as a supplement to other information and confirmation of signals provided by trend lines. Some of the most widely used and easily recognizable chart patterns are

V Formation

The name itself indicates that in the 'V' formation there is a long sharp decline and a fast reversal. The .V. pattern occurs mostly in popular stocks where the market interest changes quickly from hope to fear and vice-versa. In the case of inverted '^' the rise occurs first and declines. There are extended 'V's. In it, the bottom or top moves more slowly over a broader area.

V-Shaped Reversal



Tops and bottoms

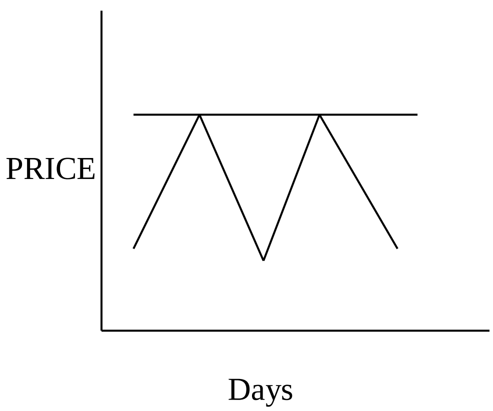
Top and bottom formation is interesting to watch but what is more important, is the middle portion of it. The investor has to buy after up trend has started ad exit before the top is reached. Generally tops and bottoms are formed at the beginning or end of the new trends. The reversal from the tops and bottoms indicate sell and buy signals.

Double top and bottom:

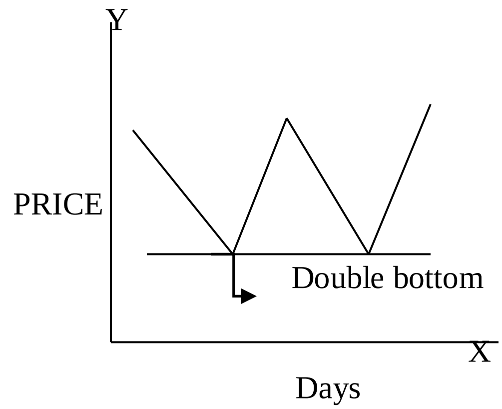
This type of information signals the end of one trend and the beginning of another. If the double top is formed when a stock price rises to a certain level, falls rapidly, again rises to the same height or more, and turns down. Its pattern resembles the letter ‘M’. The double top may indicate the onset of the bar market. But the results should be confirmed with volume and trend.

In a double bottom, the price of the stock falls to a certain level and increase with diminishing activity. Then it falls again to the same or to a lower price and turns up to a higher level. The double bottom resembles the letter ‘W. Technical analysis view double bottom as a sign for bull market. The double top and bottom figures are given below.

Double Top



Double bottom



Head and shoulders

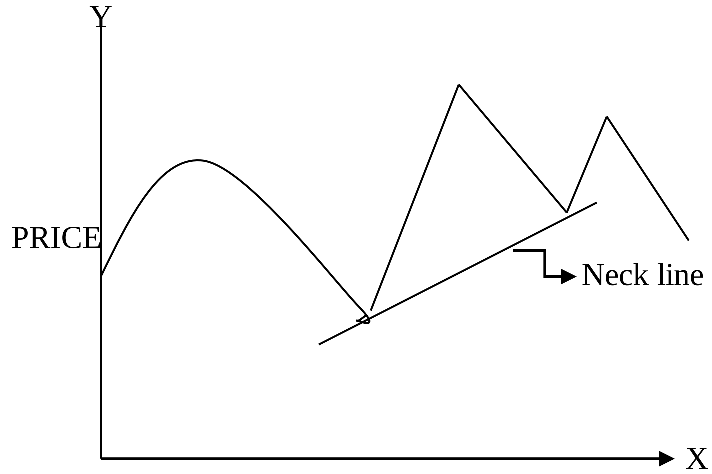
This pattern is easy to identify and the signal generated by this pattern is considered to be reliable. In the head and shoulder pattern there are three rallies resembling the left shoulder, a head and a right shoulder A neckline is drawn connecting the lows of the tops. When the stock price cuts the neckline from above, it signals the bear market.

The upward movement of the price for some duration creates the left shoulder. At the top of the left shoulder people who bought during the up trend begin to sell resulting in a dip. Near the bottom there would be reaction and people who have not bought in the first up trend start buying at relatively low prices thus pushing he price upward. The alternating forces of demand and supply create new ups and lows. The following figures explain the head and shoulders pattern.

Inverted head and shoulders

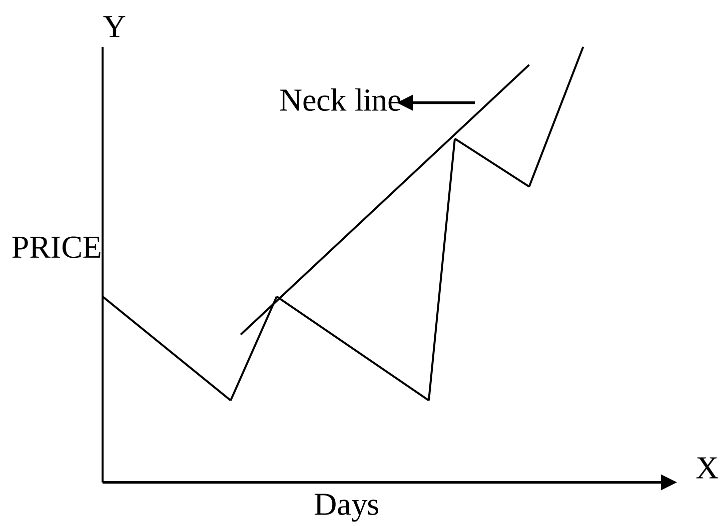
Here the reverse of the previous patterns holds true. The price of stock’s falls and rises that makes a inverted right shoulder. As the process of fall and rise in price continues the head and left shoulders are created. Connecting the tops of the inverted head and shoulders gives the neckline. When the price pierces the neckline from below, it indicates the end of bear market and the beginning of the bull market. These patterns have to be confirmed with the volume and trend of the market.

Head and shoulders



Days

Inverted Head and shoulders



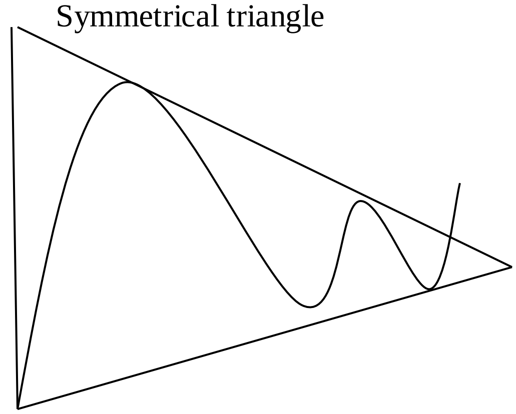
Triangles

The triangle formation is easy to identify and popular in technical analysis. The triangles are of symmetrical, ascending, descending and inverted.

Symmetrical Triangle

This pattern is made up of series of fluctuations, each fluctuation smaller than the previous one. Tops do not attain the height of the previous tops. Likewise bottoms are higher than the previous bottoms. Connecting the lower tops that are slanting downward forms a symmetrical triangle.

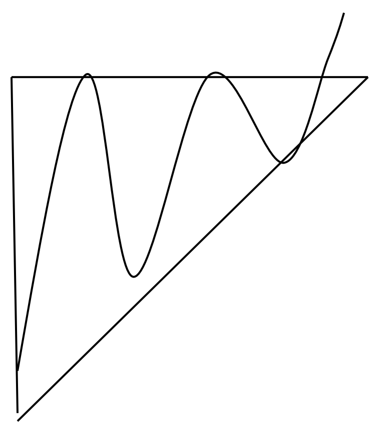
Symmetrical triangle



Ascending triangle

Here, the upper trend line is almost a horizontal trend line connecting the tops and the lower trend line is rising trend line connecting the rising bottoms. When the demand for the scrip overcomes the supply for it, then there will be a break out. The break will be in favour of the bullish trend.

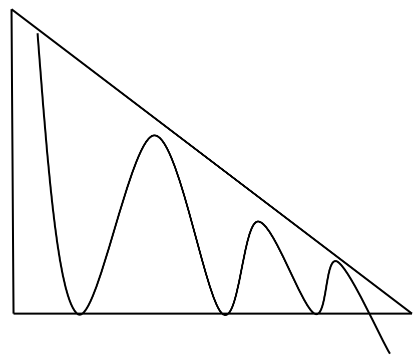
Ascending Triangle



Descending triangle

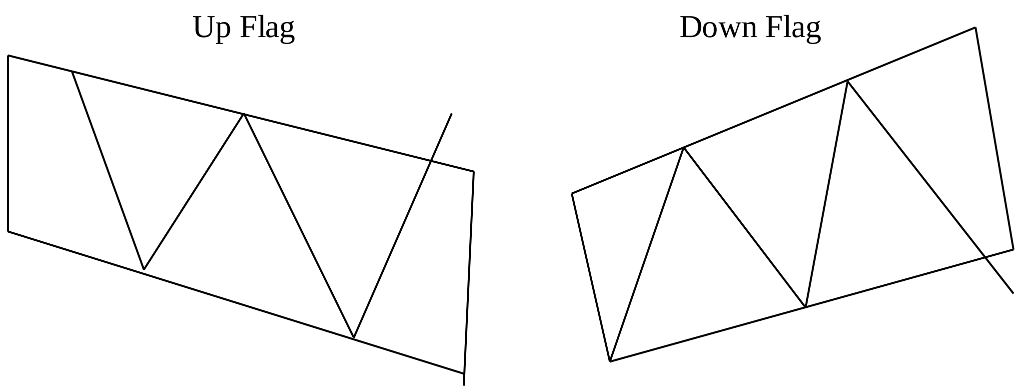
Here, connecting the lower tops forms the upper trend line. The upper trend line would be a falling one. The lower trend line would be almost horizontal connecting the bottoms. The lower line indicates the support level. The possibility for a downward breakout is high in this pattern. The pattern indicates that the bear operators are more powerful than the bull operators. This pattern is seen during the downtrend.

