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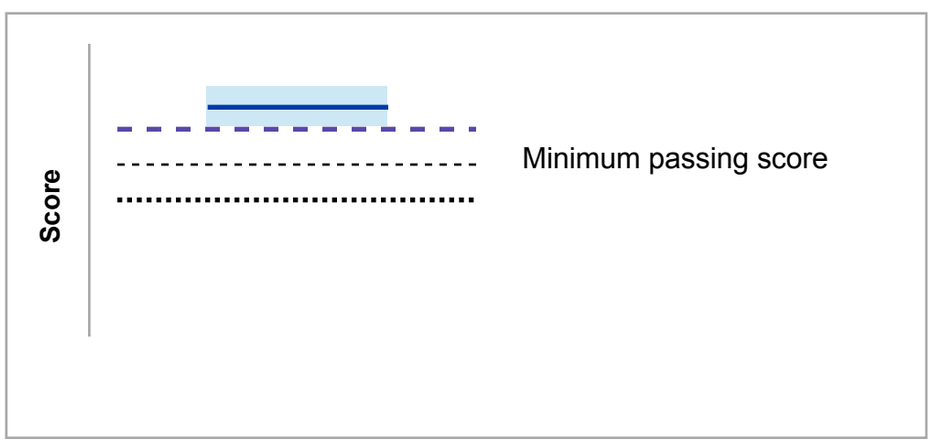

Key

Your score

Based on your knowledge on exam day, if you took a similar exam, your score would likely fall within this range

90th percentile score of all candidates

10th percentile score of all candidates

Your Performance by Topic Area

See how you performed (percentage of questions answered correctly) in each topic area. Note, there is no minimum passing score by topic area. Topic scores are offered as a guide for assessing your performance.

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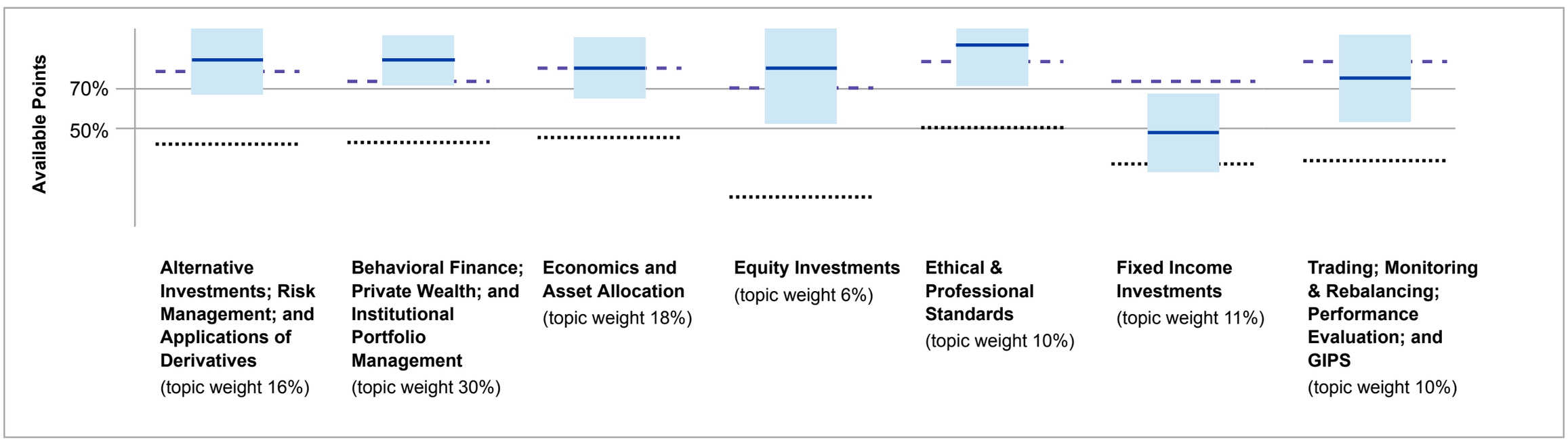

Your Performance by Item Type

See how you performed (your percentage of available points) on the item set and essay portions of the exam. Note, there is no minimum passing score by item type. Item type scores are offered as a guide for assessing your performance.