Descending Triangle



Flags

Flag pattern is commonly seen on the price charts. These patterns emerge either before a fall or rise in the value of scrips. These patterns show the market corrections of the overbought or oversold situations. The time taken to form theses patterns is quick. Each rally and setback may last only three to four days. If the pattern is wider it may take three weeks to complete the pattern.

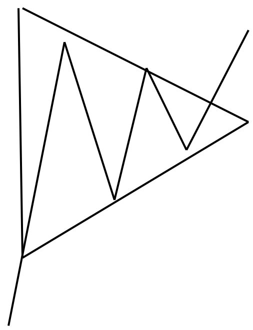


A flag resembles a parallelogram. A bullish flag is formed by two trend lines that stoop downwards. The break out would occur on the upper side of the trend line. In a bearish flag both the trend lines would be stooping upwards. The breakout occurs in the downward trend line.

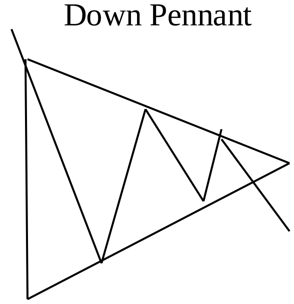
Pennant

Pennant looks like a symmetrical triangle. Here also there are bullish and bearish pennant. In the bullish pennant, the lower tops form the upper trend line. The lower trend line connects the rising bottoms. The bullish trend occurs when the value of scrip moves above the upward trend line. Likewise in the bearish pennant, upward trend line is falling and the lower trend line is rising.

Up Pennant



Down Pennant



TECHNICAL ANALYSIS AND FUNDAMENTAL ANALYSIS

1. Fundamental analysts analyses the stock based on the specific goals of the investors. They study the financial strength of corporate, growth of sales, earnings and profitability. They also take into account the general industry and economic conditions.

The technical analysts mainly focus the attention on the past history of prices. Generally technical analysts choose to study two basic market data-price and volume.

2. The fundamental analysts estimate the intrinsic value of the shares and purchase them when they are undervalued. They dispose the shares when they are over priced and earn profits. They try to find out the long term value of shares.

Compared to fundamental analysts, technical analysts mainly predict the short term price movement rather than long term movement. They are not committed to buy and hold policy.

3. Fundamentalists are of the opinion that supply and demand for stocks depend on the underlying factors. The forecasts of supply and demand depend on various factors.

Technicians opine that they can forecast supply and demand by studying the prices and volume of trading.

In both the approaches supply and demand factors are considered to be critical. Business, economic, social and political concern affect the supply and demand for securities. These underlying factors in the form of supply and demand come together in the securities' market to determine security prices.

EFFICIENT MARKET THEORY

Efficient market theory states that the share price fluctuations are random and do not follow any regular pattern.

Basic Concepts

Market Efficiency

The expectations of the investors regarding the future cashflows are translated or reflected on the share prices. The accuracy and the quickness in which the market translates the expectation into prices are termed as market efficiency. There are two types of market efficiencies

-Operational efficiency

-Informational efficiency

Operational efficiency:

At stock exchange operational efficiency is measured by factors like time taken to execute the order and the number of bad deliveries. Investors are concerned with the operational efficiency of the market. But efficient market hypothesis does not deal with his efficiency.

Informational efficiency:

It is a measure of the swiftness or the market's reaction to new information. New information in the form of economic reports, company analysis, political statements and announcement of new industrial policy is received by the market frequently. How does the market react to this? Security prices adjust themselves very rapidly and accurately. They never take a long time to adjust to the new information. For instance the announcement of bonus shares of any company would result in a hike in price of that stock. Like-wise major changes in the policy decisions of the government are also reflected in the stock index movement.

Liquidity traders

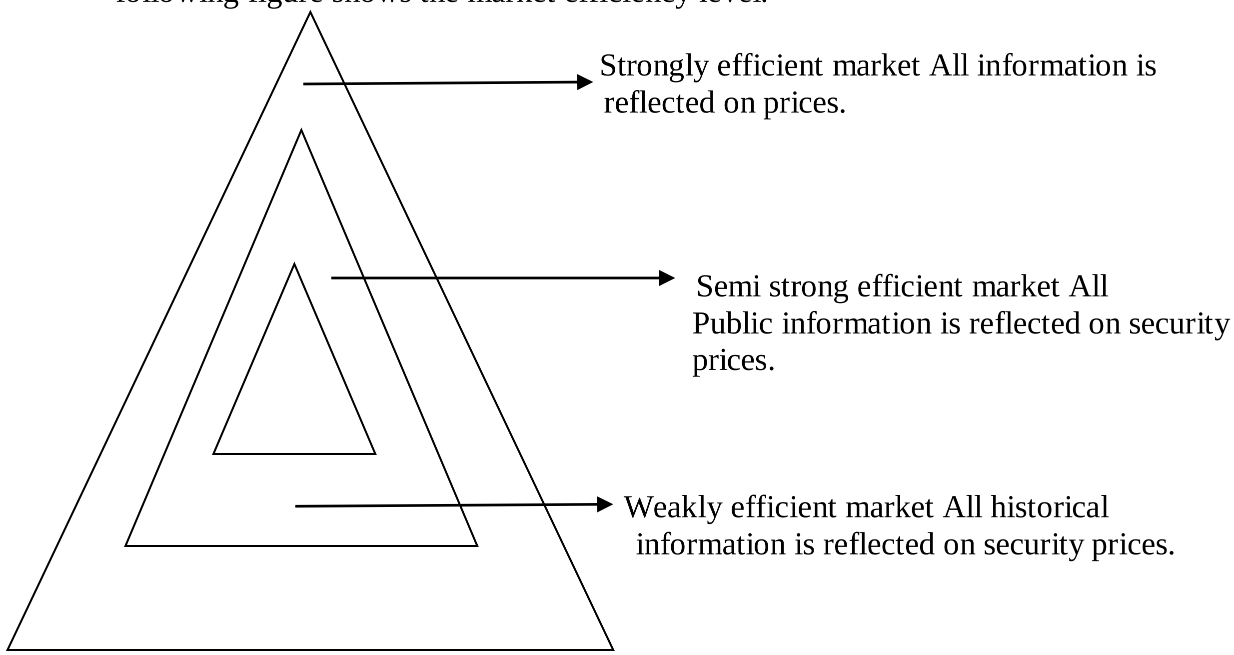
These traders' investments and resale of shares depend upon their individual fortune. Liquidity traders may sell their shares to pay their bills. They do not investigate before they invest.

Information traders

Information traders analyse before adopting any buy or sell strategy. They estimate the intrinsic value of shares. The deviation between the intrinsic value and the market value makes them enter the market. They sell if the market value is higher than the intrinsic value and vice-versa. The buying and selling of the shares through the demand and supply forces bring the market price back to its intrinsic value.

The Random-walk theory

In 1900, a French mathematician named Louis Bachelier wrote a paper suggesting that security price fluctuations were random. In 1953, Maurice Kendall in his paper reported that stock price series is a wandering one. They appeared to be random, each successive change is independent of the previous one, in 1970, Fama stated that efficient markets fully reflect the available information. If markets are efficient, securities' prices reflect normal returns for their level of risk. Fama suggested that efficient market hypothesis can be divided into three categories. They are "weak form", the "semi-strong form". The level of information being considered in the market is the basis for this segregation. The following figure shows the market efficiency level.



Levels of Information and the markets

Weak Form of EMH

The type of information used in the weak form of EMH is the historical prices. According to it, current prices reflect all information found in the past prices and traded volumes. Future prices can not be predicted by analyzing the prices from the past. Everyone has the access to the past prices, even though some people cab get these more conveniently than others. Liquidity traders may sell their stocks with out considering the intrinsic value of the shares and cause price fluctuations. Buying and selling activities of the information traders lead the market price to align with the intrinsic value.

Semi-Strong Form

The semi-strong form of the efficient market hypothesis states that the security price adjusts rapidly to all publicy available information. In the semi-strongly efficient markets, securities prices fully reflect all publicly available information. The prices not only reflect the past price data, but also the available information regarding the earnings of the corporate, dividend, bonus issue, right issue, mergers, acquisitions and so on. In the semi-strongly efficient market a few insiders can earn a profit on a short run price changes rather than the investors who adopt the naïve buy and hold policy.

Strong Form

The strong from EMH states that all information is fully reflected on security prices. It represents an extreme hypothesis which most observes do not expect it to be literally true. The strong form of the efficient market hypothesis maintains that not only the publicly available information is useless to the investor or analyst but all information is useless. Information whether it is public or inside cannot be used consistently to earn superior investors' return in the strong form. This implies that security analysts and portfolio managers who have access to information more quickly than the ordinary investors would not be able to use it to earn more profits.

Empirical evidence

Many of the tests of the strong form of the efficient market hypothesis deal with mutual fund performances.

The essence of the theory

According to the theory, the successive price changes or changes in return are independent and these successive price changes are randomly distributed. Random Walk Model argues that all publicly available information is fully reflected on the stock prices and further the stock prices instantaneously adjust themselves to the available new information. The theory mainly deals with the successive changes rather than the price or return levels.

MARKET INEFFICIENCIES

Low PE Effect

Many studies have provided evidences that stocks with low price earnings ratios yield higher returns than stocks with higher PEs. This is known as low PE effect. A study made by Basu in 1977 was risk adjusted return and even after the adjustment there was excess return in the low price earnings stocks. If historical information of P/E ratios is useful to the investor in obtaining superior stock returns, the validity of the semi-strong form of market hypothesis is questioned. His results stated that low P/E portfolio experienced superior returns relative to the market and high P/E portfolio performed in an inferior manner relative to the overall market. Since his result directly contradicts semi-strong form of efficient market hypothesis, it is considered to be important.

Small firm effect

The theory of the small firm effect maintains that investing in small firms (those with low capitalization) provides superior risk adjusted returns. Banz found that the size of the firm has been highly correlated with returns. Banz examined historical monthly returns of NYSE common stocks for the period 1931-1975. He formed portfolios consisting of 10 smallest firms and the 10 largest firms and computed the average return for these portfolios. The small firm portfolio has out performed the large firm portfolio.

The weekend effect

French in his study had examined the returns generated by the Standard and Poor Index for each day of the week. Stock prices tend to rise all week long to a peak on Fridays. The stocks are traded on Monday at reduced prices, before they begin the next week’s price rise. Buying on Monday and selling on Friday from 1953 to 1977 would have generated average annual return of 13.4% while simple buy and hold would have yielded 5.5% annual return. If the transaction costs are taken into account, the naïve buy and hold strategy would have provided higher return. Yet the knowledge of the weekend effect is still of value. Purchases planned on Thursday or Friday can be delayed until Monday, while sale planned for Monday can be delayed until the end of the week. The weekend effect is a small but significant deviation from perfectly random price movements and violates the weekly efficient market hypothesis.

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Department of Management Studies
Semester III

SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT
UNIT - V
PORTFOLIO MANAGEMENT

INTRODUCTION
Portfolio is a combination of securities such as stocks, bonds and money market instruments. Diversification of investments helps to spread risk over many assets.

PORTFOLIO ANALYSIS
Approaches in Portfolio Construction

1. **Traditional Approach**

   The traditional approach basically deals with two major decisions. They are:
   a) Determining the objectives of the portfolio
   b) Selection of securities to be included in the portfolio

Normally, this is carried out in four to six steps. Before formulating the objectives, the constraints of the investor should be analyzed. Within the given frame work of constraints, objectives are formulated. Then based on the objectives, securities are selected. After that, the risk and return of the securities should be studied. The investor has to assess the major risk categories that he or she is trying to minimize. Compromise on risk and non-risk factors has to be carried out. Finally, relative portfolio weights are assigned to securities like bonds, stocks and debentures and then diversification is carried out. The following flow chart explains this

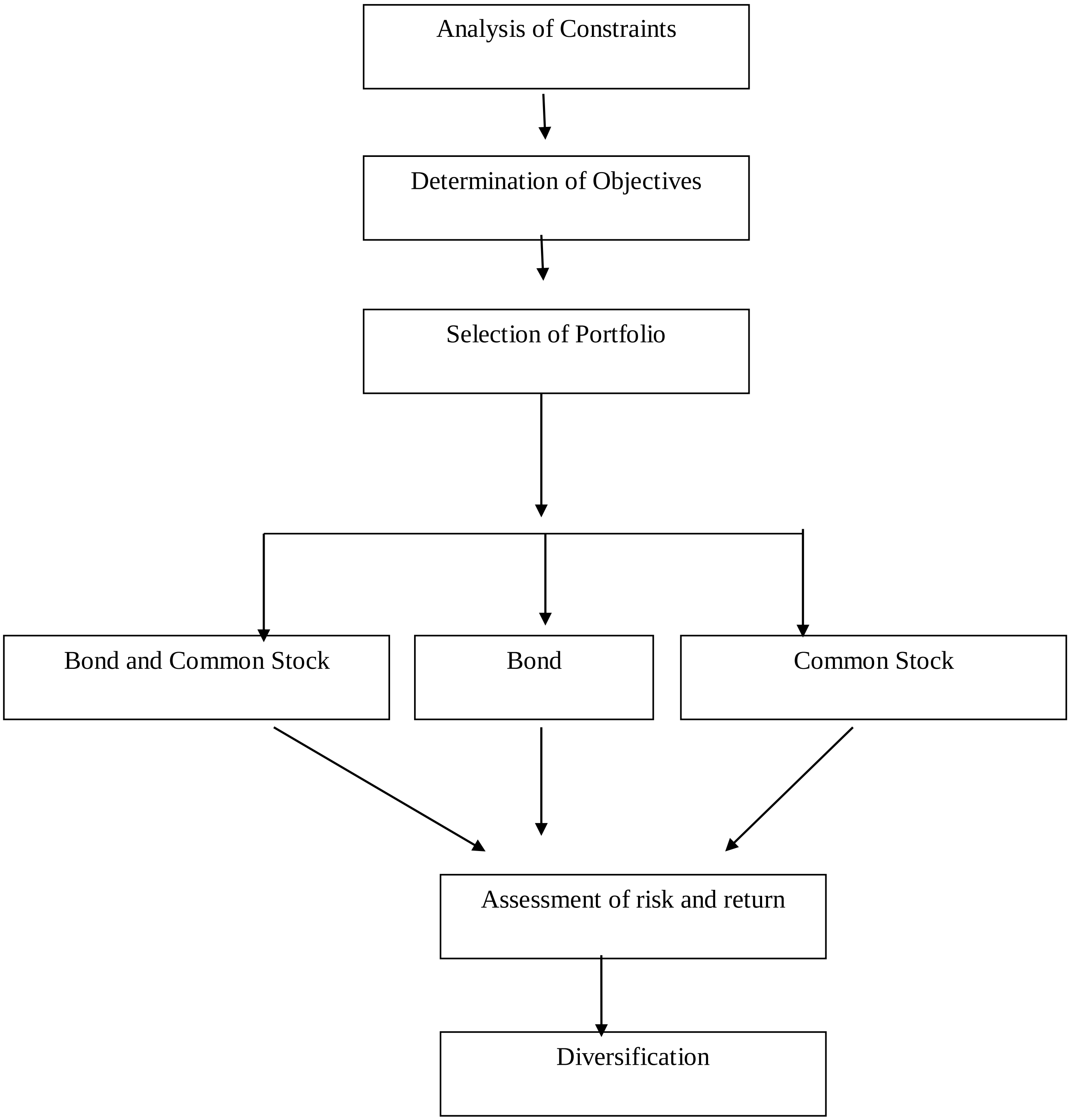
Analysis of Constraints

The constraints are: income needs, liquidity, time horizon, safety, tax considerations and the temperament.

Income Needs

The income needs depend on the need for income in constant rupees and current rupees. The need for income in current rupees arises from the investor's need to meet all or part of the living expenses. At the same time inflation may erode the purchasing power, the investor may like to offset the effect of the inflation and so, needs income in constant rupees.

STEPS IN TRADITIONAL APPROACH



DETERMINATION OF OBJECTIVES

The common objectives are

- ⇨ Current income
- ⇨ Growth in income
- ⇨ Capital appreciation
- ⇨ Preservation of capital

SELECTION OF PORTFOLIO

Risk and return analysis

First, the individual prefers larger to smaller returns from securities. To achieve this goal, the investor has to take more risk.

Diversification

Selection of Industries

↓

Selection of Companies in the Industry

↓

Determining the size of participation

PORTFOLIO MANAGEMENT - MARKOWITZ MODEL

Harry Markowitz opened new vistas to modern portfolio selection by publishing an article in the Journal of Finance in March 1952. He indicated the importance of correlation among the different stocks' returns in the construction of a stock portfolio. He also showed that for a given level of expected return in a group of securities, one security dominates the other.

Assumptions

For a given level of risk, investor prefers higher return to lower return. Likewise, for a given level of return investor prefers lower risk than higher risk.

The concept

Diversification reduces the risk.

	Stock ABC	**Stock XYZ**
Return %	11 or 17	20 or 8
Probability	0.5 each return	0.5 each return
Expected Return	14	14
Variance	9	36
Standard deviation	3	6

ABC and XYZ companies stocks have the same expected return of 14%. XYZ company's stock is much riskier than ABC stock, because the standard deviation of the former being 6 and latter 3. When ABC return is high XYZ return is low and vice-versa i.e. when there is 17% return from ABC, there would be 8% return from XYZ. Likewise when ABC return is 11% XYZ return is 20%. If a particular investor holds only ABC or XYZ he would stand to lose in the time of bad performance.

Utility Analysis

Utility is the satisfaction the investor enjoys from the portfolio return. An ordinary investor is assumed to receive greater utility from higher return and vice-versa. The investor gets more satisfaction or more utility in X + 1 rupees than from X rupee. If he is allowed to choose between two certain investments, he would always like to take the one with larger outcome. Thus, utility increases with increase in return.

Leveraged portfolios

Investor has to consider not only risky assets but also risk-free assets. Secondly, he should be able to borrow and lend money at a given rate of interest.

What is Risk free Asset?

The features of risk free asset are:

a) Absence of default risk and interest risk and
b) Full payment of principal and interest amount

The return from the risk free asset is certain and the standard deviation of the return is nil. These types of assets are usually fixed income securities.

The Sharpe Index Model

Sharpe has developed a simplified model to analyze the portfolio. He assumed that the return of a security is linearly related to a single index like the market index.

Single Index Model

Casual observation of the stock prices over a period of time reveals that most of the stock prices move with the market index. When the Sensex increases, stock prices also tend to increase and vice-versa. This indicates that some underlying factors affect the market index as well as the stock prices. Stock prices are related to the market index and this relationship could be used to estimate the return on stock.

Corner Portfolio

The entry or exit of a new stock in the portfolio generates a series of corner portfolio. In a one stock portfolio, it itself is the corner portfolio. In a two stock portfolio, the minimum attainable risk (variance) and the lowest return would be the corner portfolio. As the number of stocks increases in a portfolio, the corner portfolio would be the one with lowest return and risk combination.

Sharpe's optimal portfolio

Sharpe had provided a model for the selection of appropriate securities in a portfolio. The selection of any stock is directly related to its excess return-beta ratio.

$$R_i - R_f / \beta_i$$

Where,
R_i = the expected return on stock i
R_f = the return on a riskless asset
β_i = the expected change in the rate of return on stock i associated with one unit change in the market return.