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CHAPTER-1: FINANCIAL POLICY AND CORPORATE STRATEGY

A. INTRODUCTION / VARIOUS PROCESS OF STRATEGIC DECISION MAKING (NOV-17:4M)

- Strategic Financial Management is defined as application of financial techniques to strategic decisions, in order to help achieve the decision-makers objectives.

- Since the management is ultimately responsible to investors, the objective of corporate financial management should be to implement investment and financing decisions which should satisfy the shareholders i.e., maximization of shareholders wealth.

- Strategic financial management combines the backward-looking, report-focused discipline of (financial) accounting with the more dynamic, forward-looking subject of financial management.

- All business need to have the following three fundamental essential elements:

a) A Clear and realistic strategy.
b) The financial resources, controls and systems to implement the strategy;
c) The right management team and processes to make it happen.

Strategy is defined as the long-term direction of an organization to achieve competitive advantage through the configuration of resources within a changing environment for the fulfillment of stakeholder's aspirations.

B. SCOPE OF INVESTMENT AND FINANCING DECISIONS

The investment and financial decisions functions involve the following functions:

1. Continual search for best investment opportunities.
2. Selection of the best profitable opportunities.
3. Determination of optimal mix of funds for the opportunities.
4. Establishment of systems for internal controls. and
5. Analysis of results for future decision-making

C. COMPONENTS OF STRATEGIC FINANCIAL MANAGEMENT / KEY DECISIONS OF FINANCIAL STRATEGY (Nov-19[N]:4M)

Financial Strategy is the portfolio constituent of the Corporate Strategy. Key decisions falling within the scope of financial strategy include the following:

1. **Financing decisions:** These decisions deal with the mode of financing or determination of mix of equity capital and debt capital to be used to fund the assets.
2. **Investment decisions:** These decisions involve the profitable utilization of firm's funds especially in long-term projects (capital projects). The projects are therefore evaluated in relation to their expected return and risk.
3. **Dividend decisions:** These decisions determine the division of earnings between payments to shareholders and reinvestment in the company.
4. **Portfolio decisions:** These decisions involve evaluation of investments based on their contribution to the aggregate performance of the entire corporation rather than on the isolated characteristics of the investments themselves.

D. STRATEGY AT DIFFERENT HIERARCHY LEVELS

1. *Corporate Level Strategy*

- It is concerned with selection of businesses in which a company should compete.
- It evaluates whether the chosen strategy is consistent with the accomplishment of common objective of the company (Suitability).
- It also determines the kind and quantum of resources required to implement the strategy (Feasibility). At the last but not least, it evaluates whether the strategy will be acceptable to the stakeholders (Acceptability).

2. *Functional Level Strategy* - At the business unit level, the strategic issues are about practical coordination of operating units and developing and sustaining a competitive advantage for the products and services that are produced.

3. *Functional Level Strategy*

Functional level strategies involve the development and coordination of resources through which business unit level strategies can be executed effectively and efficiently.

Loop Link

Functional units of an organization are involved in higher level strategies by providing input to the business unit level and corporate level strategy, such as providing information on customer feedback or on resources and capabilities on which the higher level strategies can be based.

Once the higher level strategy is developed, the functional units translate them into discrete action plans that each department or division must accomplish for the strategy to succeed.

Among the different functional activities, finance assumes highest importance during the top down and bottom up interaction of planning. Corporate strategy deals with deployment of resources and financial strategy is mainly concerned with mobilization and effective utilization of money.

E. INTERFACE OF FINANCIAL POLICY AND STRATEGIC MANAGEMENT (May-18[N]:4M – May-18[O]:4M – Nov-12:4M – May-16:4M)

a) The interface of strategic management and financial policy will be clearly understood if we appreciate the fact that the starting point of an organization is money and the end point of that organization is also money.

Sources of finance and capital structure are the most important dimensions of a strategic plan (Financing Decision).

b) Another important dimension of strategic management and financial policy interface is the investment and fund allocation decisions. A planner has to frame policies for regulating investments in fixed assets and for restraining of current assets.

c) Dividend policy is yet another area for making financial policy decisions affecting the strategic performance of the company.

Investment opportunities and financial needs of the firm and the shareholders preference for dividend against capital gains resulting out of share are to be taken into consideration for arriving at the right dividend policy.

Corporate strategy is the cause and financial policy is the effect and sometimes financial policy is the cause and corporate strategy is the effect.