CAPITAL ASSET PRICING MODEL

Assumptions

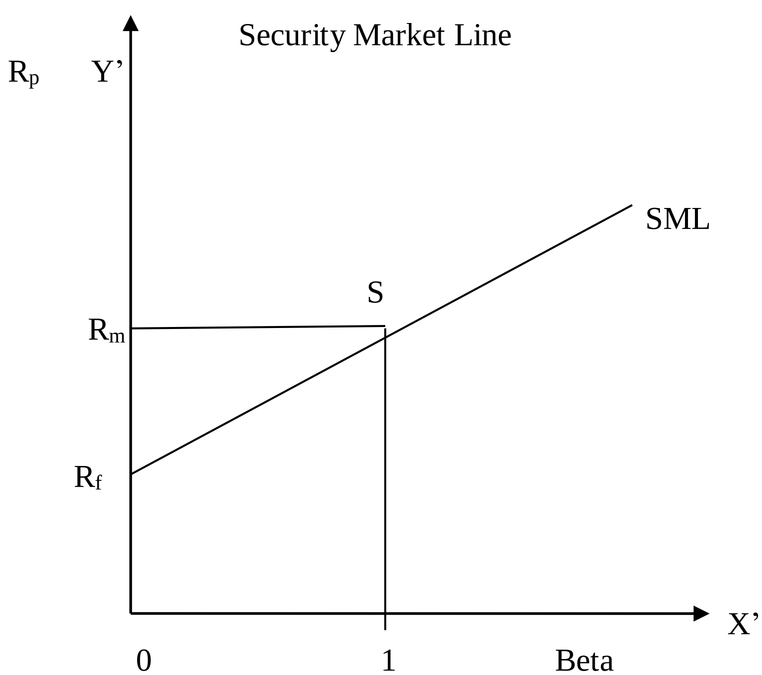
1. An individual seller or buyer cannot affect the price of a stock
2. Investors make their decisions only on the basis of the expected returns and standard deviations
3. Investors are assumed to have homogenous expectations
4. The investor can lend or borrow any amount of funds at the riskless rate of interest
5. Assets are infinitely divisible
6. There is no transaction cost
7. There is no personal income tax

The concept

All investors hold only the market portfolio and riskless securities. The market portfolio is a portfolio comprised of all stocks in the market. Each asset is held in proportion to its market value to the total value of all risky assets.

Security Market Line (SML)

The risk-return relationship of an efficient portfolio is measured by the capital market line. Inefficient portfolios lie below the capital market line



Evaluation of securities

Relative attractiveness of the security can be found out with the help of security market line. Stocks with high risk factor is expected to yield more return and vice-versa. But the investor would be interested in knowing whether the security is offering return more or less proportional to its risk.

Present validity of CAPM

The CAPM is greatly appealing at an intellectual level, logical and rational. The basic assumptions on which the model is built raise, some doubts in the minds of the investors.

Uses of CAPM

1. The CAPM focuses on the market risk, makes the investors to think about the riskiness of the assets.
2. The CAPM has been useful in the selection of securities and portfolios.
3. Given the estimate of the risk free rate, the beta of the firm, stock and the required market rate of return, one can find out the expected returns for a firm's security.

Criticisms of CAPM

1. Empirical tests and analyses have used ex-post. i.e. past data only
2. The historical data regarding the market return, risk free rate of return and betas vary differently for different periods.

PORTFOLIO EVALUATION

The evaluation of the portfolio provides a feed back about the performance to evolve better management strategy. It is a continuous process. The managed portfolios are commonly known as mutual funds

MUTUAL FUND

Mutual Fund is an investment vehicle that pools together funds from investors to purchase stocks, bonds or other securities. An investor can participate in the mutual fund by buying the units of fund. Each unit is backed by a diversified pool of assets, where the funds have been invested.

Types of Mutual Fund

1. **Closed end Fund**: It has a fixed number of units outstanding. It is open for a specific period. During that period investors can buy it. The closed –end schemes are listed in the stock exchanges. The investor can trade the units in the stock markets just like other securities. The prices may be either quoted at a premium or discount.
2. **Open-end Schemes**:- units are sold and bought continuously. The investors can directly approach the fund managers to buy or sell the units. The price of the unit is based on the net asset value of the particular scheme.

Load Factor

A commission or charge paid by the investors while purchasing or selling the mutual fund is known as load factor.

Advantages of mutual funds

The association of Mutual Finds in India (AMFI), a non-profit organization serving the cause of mutual funds, has listed the following advantages to the investors in mutual funds.

a. **Professional management** – Experienced fund managers supported by a research team, select appropriate securities to the fund.
b. **Diversification** – Mutual funds invest in a diverse range of securities and over many industries. Hence, all the eggs are not placed in one basket.
c. **Convenient Administration** – For the investors there is reduction in paper work and saving in time.
d. **Return Potential** – Medium and the long term mutual funds have the potential to provide high returns
e. **Low costs** – The funds handle the investments of a large number of people, they are in a position to pass on relatively low brokerage and other costs.
f. **Liquidity** – Mutual funds provide liquidity in two ways. In open-end schemes, the investor can get back his money at any time by selling back the units to the funds at NAV related prices. In closed-end fund, he has the option to sell the units through the stock exchange.
g. **Transparency** – Mutual funds provide information on each scheme about the specific investments made there under and so on.
h. **Flexibility** – Currently most funds have regular investment plans, regular withdrawal plans and dividend reinvestment schemes.
i. **Choice of scheme** – Mutual funds offer a variety of schemes to suit varying needs of the investors.
j. **Well-regulated** – The funds are registered with the Securities and Exchange Board of India and their operations are continuously monitored.

SHARPE'S PERFORMANCE INDEX

Sharpe's performance index gives a single value to be used for the performance ranking of various funds or portfolios. Sharpe index measures the risk premium of the portfolio relative to the total amount of risk in the portfolio. This risk premium is the difference between the portfolio's average rate of return and the riskless rate of return. The standard deviation of the portfolio indicates the risk.

$$S_t = (R_p – R_f / \sigma_p)$$

Sharpe Index = (Portfolio average return – Risk free rate of interest) / Standard deviation of the portfolio return

The larger the S_t, better the fund has performed.

TREYNOR'S PERFORMANCE INDEX

The relationship between a given market return and the fund's return is given by the characteristic line. The fund's performance is measured in relation to the market performance. The ideal fund's return rises at a faster rate than the general market performance when the market is moving upwards and its rate of return declines slowly than the market return, in the decline. The ideal fund may place its fund in the treasury bills or short sell the stock during the decline and earn positive return.

With the help of the characteristic line Treynor measures the performance of the fund.

$$R_p = \alpha + \beta R_m + e_p$$

R_p = Portfolio return

R_m = The market return or index return

e_p = The error term or the residual

α, β = Co-efficients to be estimated

Beta Co-efficient is treated as a measure of un-diversifiable systematic risk.

T_n = (Portfolio average return – riskless rate of interest) / Beta co-efficient of portfolio

$$T_n = (R_p - R_f) / \beta_p$$

JENSEN'S PERFORMANCE INDEX

The absolute risk adjusted return measure was developed by Michael Jensen and commonly known as Jensen's measure. It is mentioned as a measure of absolute performance because a definite standard is set and against that the performance is measured. The standard is based on the manager's predictive ability. Successful prediction of security price would enable the manager to earn higher returns than the ordinary investor expects to earn in a given level of risk. The basic model of Jensen is given below:

$$R_p = \alpha + \beta(R_m - R_f)$$

R_p = average return of portfolio

R_f = riskless rate of interest

α = the intercept

β = a measure of systematic risk

R_m = average market return

PORTFOLIO REVISION

The portfolio management process needs frequent changes in the composition of stocks and bonds. In securities, the type of securities to be held should be revised according to the portfolio policy. If the policy of investor shifts from earnings to capital appreciation, the stocks should be revised accordingly.

Passive Management

Passive management is a process of holding a well diversified portfolio for a long term with the buy and hold approach. The fund manager buys every stock in the index in exact proportion of the stock in that index. If Reliance Industry's stock constitutes 5 % of the index, the fund also invests 5 % of its money in Reliance Industry stock.

Active Management

Active Management is holding securities based on the forecast about the future.

Portfolio Managers

The managers may indulge in 'group rotation's. Here, the group rotation means changing the investment in different industries' stocks depending on the assessed expectations regarding their future performance.

The Formula Plans

The formula plans provide the basic rules and regulations for the purchase and sale of securities. The amount to be spent on the different types of securities is fixed. The amount may be fixed either in constant or variable ratio. This depends on the investor's attitude towards risk and return. The commonly used formula plans are rupee cost averaging, constant rupee value, the constant ratio and the variable ratio plans. The formula plans help to divide the investible fund between the aggressive and conservative portfolios.

Rupee Cost Averaging

The investor buys varying number of shares at various points of the stock market cycle. In a way, it can be called time diversification.

Constant Rupee plan

The constant rupee plan enables the shift of investment from bonds to stocks and vice-versa by maintaining a constant investment in the stock portion of the portfolio.

Constant Ratio plan

Constant ratio plan attempts to maintain a constant ratio between the aggressive and conservative portfolios. The ratio is fixed by the investor. The investor's attitude towards risk and the return plays a major role in fixing the ratio. The conservative investor may like to have more of bond and the aggressive investor, more of stocks.

Variable ratio plan

At varying levels of market price, the proportion of the stocks and bonds change. Whenever the price of the stock increases, the stocks are sold and new ratio is adopted by increasing the proportion of defensive or conservative portfolio. To adopt this plan, the investor is required to estimate a long term trend in the price of the stocks. Forecasting is very essential to this plan.

Revision and the cost

In revision of traded volumes the portfolio manager has to incur brokerage commission, price impact and bid-ask spread. Price impact means the effect on the price of stock. If the size of the trade is heavy on the buying side, the prices of the stock may increase. The bid-ask spread is the difference between the price that the market maker is willing to buy and sell the stock. Revision is done with the view of either increasing the expected return of the portfolio or to reduce the risk (standard deviation) of the portfolio.

Swaps

Swap is a contract between two parties to exchange a set of cash flows over a pre-determined period of time. The two parties are known as counter parties.

Example: A has sold stocks and bought bonds while B has sold bonds and bought stocks. Here, they have restricted their portfolios without the transaction costs, even though they have to pay the swap fee to the swap bank that set up the contract between the two parties.

ARBITRAGE PRICING THEORY

Arbitrage is a process of earning profit by taking advantage of differential pricing for the same asset. The process generates riskless profit. In the security market, it is of selling security at a high price and the simultaneous purchase of the same security at a relatively lower price. Since the profit earned through arbitrage is riskless, the investors have the incentive to undertake this whenever an opportunity arises.

The assumptions

1. The investors have homogenous expectations
2. The investors are risk averse and utility maximisers.
3. Perfect competition prevails in the market and there is no transaction cost

Arbitrage portfolio

According to the APT theory an investor tries to find out the possibility to increase returns from his portfolio without increasing the funds in the portfolio. He also likes to keep the risk at the same level,

The APT Model

Returns of the securities are influenced by a number of macro economic factors. The macro economic factors are growth rate of industrial production, rate of inflation, spread between long term and short term interest rates and spread between low-grade and high grade bonds.

Arbitrage pricing equation

$$R_i = \lambda_0 + \lambda_i b_i$$

R_i = return from stock A
λ_0 = riskless rate of return
bi = the sensitivity related to the factor
λ_i = slope of the arbitrage pricing line

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DEPARTMENT OF MANAGEMENT STUDIES

SECURITY ANALYSIS & PORTFOLIO MANAGEMENT

UNIT – I

INVESTMENT SETTING

PART : A

1. What is investment?

Investment is defined as employment of funds with the aim of achieving future benefits or return.

2. What is economic investment?

Economic investment is the net addition to capital stock of society or employment of funds in foods and services which are used in the production of some other goods and services which are used in the production of some other goods and services.

3. What is financial investment?

Commitment of funds to derive income in the form of interest, dividend, premiums, pension dividend or appreciation in the value of capital by purchasing shares, debentures, post office saving, insurance policy etc.

4. What are the features of investment?

Risk, Return, Safety & Liquidity.

5. Define Risk?

Risk is defined as variability of return i.e. it is the difference or deviation from expected return.

6. What ate the factors influencing risk in investment?

Length of maturiry period
Creditworthiness of issue of security
Nature of instrument or security
Liquidity of an investment

7. State the type of risk?

Default risk
Interest rate risk
Market risk
Political risk
Management risk
Purchasing power risk
Marketability risk
Unsystematic risk

8. Define default risk?
The companies failure to each a desired rate of return to equity share holders.

9. Define Interest rate risk?

The prevailing rates in an economy have a direct bearing on value of securities. If the level of interest rate goes up the asset value are likely to fall & vice versa.

10. Define Market rate risk?

Market risk arises because of price differentiation due to inflation resulting in variation in rates of return

11. Define Political risk?

The condition of investment climate and the performance of money and capital market of any country depend on political stability and favorable physical policy being adopted by a state. Any change in taxation loss, customs and excise duties, them certain controls of working some legal restrictions affect the value of securities.

12. Define Management risk?

It arises due to wrong decisions or bad decisions management affairs of the company. It normally arises due to wrong management decisions in identifying good and bad financing mix.

13. What is purchasing power risk?

Purchasing power risk arises due to inflation. The value of money may change over time. It results in decrease in value of invested rupess due to fall in purchasing power of money.

14. What is Marketability or Liquidity risk?

All securities cannot be easily traded in stock exchange/secondary market. Certain companies may fail to get their securities listed in reputed stock exchange. In that case the investor may find it very difficult to market his investment. In that situation very difficult to sell their securities or it cannot be easily converted in to cash.

15. What is systematic risk?

Systematic risk is non diversifiable and is associated with the securities market as well as the economic, sociological, political and legal consideration of prices of all securities in the economy.

16. Define Unsystematic risk?
Unsystematic risk is unique to a firm or industry. It is diversible risk and does not affect an average investor. It is caused by factors like labour strike, irregular disorganized management policy and consumer preferences.

17. What is Return?

The expectation of investor is called as return. All investment are characterized by the expectation of the return. Return may be received in the form of yield + Capital appreciation.

Capital appreciation = Difference between purchase price and selling price.

18. What is Safety?
Safety of investment is identified with certainty of repayment of capital with out loss of money or time.
19. State the objectives of investment?

- To utilize savings for capital formation
- To hedge against inflation
- To maximize returns.
- To Minimize risk.

20. State the importance of investment?

- Longer life expectancy/ planning for retirement
- To protect against increasing rate of taxation.
- To extract the benefits of rising interest rates on deposits
- To fight against inflation.
- To constructively use the rising income.

21. State the principles of investments?

- Safety of investment
- Liquidity
- Income Yield
- Inflation
- Appreciation
- Stability of Income
- Capital Growth
- Purchasing power stability
- Legality
- Freedom from care
- Tax
- Tangibility

22. State the type of investors?
Individual Investors.
Industrial Investors

23. Who are individual investors?
Individual investors are large in number but their investible resources are less or smaller. They generally lock the skill to carry out extensive evaluation and analysis before investing.

24. Who are institutional investors?
They are the organizations with surplus fund who engage in investment activity. The mutu fund investment companies, banking companies, insurance companies etc are organization with large amount surplus fund to be invested in various investment alternatives.
25. What is speculation?
Speculation can be defined as purchase of asset with the primary objective of making quick or sudden profit by fluctuation.

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DEPARTMENT OF MANAGEMENT STUDIES
SECURITY ANALYSIS & PORTFOLIO MANAGEMENT
UNIT – II
SECURITIES MARKETS

PART : A

1. State different direct and indirect investment avenues?

Investment Avenues

- Direct investment
  - Fixed principle security
    * Cash
    * Saving certificate
    * Savings a/c
    * Bonds and debentures
  - Variable principle security
    * Equity Shares
    * Preference Share
    * Debentures
  - Non security investments
    * Real estate
    * Mortgages
    * Business ventures
    * Investment in art and activities
    * Investment in other valuable things gold and silver
- Indirect investment
  * Pension fund
  * Provident
  * Investment in companies, UTI and other trust funds

ond?

g term c ... al such as interest for

eriod of

haracteristics of bond?

It has a face value

Rate of interest is fixed

Interest must be paid annually or semi annually

The rate of interest is paid annually of semi annually

The redemption is also stated in bond and it may either par or premium

4. Difference between stock and shares:

Stocks	**Shares**
Stock does not have any nominal value	Share has a nominal value
Stock is fully paid up	Shares may not be fully paid up
Stock transferable in small fraction	Shares can transferred in round no's
Stock are sometimes unequal amounts	Shares ate of equal domination.

5. State the information of investment?

Sources of investment information are

- Media
- Insiders
- Professional investment consultant
- Tips from friends and colleagues
- Stock broker
- Annual report
- Institution floating financial service
- Financial market
- Financial Intermediaries

6. What are the types of information available?

- ✓ International affairs
- ✓ National affairs
- ✓ Industry information

7. What are stock market indices?

Stock market indices are barometers of stock markets. They mirror the stock market behavior.

8. State the uses of indices?

- It helps to recognize the board trends in the market
- It can be used as a benchmark for evaluating investors portfolio
- It function as a status report on the general economy
- Impacts of various economic policies are reflected in stock marker
- Investors can use the indices to invest the funds
- To earn returns on par with market return he can choose the stock that reflects the market movement

9. What are the quantitative criteria used in computation of stock index?

- Liquidity
- Trading activity
- Continuity
- Industry reputation
- Listed history

10. What is capital market?

Capital market may be defined as a market for borrowing and lending long term capital funds required by business enterprises. Capital market is the market for financial assets that have long or indefinite maturity & offers an ideal source of external finance.

11. What are the functions of capital market?

- ***Allocation function:*** Channelization of savings of investors into productive avenues of investment.
- ***Liquidity functions:*** buyers and sellers exchange securities at mutually satisfactory prices.
- ***Indicative function:*** Acts as barometer for showing the progress of the company and economy through share price movements.
- ***Savings and investment function:*** Quickly converts long term investments in to liquid funds.
- ***Transfer function:*** Transfer of tangible and non tangible assets among individual economic groups.
- ***Merger function:*** Encourages voluntary or coercive take over mechanism to put the management of inefficient companies into competent hands.

12. What are the new financial services offered in capital market?

- Emerge of SEBI
- Credit rating services and credit rating institutions like CRISIL, CARE & ICRSA
- Stock holding corporation setup to custodial services.
- IL & FS setup to offer infrastructure financing and leasing services.
- OTCEI was established to provide screen based stock exchange facility to investors.

13. What are constituent of Indian capital market?

- Gilt edged market
- Industrial securities market
- Primary market
- Secondary market

14. What is gilt edged market?

- It is the government securities market. It is the market for govt & semi govt securities. The securities in this market are stable in value & are sought after by banks. There is guaranteed return on investments.
- No speculation on securities
- Institutions are compelled by law to invest in govt market.
- Predominated by institutions.

15. What is primary market or New Issue Market?

Primary market is known as new issue market. It is a market for raising fresh capital in the form of shares and debentures. Issues exchange financial securities for long term funds. This market helps in capital formation.

16. What are the modes of raising capital?

Public issue: When the securities are issued to the members of general public it is a public issue. This method can be used to raise long term funds.

Rights issue: When the issue of equity shares of a company is made to the existing share holders it is rights issue.

Private placement: When the shares of a company are sold to a group of small investors, it takes form of private placement.

17. What is secondary market?

A market that deals in securities that have been already issued by the company is called secondary market, stock exchange or the share market.

18. What are mutual funds?

Financial institutions that provide facilities for channeling savings of a vast number of small investors in to avenues of productive investments are called mutual funds. A mutual fund company invests funds pooled from share holders & gives them the benefit of diversified investment portfolio and a reasonable return. Benefits take high return easy liquidity safety and tax benefits are offered by MFs.

19. What is factoring?

An arrangement whereby a financial institution provides financial accommodation on the basis of sale of accounts receivables is called factoring. Under this arrangement, the factoring institution undertakes the task of collecting book debts for and on behalf of its client.