F. SUSTAINABLE GROWTH / Balancing Financial Goals and Sustainable growth (May-14:4M)

- In general terms (environmental context), sustainable growth rate refers to satisfying the needs of present generation without compromising the ability of future generations to meet their own needs.

- In financial context, The sustainable growth rate (SGR), concept by Robert C. Higgins, of a firm is the maximum rate of growth in sales that can be achieved, given the firm's profitability, asset utilization, and desired dividend payout and debt (financial leverage) ratios.

SGR = ROE x (1- Dividend payment ratio)

Appropriateness of decisions taken by the Finance Personnel is judged not only in the context of current stakeholders but also in the context of future stakeholders.

- Sustainable growth is important to enterprise long-term development. Too fast or too slow growth will hinder the development of the enterprise in the long-run.

- Achieving sustainable growth rate requires paying attention to two critical aspects viz., growth strategy and growth capability.

- Sustainable growth model assumes that the business wants to:
    a) Maintain a target capital structure without issuing new equity.
    b) Maintain a target dividend payment ratio; and
    c) Increase sales as rapidly as market conditions allow.

  Sustainable growth rate is a measure of how much a firm can grow without borrowing more money. After the firm has passed this rate, it must borrow funds from another source to facilitate growth.

- De-marketing, Incremental growth strategy, Profit strategy and Pause strategy are some of the variants of stable growth strategy.

- The weak version of sustainability refers to preservation of critical resources to ensure support for all, over a long time horizon. The strong concept of sustainability is concerned with the preservation of resources under the primacy of ecosystem functioning.

What makes an organization Sustainable (May-19[O]:4M – Nov-16:4M)	*What makes an organization financially sustainable (May-17: 4M)*
a. A clear strategic direction b. Ability to scan the environment and identify the opportunities to exploit. c. Ability to attract, maintain and retain competent staff. d. Possessing adequate administrative and financial infrastructure. e. Community support	i. Having more than one source of incom ii. Having more than one way of generating income. iii. Regular strategic and financial planning. iv. Adequate financial systems. v. Good public image. vi. Clarity in values. vii. Adequate financial systems. viii. Financial autonomy.

CHAPTER-2: RISK MANAGEMENT

I. Types of Risks Faced by an Organization

1. Strategic Risk

- It refers to the risk that the company 'strategy becomes less effective.
- When such risk occurs, the company fails to achieve its goals.
- This risk may arise due to technological changes, new competitor entering the market, shifts in consumer demand, increase in cost of inputs etc.

2. Compliance Risk

- It refers to the risk arising from failure to comply with various applicable rules and regulations. E.g., Companies Act, 2013, SEBI rules and regulations etc.
- Non-compliance with applicable regulations may result in penalties and fines. Sometimes it may also lead to imprisonment of the persons in-charge of the affairs of the company e.g., directors.

3. Operational Risk

- Internal risks faced by an organization are grouped together and referred to as the operational risk.
- It arises from the people and process which together produces the output of an organization. E.g., Fraud by employees or management of the company.
- Though some of the operational risks are insurable, it would be preferable to take proactive steps towards their prevention.

4. Financial Risk

- It arises due to unexpected changes in interest rates, prices, exchange rates and credit rating etc.
- This risk can be divided into following three types:

A. *Counter Party Risk/Credit risk* – it arises due to failure of the counter party to honor its obligation to deliver the goods or to make the payment for the goods received.

Indications of Counter party risk

a. Failure to obtain necessary resources to honor the obligations undertaken.
b. Counter party becoming insolvent.
c. Regulatory restrictions from the Government.
d. Hostile actions of foreign government.

Techniques to manage counter party risk

(1) Carrying out Due Diligence before dealing with any third party.
(2) Keeping exposure to a single entity or group or connected entities within reasonable limits.
(3) Reviewing the limits regularly.
(4) Rapid action in the event of any likelihood of defaults.
(5) Use of performance guarantee, insurance or other instruments.

B. *Political Risk* – it arises due to adverse action taken by the government of foreign country. Such action may be restriction on remittances, confiscation of properties etc.

Assessment of Political Risk

Political risk of a country can be assessed by following ways:

(1) By referring political rankings published by different business magazines.
(2) By evaluating country's macro-economic conditions.
(3) By analyzing the popularity of current government and assess their stability.
(4) By taking advises from the embassies of the home country.