20. What are credit rating institutions?

These institutions provide services for evaluating the credit worthiness of traders & securities & issue rating grades indicating the quality & soundness of credit. The main purpose of credit rating is to provide guidance to investors / creditors in determining credit risk associated with debt investment.

21. What is OTCEI?

OTCEI was setup to allow the trading of securities across electronic counters through out country. It address the problems of investors and medium sized companies. Some of the greatest strengths of OTCEI are transparency of transactions, quickly deals, faster settlements and better liquidity.

22. What is NCDS?

national clearance and Depository system uses scrip less trading system; there settlement of transactions relating to securities takes place through a book entry as against physical exchange of security under the traditional system.

23. What is commercial paper?

A form of usance promissory note, which is negotiate by endorsement and delivery issued by the corporate houses for raising short term financial resources from the money market are called commercial paper.

24. What is certificate of deposit market?

A marketable document of little to a time deposit for a specified period is certificate of deposit market. It takes the form of a receipt given by a bank or any other institution for funds deposited with it by the depositors. There is no prescribed interest rate & so banks have freedom to issue it at a discount or at a face value.

25. What are zero coupon bonds?

These are bonds which bear no interest. In order to compensate the loss of interest they are issued at substantial discount from their eventual maturity value.

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DEPARTMENT OF MANAGEMENT STUDIES

SECURITY ANALYSIS & PORTFOLIO MANAGEMENT

UNIT – III

FUNDAMENTAL ANALYSIS

PART : A

1. Distinguish between market value and book value of shares. Book value:

$$\text{Book value} = \frac{\text{share capital + Reserves and Surplus}}{\text{No. of shares}}$$

Market value: It is the price that gets setted by the forces of demand and supply.

2. How is technical analysis different from fundamental analysis in investment management?

TECHNICAL ANALYSIS AND FUNDAMENTAL ANALYSIS

1. Fundamental analysts analyses the stock based on the specific goals of the investors. They study the financial strength of corporate, growth of sales, earnings and profitability. They also take into account the general industry and economic conditions.

The technical analysts mainly focus the attention on the past history of prices. Generally technical analysts choose to study two basic market data-price and volume.

2. The fundamental analysts estimate the intrinsic value of the shares and purchase them when they are undervalued. They dispose the shares when they are over priced and earn profits. They try to find out the long term value of shares.

Compared to fundamental analysts, technical analysts mainly predict the short term price movement rather than long term movement. They are not committed to buy and hold policy.

3. Fundamentalists are of the opinion that supply and demand for stocks depend on the underlying factors. The forecasts of supply and demand depend on various factors.

Technicians opine that they can forecast supply and demand by studying the prices and volume of trading.

In both the approaches supply and demand factors are considered to be critical. Business, economic, social and political concern affect the supply and demand for securities. These underlying factors in the form of supply and demand come together in the securities' market to determine security prices.

3. What is arbitrage pricing theory?

William F. Sharpe observes, the arbitrage pricing theory is an equilibrium theory of the relationship between security expected returns and relevant security attributes

4. State the criteria for evaluation of portfolio.

Return: investors always expect a good rate of return from their investment

5. Distinguish between IPO and FPO

IPO stands for initial public offering. Any company, let say for instance, the power Finance Corporation (PFC) needs money to lend funds to power producers in India.

FPO Stands for follow on public offer: A company that is already listed on the stock exchanges can also approach investors for funds. If Infosys tomorrow comes with another public offer it will be an FPO as Infosys is already a listed company.

6. What is P/E ratio?

The reciprocal of the earnings yield is called the price- Earnings Ratio (P/E) Thus:

$$\text{Price Earnings ration} = \frac{\text{marketvaluepersahre}}{\text{earningspershare}}$$

7. Define intrinsic value of security

Intrinsic value of share = Normalized EPS X Expected P/E Ratio*

$$\text{*Expected P/E ratio} = \frac{\text{Cash dividend/EPS}}{\text{Discount Rate} - \text{Growth Rate}}$$

8. What is offer for sale method?

Where the marketing of securities takes place through intermediaries such as issue houses, stock brokers. And other it is offer for sale method. There are two stages

- the issuer company makes an enblock sale of securities to intermediaries such as issue house and broker at an agreed price.
- the securities are resold to the ultimate investors at a market related price.

9. What is private placement method?

A method of marketing of securities whereby the issuer makes the offer for sale to individual or institutions. Privately without the issue of prospectus is called private placement method.

10. What is initial public offer (IPO)?

The public issue made by a corporate entry for the first time in its life is called initial public offer. Here securities are issued to successful applicants on the basis of orders placed by them, through their brokers. When a company whose stock is not public traded wants to offer that to the general public.

11. What is rights issue method?

When the shares of an existing company are offered to its existing share holders it takes the forms of "Rights Issue" here the existing company issues shares to the existing shareholders in proportion to the number of shares already held by them.

12. What is bonus issue?

Where the accumulated reserves & surplus of profits of a company are converted into paid up capital, it takes the forms the form of issues of bonus shares. IT is the capitalization of existing reserves & surplus, of a company.

13. What is book building method?

A method of making the market shares of a company whereby the quantum and price of securities to be issued will be decided on the basis of the bids received from the prospective shareholders by the lead merchant bankers is known as book building method. Here share prices are determined on the basis of real demand for the shares at various price levels in the market.

14. What is ESOP?

A method of marketing the securities of a company whereby its employees are encouraged to take up shares and subscribe to it is known as stock option. It encourages employee participation in the company.

15. What is bought out deals?

A method of marketing of securities of a body corporate whereby the promoters of an unlisted company make an outsight sale of a chink of a equity shares to a single sponsor or lead sponsor is called bought out deals.

16. What is debt market?

A market where fixed income securities issued by central & state govts municipal corporations, govt bodies and commercial bodies such as financial situations, banks, public sector units, public limited companies are traded is called the debt market.

17. What are public sector bonds?

Bonds issued by public sector entities such as government agencies, statutory bodies, public bodies etc... They are

- Govt guaranteed bonds
- PSU bonds
- Debentures
- Commercial paper.

18. What are private sector bonds?

Bonds issued by private sector entities such as corporate, banks, financial institutions and include.

- Debentures
- Bonds
- Commercial paper
- Floating rate bonds
- Zero coupon bonds
- Inter corporate deposits
- Certificate of deposits

19. What is wholesale debt market?

Two types of transactions like outsight sale or purchase and a Repo trade take place here. This market consists of institutions & agencies like banks financial institutions, mutual funds & FI IS.

20. What are Repos?

A Repo is a ready forward trade transaction where the said trade is intended to be reversed with an agreement to purchase them back at a later date. The trade is called Repo transaction from view point of seller & reverses Repo from the view point of buyer. These 2 are used in the in the money markets as instruments for short term liquidity management.

21. What are the two board approaches to be done for analyzing the price movement?

- Fundamental approach
- Technical approach.

22. What is technical analysis?

It is the process of identifying trend reversals at an earlier stage to formulate the buying and selling strategy. the technical analysis is made to make a right decision to purchase the right securities

23. What is a purchase criterion of securities?

If the price of the shares is lower than its intrinsic value, inventor buys it, but if he finds the price of the shares higher than the intrinsic value he sells & gets profit.

24. Name any four Market Indices in Indian Stock Market

BSE Sensex, NSE Nifty, BSE Small Cap, BSE Mid-Cap

25. Why do companies issue shares in Primary Market?

The primary market is that part of the capital markets that deals with the issuance of new securities. Companies, governments or public sector institutions can obtain funding through the sale of a new stock or bond issue. This is typically done through a syndicateof securities dealers. The process of selling new issues to investors is called underwriting. In the case of a new stock issue, this sale is an initial public offering (IPO). Dealers earn a commission that is built into the price of the security offering, though it can be found in the prospectus. Primary markets create long term instruments through which corporate entities borrow from capital market.

Features of primary markets are:

- This is the market for new long term equity capital. The primary market is the market where the securities are sold for the first time. Therefore it is also called the new issue market (NIM).
- In a primary issue, the securities are issued by the company directly to investors.
- The company receives the money and issues new security certificates to the investors.
- Primary issues are used by companies for the purpose of setting up new business or for expanding or modernizing the existing business.
- The primary market performs the crucial function of facilitating capital formation in the economy.
- The new issue market does not include certain other sources of new long term external finance, such as loans from financial institutions. Borrowers in the new issue market may be raising capital for converting private capital into public capital; this is known as "going public."
- The financial assets sold can only be redeemed by the original holder.

Methods of issuing securities in the primary market are:

- Public issuance, including initial public offering;
- Rights issue (for existing companies);
- Preferential issue.

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DEPARTMENT OF MANAGEMENT STUDIES

SECURITY ANALYSIS & PORTFOLIO MANAGEMENT

UNIT – IV

TECHNICAL ANALYSIS

PART: A

1. What are the important assumptions or basic premises of technical analysis?

- The market value of the script is determined by the interaction of supply and demand.
- The market discounts everything.
- The market always moves in trends.

2. What are the various tools in technical analysis?

- dow theory
- volume of trade
- short selling
- odd lot trading
- bars and lines chart
- moving average

3. What are the three assumptions of Dow Theory?

- No single individual or buyer can influence the major trend of the market
- Market discounts everything
- The theory is not infallible

4. Write the classification of trend in Dow Theory?

Primary trend: Broad upward or downward movement that may last for a year or trios.
Intermediate trend: Which last for three weeks to three months.
Short term trend: Day-to-day price movement.

5. Expand NEAT and BOLT

The Bombay on-line Trading system (BOLT) is CMC's on –line trading system for trading in stocks. The System is operational at Bombay Stock Exchange BSE on –line trading System (BOLT)

National Exchange For Automated Trading (NEAT). NSE Terminal, Discuss intraday data from neat terminal at the Data Feeds Within the Traderji. com – Discussion forum for stocks Commodities &Forex

6. What are oscillators?

Oscillators indicate the market momentum or scrip momentum. Oscillator indicators have a range, for example between zero and 100, and signal periods where the security is overbought (near 100) or oversold (near zero). Non – bounded indicators still form buy they vary in the movement.