Indications of Political Risk

From the following actions by the Governments of the foreign country political risk can be identified:

1. Insistence on resident investors or labor.
2. Restriction on conversion of currency.
3. Repatriation of foreign assets of the local govt.
4. Price fixation of the products.

Techniques used to mitigate political risk.

(i) Local sourcing of raw materials and labor.
(ii) Entering into joint ventures
(iii) Local financing.
(iv) Prior negotiations.

C. *Interest rate risk* – It arises due to changes in interest rates resulting in changes in assets and liabilities. It is more critical to the organization having interest sensitive assets and liabilities e.g., Banking companies.

Identification of Interest rate risk

Interest rate Risk is mainly identified from the following:

1. Monetary Policy and other actions of the Government.
2. Economic Growth
3. Industrial Data
4. Foreign Investments.
5. Stock market movements.

D. *Currency Risk* – It refers to actual cash flows being varied from the expected cash flows in foreign exchange dealings. It results from the movement in exchange rates.

Identification of Currency Risk

Parameters to identity the currency risk include:

(1) Government Action.
(2) Interest Rates.
(3) Inflation Rates.
(4) Natural Calamities.
(5) Human induced events such as wars.
(6) Change of government and its attitude.

E. *Liquidity Risk* – It refers to the inability of an organization to meet its liabilities whenever they become due. It arises due to mismatch in cash flows.

II. Evaluation of Financial Risk (Nov-18[N]:4M

The financial risk can be evaluated from different point of views as follows:

(a) **From stakeholder's point of view**:

- Equity shareholders view financial gearing (i.e. ratio of debt in capital structure of company) as risk since in event of winding up of a company they will be least prioritized.
- Lenders view financial gearing as risk since company having high gearing faces more risk in default of payment of interest and principal repayment.

(b) **From Company's point of view:** From company's point of view if a company borrows excessively or lend to someone who defaults, then it can be forced to go into liquidation.

(c) **From Government's point of view:** From Government's point of view, the financial risk can be viewed as failure of any bank or down grading of any financial institution leading to spread of distrust among society at large.

III. Value at Risk

- It is an estimate of the loss that is expected to be exceeded with a given level of probability over a specified time period.

Features of VaR

1. VaR measure of risk embodies three components viz., time period, confidence level and loss.
2. VaR is a statistical tool based on Standard Deviation.
3. VaR can be measured for different time horizons (1-day, 1-Week, 1-Month etc).
4. VaR measure predicts the probability of maximum loss under the assumption of normal distribution.
5. VaR is computed using Z-score. Z-score multiplied with Standard Deviation provides VaR. Z-Score indicates how many Standard Deviations is away from the mean value.

Applications of VaR (May-19[N]:4M)

VAR can be applied:

(a) To measure the maximum possible loss on any portfolio, capital investment etc.
(b) As a benchmark for performance measurement of any operation.
(c) To fix limits for individuals dealing in front office of a treasury department.
(d) To enable the management to decide the trading strategies.
(e) As a tool for Asset Liability Management.

Methods used to compute to VaR

1. Under the Analytical method, a multiple of the standard deviation is subtracted from the expected return. Such multiple is determined by the desired confidence level.

$\mu_r - \sigma$ * z-Score.
Where, μ_r is the mean return on a security or portfolio. σ is the standard deviation of the above returns.

2. Under the Historical method, actual returns on a portfolio during a period are ranked and VaR is obtained by determining the return that would be lost with a given probability level.
3. Monte Carlo simulation estimates VaR by generating random returns and determining the worst outcomes.

Problems (Class room discussion)

1) An investor holds ₹ 2 crore shares of X Ltd. whose market price standard deviation is 2% per day. Assuming 252 trading days a year, determine maximum loss level over the period of 1 trading day and 10 trading days with 99% confidence level.
2) Consider a portfolio consisting of a Rs. 200,00,000 investment in share XYZ and a Rs. 200,00,000 investment in share ABC. The daily standard deviation of both shares is 1% and that the coefficient of correlation between them is 0.3. You are required to determine the 10- day 99% value at risk for the portfolio?

CHAPTER-3: SECURITY ANALYSIS

Introduction

- *Security Analysis* involves a systematic analysis of the risk return profiles of various securities which is to help a rational investor to estimate a value for a company from all the price sensitive information/data so that he can make purchases when the market under-prices some of them and thereby earn a reasonable rate of return.
- Two approaches viz. fundamental analysis and technical analysis are in vogue for carrying out Security Analysis.
- In fundamental analysis, factors affecting risk-return characteristics of securities are looked into while in technical analysis, demand/ supply position of the securities along with prevalent share price trends are examined.

I. FUNDAMENTAL ANALYSIS

- Fundamental analysis is based on the assumption that the share prices depend upon the future dividends expected by the shareholders. In other words, intrinsic value (discounted value of the cash flows) is the price the shareholders are prepared to pay for a share and it is the price at which they expect to sell it in the future.
- Using the dividend discount model, the intrinsic value or fundamental price of the share is computed as follows:

$$P_0 = \frac{D_1}{(k-g)}$$

$$P_0 = \frac{D_0(1+g)}{(k-g)}$$

$$P_0 = \frac{b\,E_1}{(k-g)}$$

$$P_0 = \frac{b\,E_0\;(1+g)}{(k-g)}$$

Where,
D_1 = Expected Dividend in year 1
D_0 = Current year dividend
k = required rate of return.
g = Growth rate in dividends.

b = Dividend Payout ratio.
E_1 = Expected Earnings in year 1
E_0 = Current Year Earnings.

- Fundamental analysis encompasses economic, industrial and company analysis which constitute the different stages in an investment decision making process.

A. Economic Analysis

- Economic analysis is used to forecast national income with its various components that have a bearing on the concerned industry and the company in particular.
- Trends in peoples' income and expenditure reflect the growth of a particular industry/company in future.
- Consumption affects corporate profits, dividends and share prices in the market.

Factors affecting economic analysis include:

a. *Growth rates of national income* – Estimated growth rate of the economy indicates the prospects of industry which in-turn reflects the prospects of a company in that industry and ultimately the returns from investment in shares of that company.
b. *Growth rates of industrial sector*
c. *Inflation* – It is particularly relevant for industries like consumer products whose prospects are significantly affected by inflation rates.
d. *Monsoon* – It has both forward and backward linkages.

Techniques used in Economic Analysis

A. *Anticipatory Surveys* - They help investors to form an opinion about the future state of the economy. It incorporates expert opinion on construction activities, expenditure on plant and machinery, levels of inventory – all having a definite bearing on economic activities. Also future spending habits of consumers are taken into account.
B. *Economic Indicators* – Discussed below.
C. *Economic Model Building Approach:* In this approach, a precise and clear relationship between dependent and independent variables is determined. GNP model building or sectoral analysis is used in practice through the use of national accounting framework.

Economic Indicators

Economic indicator is a variable that provides information on the state of the overall economy. They have been classified into following three types:

1. *Leading Indicators* – These variables have turning points in advance of overall economy. They have value in predicting the state of economy in near-term. E.g., Shape of Yield curve.
2. *Coincident Indicators* – These variables have turning points at approximately the same time of the overall economy. They have value in identifying the present state of the economy. E.g., Industrial Production index.
3. *Lagging Indicators* – These variables have turning points after the overall economy reaches turning points. They have value in identifying the economies past condition. E.g., Inventory-Sales ratio, Commercial and Industrial loans outstanding

Different variables may give conflicting signals about the future direction of the economy. To avoid this, Diffusion/Composite Index is used. The index measures the strength/weakness in the movement of particular set of indicators.

B. Industry Analysis

- When an economy grows, it is very unlikely that all industries in the economy would grow at the same rate. So it is necessary to examine industry specific factors, in addition to economy-wide factors.
- Since the basic profitability of any company depends upon the economic prospects of the industry to which it belongs, an appraisal of the particular industry's prospects is essential.

Factors Affecting Industry Analysis

(a) Product Life-Cycle*:* An industry usually exhibits high profitability in the initial and growth stages, medium but steady profitability in the maturity stage and a sharp decline in profitability in the last stage of growth.

(b) Demand Supply Gap*:* Excess supply reduces the profitability of the industry because of the decline in the unit price realization, while insufficient supply tends to improve the profitability because of higher unit price realization.

(c) Barriers to entry – An industry with significant barriers to entry will enjoy pricing power and good prospects of profitability. Some of these barriers are innate to the product and the technology of production, while other barriers are created by existing firms in the industry.