7. What is" breadth of the market"?

Breadth of the market

A technical analysis theory that predicts the strength of the market according to the number of stocks that advance or decline in a particular trading day. The breadth of market indicator is used to gauge the number of stocks advancing and declining – for the day. If the breadth indicator is strong, this theory predicts that the market will be rising and vice versa

8. What is bullish trend in a market?

The securities price trend may either increasing or decreasing. When the market exhibits the increasing trend, it is called bull market.

9. What are the assumptions used in technical analysis?

The assumptions used in technical analysis are;

- The market value of the scrip is determined by the intersection of supply and demand
- The market discounts everything.
- The market always moves in trend, except for miner deviations
- Followed by the historical facts, any layman can understand the market move.

10. How are line and bar charts and point and figure charts analyzed?

The line and bar charts and point and figure charts are analyzed in the following:

a. Head and shoulders top is supposed to have two shoulders, left and right and a head.
b. The left shoulder is seen during the time when there is abull in the trading market followed by heavy purchases.
c. Right shoulder price rises moderately.
d. Head – Heavy purchases in the market.

11. Define Aroon Oscillator.

A trend-following indicator that uses aspects of the Aroon indicator ("Aroon up" and "Aroon down") to gauge the strength of a current trend and the likelihood that it will continue. The Aroon oscillator is calculated by subtracting Aroon down from Aroon up. Readings above zero indicate that an uptrend is present, while readings below zero indicate that a downtrend is present.

Aroon up and Aroon down are the two components that comprise the Aroon indicator. The notion is that an asset is trending up when a stock is trading near the high of its range. Aroon up is used to measure the strength of the uptrend, while Aroon down is used to measure the strength of the downtrend. Many traders will watch for a cross above the zero line to suggest the beginning of a new uptrend. Conversely, a cross below zero would indicate the start of a downtrend. Readings near zero suggest that a security may be trending sideways and that this period of consolidation could continue.

12. Specify the conditions for a person to become member of a stock exchange

Eligibility criteria:
1. Individuals / Corporates are eligible to apply for Trading Membership.
2. Age - Not less than 21 years
3. Qualification - Minimum pass in Plus 2 exam. Graduation preferred.
4. Experience:
a) Not less than two years experience as a sub-broker, authorised assistant, investment consultant, merchant banker or in similar activities relating to capital market.
b) In the case of Corporates, atleast two designated directors should have minimum 2 years experience in stock broking activity. The designated directors should not be whole-time directors of any other corporate body or in whole-time employment elsewhere. The Exchange may at its sole discretion, relax the requirement of para 4 in the case of professionally qualified applicants, such as CA/CS/ICWA/MBAs.
5. Net worth requirements - The applicant should have minimum net worth as under:
a. Cash segment Rs 15 lakhs
b. Cash & F& O Segment Rs.30 lakhs
6. The applicant should not be connected with any of the defaulting brokers of any Exchange
7. No Complaints / arbitration / disciplinary proceedings are pending in any stock exchange against the applicant, if the applicant has already been admitted as a trading member in any other stock exchange(s).
8. No investigation / enquiry by any Exchange is pending against the applicant.
9. The applicant should qualify to be considered as a ‘fit and proper person’ as specified in Schedule II of Regulation 7 of SEBI (Intermediaries) Regulations, 2008.

Payment of Fees and Deposits:
The applicants are required to make payments of fees and deposits as under:
1. Admission fee of Rs. 1,00,000/- plus service tax as applicable. Admission fee is payable alongwith the application and is non-refundable. If for any reasons the applicant is not admitted to trading membership, the admission fee will be refunded, after deducting a sum of Rs.5,000 + service tax towards processing fee.
2. Trading Members are required to maintain Base Minimum Capital for each segment of trade as under:
Cash Segment - Rs. 4 lakhs.
Derivative Segment - Rs. 10 lakhs.
In addition Members may be required to maintain Additional Deposits for meeting the Liquid Assets requirements, as may be prescribed from time to time, to comply with the Comprehensive Risk Management Framework stipulated by SEBI. The liquid assets maintained as above will be apportioned towards Base Minimum Capital/Additional

Deposits/ Margin deposits / Settlement Guarantee Fund etc. in the prescribed manner. No interest shall be paid on the cash deposits.
3. Annual Membership subscription of Rs. 4500/- plus service tax.
4. All payments due to the Exchange should be made by Demand Draft / Pay Order - drawn in favour of Madras Stock Exchange Ltd., and payable at Chennai. Outstation cheques will not be accepted.

13. What are deep discount bonds?

The bonds that are issued by corporate at very high discount and matured at par value are deep discount bonds.

14. What is stock invested?

An arrangement whereby it is possible for an investor to apply for the shares without having to pay for them and where the investors could make payment for shares when allotted to him through his bankers is called stock invest. There is only a guarantee of subscription & a banker makes payment only at the time of making application for shares.

15. What are equipref share?

These instruments are issued in 2 parts, part A & part B. Part A is convertible into equity shares automatically & compulsorily on the date of allotment without any further act or application by allotted. Part B will be redeemed at par / converted into equity share after a lock in period at the option of the investors.

16. What are Euro issues?

The securities that are issued by Indian companies & are traded in European stock exchange are called Euro issues.

17. What is pure prospectus method?

The method whereby a corporate enterprise mobilizes capital funds from the general public by means of an issue of a prospectus is called pure prospectus method.

18. State the characteristics of speculator?

- Speculator is usually interested in short term holdings
- He assumes high risk
- He is interested in price fluctuation
- He expects high rate of return in exchange for the risk formed
- His buying decision is formed on rumors, intuition, marker analysis and charts.
- Speculator borrow money from brokerage firms

19. Difference between investment and speculation?

Investment	Speculation
Investment usually involves employment of funds to an asset to enjoy a series of benefits from it	Speculation is an employment of funds in an asset with expectation of profit on sale due to its price fluctuation.

Type of contract is creditor in nature	Type of contract in speculation is ownership nature
Investment is usually by outright purchase	Speculator buy the security or purchase asset often on margin

20. What is gambling?

Gambling is an activity which involves taking risk with out demanding compensation in the form of increased expected return. It is an act of involving an element of risk. It is an activity arises out of thrill and excitement and a combination of pleasure and pain.

21. State the characteristics of gambling?

* Gambler never stops still winning
* Gambler normally assumes high risk more than he or she afford
* Gambler displays persistent optimism without winning
* Gambler absorbs all other investments

22. State the investment alternative?

There are two investment alternatives available in the market

- Direct investment
- Indirect investment

23. Differentiate between gambling & investment?

INVESTMENT	GAMBLING
People usually make investment with future date in mind	Gambling is an activity involving an element of risk
Employment of funds for future benefit after making careful analysis	Employment of funds without minding compensation based on rumors, tips etc
Bear less risk i.e. investor plans the level of risk tolerance	Bear high risk, artificially unnecessary risks are created

24. Differentiate between Business Risk and Financial Risk

Financial Risk

Financial risk refers to the chance a business's cash flows are not enough to pay creditors and fulfill other financial responsibilities. The level of financial risk, therefore, relates less to the business's operations themselves and more to the amount of debt a business incurs to finance those operations. The more debt a business owes, the more likely it is to default on its financial obligations. Taking on higher levels of debt or financial liability therefore increases a business's level of financial risk.

Business Risk

Business risk refers to the chance a business's cash flows are not enough to cover its operating expenses like cost of goods sold, rent and wages. Unlike financial risk, business risk is independent of the amount of debt a business owes. There are two types of business risk: systematic risk and unsystematic risk.

25. Differentiate between Systematic Risk and Unsystematic Risk

Systematic Risk

Systematic risk refers to the chance an entire market or economy will experience a downturn or even fail. Economic crashes, recessions, wars, interest rates and natural disasters are common sources of systematic risk. Any business operating in the market is exposed to this risk, and the amount of systematic risk does not vary between businesses in the same market. Therefore there is little small business owners can do to decrease their exposure to systematic risk.

Unsystematic Risk

Unsystematic risk describes the chance a specific company or line of business will experience a downturn or even fail. Unlike systematic risk, unsystematic risk can vary greatly from business to business. Sources of unsystematic risk include the strategic, management and investment decisions a small business owner faces every day. Investors decrease their exposure to unsystematic risk by diversifying their portfolio and holding ownership in a variety of companies operating in a variety of industries.

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Department of Management Studies

Semester III

SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT

UNIT - V

PORTFOLIO MANAGEMENT

PART : A

1. What is the formula to calculate Sharpe's measures?

$$S_p = \frac{R_p - R_f}{Q_p}$$

Where Sp = Sharpe's Ratio
R_p = Portfolio average return
R_f = risk free return, and
Q_p = Standard deviation of portfolio returns.

2. What are the two major types of information necessary for securing analysis?

Stock market information: Financial dailies, Investmentrelated magazine published by stock exchanges, separate news bulletins issed by NSE, BSE and OTCEI providing information regarding the changes that takes place in the stock market. SEBI news letters gives the change rules and regulations regarding the activities of stock market

Industry Information's: Bussiness India, Business Today, Dalal Street Stock Exchange publications etc.,

Company Information : The BSE, NSE,OTCEI provide detail about listed compaines in the web sites, Kothari's Economic and industry guide of indiagives relevant financial information about the public limited companies.

3. What to you mean by underwriting?

Underwriting is an agreement made by the parties to undertake the issue of shares to the public. In an underwriting, the unterwriter – generally banks, financial institutions, brokers etc. – guarantee to buy the shares if the issues is not fully subscribed by the underwriters. The company has to pay an under writing commission to the underwriter for their services.

4. Define open – ended funds.

An open ended fund or scheme is one that is available for subscription and repurchase on a continuous basis. These schemes do not have a fixed maturity period. Investors can conveniently buy and sell units at Net Asset Value (NAV) related prices after deduction of exit load, if any which are declared on a daily basis. The key feature of open – end schemes is liquidity.

5. What are the different stages in industry life cycle?

The industry life cycle has four well defined stages are;

- Pioneering stage
- Rapid growth stage
- Maturity and stabilization stage
- Declining stage

6. What are the objectives of mutual fund schemes?

The are many objective in mutual funds listed below:-

1. Professional Management, 2. Diversification, 3. Convenient Administration, 4. Return Potential, 5. Low Costs, 6. Liquidity, 7. Flexibility, 8. Choice of Schemes, 9. Well Regulated.

7. Explain the three type of trends in stock prices?

Trend is the direction of prices can either increase or fall or remain flat. The three diretions o share price movements called as rishing, falling, falling and flat trends. In other wards bullish, bearish and flat trend

8. What is an index fund?

In order to track the return performance of markets, market indices of a sub – set of trading stock is created. The CNX Nifty is one such index of 50 large and liquid stock is created. If a fund manager creates an equity fund, which will invest in the Nifty stocks , in the same proportion as in the index, he is creating an index fund. This strategy is also called passive fund management. The cost of this strategy is lower, and the performance virtually tracks the market index. An index fund provides and ideal exposure to equity markets, without the investor having to bear the risks and costs arising from the market views that a fund manger may take.

9. What is the difference between SML and CML?

Security Market Line (SML) : The security line is a useful tool in determining whether an asset being considered for a portfolio offers a reasonable expected return foe risk. Individual securities are plotted on the SML graph

Capital Market line (CML) : A Line used in the capital asset pricing model to illustrate the rates of return for efficient portfolios depending on the risk – free rate of return and the level of risk (standard deviation) for a particular portfolio.

10. What is insider trading?

Trading in a company's shares by a connected person having non – public and price sensitive information such as expansion plans, financial results and takeover bids, by virtue of his association with the company, is called insider trading.

11. What is market lot?

A market lot is the minimum number of shares of a particular security that must be transacted on the exchange. In demat scrips, the market lot is fixed at one single share. What is the no – delivery period?

12. What is an odd lot?

The number of shares that are less than the market lot are known as odd – lots. Under the scrip – based delivery system, these shares are normally traded at a discount to the prevailing price for the marketable lot

13. What do you mean by price band?

The daily/weekly price limits within which price of a security is allowed to rise or fall is the price band for that particular stock?

14. Describe price rigging?

When a person or persons acting in concert with each other collude to artificially increase if decrease the price of a security, the process is called price rigging.

15. What is dematerialization of shares?

Dematerialization is the process through which shares held in electronic form in a depository are converted back into physical form

16. Describe screen – based trading?

When buying/selling of securities is done using computers and matching of trades is done by the computer, the process is called screen-based trading.

17. What is settlement?

It refers to the scrip-wise netting of traders by a broker after the trading period is over

18. What is a spot transfer of shares?

The instruction given by a registered holder of shares to the company to stop the transfer of shares as a result or loss is known as spot transfer.

19. What is trade and settlement guarantee in trading?

Trade guarantee is the guarantee provided by the clearing corporation for all trades that are executed on the exchange. In contrast, the settlement guarantee guarantees the settlement of trade after multilateral netting.

20. What is trading for delivery?

Trading for delivery is the trading conducted with an intention to deliver shares as opposed to a position that is squared off within the settlement.

21. What is a book building issue?

In a book building issue, the issuer appoints lead managers who collect bids within an indicated fixed band from prospective investors. A common price is then arrived at for offloading shares, enabling better pricing with a wide institutional investor base.

22. Describe margin trading?

Margin trading allows investors to buy a stock by paying a part of the transaction value with the rest being financed by the broker.

23. What is a green –shoe option?

A Green – shoe Option or an over-allotment offer is an option which is sometimes a part of an underwriting agreement which allows the underwriter to purchase and sell additional shares if the market's demand for the shares is greater than originally expected.

24. What is stock split?

A proportionate increase in the number of outstanding shares by splitting the face value in a desired ratio is called stock split. For example, a share of face value Rs.100 may be split into 10 shares of Rs.10 each.

25. What is a rights issue?

Rights issue is defined as an issue of a new equity in which the existing shareholders are given a right to subscribe to the issue.

26. Define Open-ended Fund/ Scheme?

An open-ended fund or scheme is one that is available for subscription and repurchase on a continuous basis. These schemes do not have a fixed maturity period. Investors can conveniently buy and sell units at Net Asset Value (NAV) related prices after deduction of exit load, if any which are declared on a daily basis. The key feature of open-end schemes is liquidity.

27. What is Close-ended Fund/ Scheme?

A close-ended fund or scheme has a stipulated maturity period e.g. 5-7 years. The fund is open for subscription only during a specified period at the time of the launch of the scheme. Investors can invest in the scheme at the time of the initial public issue In order to provide an exit route to the invertors. some close-ended funds give and option of selling back the units to the mutual fund through periodic repurchase at NAV related prices. These mutual funds schemes disclose NAV generally on a weekly basis.

28. Define Gilt Fund

These funds invest exclusively in government securities. Government securities have no default risk. NAVs of these schemes also fluctuate due to change in interest rates and other economic factors as is the case with income or debt oriented schemes.

29. What does APT meant?

Arbitrage Pricing Theory: An alternative asset pricing model to the Capital Asset Pricing Model. Unlike the Capital Asset Pricing Model, which specifies returns as a linear function of only systematic risk, Arbitrage Pricing Theory may specify returns as a linear function of more than a single factor. Thus, there is no clear risk-return trade-off in this model.

SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT

QUESTION BANK

PART-B

UNIT-I
INVESTMENT SETTING

1. Distinguish between investing and speculating. Is it possible to incorporate investment and speculation within the same security? Explain with examples. (April/May2010)
2. What are the main advantages and disadvantages to a company by raising through issuing the ordinary shares? (April/May2010)
3. What are the different avenues of investments available in Indian market? Which of them do Indian investors prefer and why? (November/ December 2009)
4. Explain briefly on the Securities Contract (Regulation) Act, 1956 (November/ December 2009)
5. State the economic and financial meaning of investment. In the stock market, can you differentiate the investor from a speculator? (May/June 2009)

UNIT-II
SECURITIES MARKETS

6. Discuss the efficiency of automated Vis-à-vis floor-trading system in the secondary capital market? (April/May2010)
7. Discuss the role of private placements in raising resources in the primary capital market. (April/May2010)
8. What are the objectives and functions of SEBI? Explain the organization of SEBI? (May/June 2009)
9. What are the steps taken by SEBI in the primary market to protect the investors? (May/June 2009)

10. Write on the membership, organization and management of the stock exchanges. (November/ December 2009)

UNIT-III
FUNDAMENTAL ANALYSIS

11. What economic factors would you be most interested in forecasting if you were an analyst investigating major consumer durable – goods sales for next year? (April/May 2010)

12. Discuss the contention that differences in the preferences of various firms within the industry limits the usefulness of industry analysis. (April/May 2010)

13. Explain the major indicators used to evaluate the performance of the macro economy of India. (November/December 2009)

14. Compare and contrast the dividend valuation model and P/E approach of equity valuation. (November/December 2009)

15. How does ratio analysis reflect the financial health of a company? (May/June 2009)

UNIT-IV
TECHNICAL ANALYSIS

16. Discuss the relationship between fundamental analysis and efficient market hypothesis. (May/June 2009)

17. Explains in detail the Dow theory and how it might be used to determine the direction of the stock market? (November/December 2010)

18. Critically examine the Elliot Wave Principle on stock market predictions. (April/May2010)

19. Explain the techniques of Moving Average Analysis. What buy and sell signals are provided by it? (November/December 2009)

20. What are technical analysis indicators and oscillators? Explain any four in detail. (November/December 2009)

UNIT-V
PORTFOLIO MANAGEMENT

21. What are the basic assumptions of CAPM? What are the advantages of adopting CAPM model in the portfolio management? (May/June 2009)

22. Consider the following information for three mutual funds P.Q and R and the market. (November/December 2009)

Fund	Mean Return	Standard Deviation	Beta
P	15	20	0.90
Q	17	24	1.10
R	19	27	1.20
Market Index	16	20	1.00

The mean risk free rate was 10%. Calculate the Treynor Measure, Sharpe Measure and Jensen Measure for the three mutual funds and the market index.

23. Two assets J and K, have the following risk and return characteristics: (November/December 2010)

$\sigma_J = 25\%$ $E(r_J) = 18\%$ $P_{JK} = -0.2$

$\sigma_K = 20\%$ $E(r_K) = 14\%$

Determine the best portfolio mix based on the risk and return analysis.

Portfolio	Weightage of J (%)	Weightage of K (%)
(a)	90	10
(b)	50	50
(c)	40	60
(d)	20	80

24. Vinoth received Rs. 10 lakh from his pension fund. He wants to invest in the stock market. The treasury bill rate is 5% and the market return variance is 10. The following table gives the details regarding the expected return, beta and residual variance of the individual security. What is the optimum portfolio assuming no short sales? (May/June 2009)

Security	**Expected return**	**Beta**	σ^2_{ei}
A	15	1.0	30
B	12	1.5	20
C	11	2.0	40
D	8	0.8	10
E	9	1.0	20
F	14	1.5	10

25. Suppose that seven portfolios experienced the following results during the ten year period: (April/May2010)

Portfolio	**Average annual return (%)**	**Standard deviation (%)**	**Beta**
A	15.6	27.0	0.81
B	11.8	18.0	0.55
C	8.3	15.2	0.38
D	19.0	21.2	0.75
E	-6.0	4.0	0.45
F	23.5	19.3	0.63
G	12.1	8.2	0.98
Market	13.0	12.0	1.00
T-Bill	6.0		

(i) Rank these portfolios using Sharpe's method and Treynor's method.
(ii) Compare the rankings and explain the reasons behind any differences noted.
(iii) Did any portfolios outperform the market? Why or Why not?