(d) State of competition in the industry – Factors that affect the competitive position of the industry include leadership position of the firms in the industry and type of products manufactured viz., homogeneous or highly differentiated.

(e) Technology and Research – Industries which continuously engage in research and update themselves with latest technology have a competitive advantage over others in terms of quality, price etc.

Techniques used in Industry Analysis

1. *Regression and Correlation* – These are the statistical techniques used to indentify factors affecting the demand for the products of a particular industry. Such factors include, Gross National Product (GNP), Disposable income, consumption, price and income-elasticity of demand.
2. *Input-Output Analysis* – This analysis is based on the interdependencies between industries. It is used for estimating the impacts of positive or negative economic shocks and analyzing the ripple effects. This analysis detects changes in patters indicating growth or decline of industries.

C. Company Analysis

Economic and industry framework provides proper background for the company analysis. A company's quantitative and qualitative fundamentals need to be carefully examined before purchasing the shares of a company.

Factors affecting company analysis

(a) Net worth and Book value.
(b) Sources and uses of funds.
(c) Size and ranking of the company within the economy, in general, and the industry, in particular.
(d) Position of the company in terms of technical know-how, research and development activity and price leadership.
(e) Growth in sales, net income, net capital employed and earnings per share.
(f) The financial solvency and liquidity, the efficiency with which the funds are used, the profitability, the operating efficiency and the financial and operating leverages of the company.
(g) Competitive advantage (e.g., brand name or market penetration) enjoyed by the company.
(h) Quality of management and its policy regarding relationship with shareholders.

(i) Effectiveness of Corporate Governance.
(j) Location and Labor-Management Relations.
(k) Share holding pattern.
(l) Marketability of the shares.

Techniques used in Company Analysis

(a) Correlation & Regression Analysis*:* Simple regression is used when inter relationship covers two variables. For more than two variables, multiple regression analysis is followed.

(b) Trend Analysis*:* The relationship of one variable is tested over time using regression analysis. It gives an insight to the historical behavior of the variable.

(c) Decision Tree Analysis: In this analysis a range of values of the variable with probabilities of occurrence of each value is taken up. To obtain the probability of final outcome, the probabilities of each sequence is to be multiplied and then summed up.

II. Technical Analysis

- Technical Analysis is a method of analyzing the share price movements based on a study of price graphs or charts on the assumption that share price trends are repetitive.
- Rationale for such assumption is that, share price movements are driven by supply and demand for a share which in turn driven investor psychology.
- Investor psychology follows a certain pattern which implies that what is seen to have happened before is likely to be repeated.
- Technical analyst attempts to answer 2 basic questions:
  (i) Is there a discernible trend in the prices?
  (ii) If there is such a trend, then are there any indications that the trend would reverse?

A. Principles of Technical Analysis

Technical analysis is based on the following three principals:

a. **The Market Discounts Everything –** Technical analysts believe that in an efficient market everything from a company's fundamentals to broad market factors to investor psychology are factored in stock market.
As such, technical analysts argue that there is no need to consider the fundamental factors separately.

b. **Price Moves in Trends -** Technical analysts believe that prices move in trends. In other words, a stock price is more likely to continue a past trend than move in a different direction.

c. **History Tends to Repeat Itself -** Technical analysts believe that history tends to repeat itself. The repetitive nature of price movements is attributed to investor psychology, which tends to be very predictable based on emotions like fear or excitement.

B. Dow Theory

- Dow Theory originated by Charles Dow is a technical framework used for the analysis of financial markets.
- The Dow Theory is based upon the movements of two indices viz., Dow Jones Industrial Average (DJIA) and Dow Jones Transportation Average (DJTA).
- There are six main components to the Dow Theory:
  1. Market Discounts Everything.
  2. Market has three movements viz., primary, secondary trends and minor trends.
  3. Primary trends have three phases' viz., accumulation phase, absorption phase and distribution phase.
  4. Indices must confirm each other.
  5. Volumes must confirm the trend.
  6. Trends persist until a clear reversal occurs.

Market Movements

(a) *Primary Movement* – It is the main trend of the market, which lasts from one year to 36 months or longer. This trend is commonly called bear or bull market.
(b) *Secondary Movement* – It is shorter in duration than the primary movement, and is opposite in direction. It lasts from two weeks to a month or more.
(c) *Minor Movement* – They are day to day narrow fluctuations.

Phases of Primary/Main trend

(i) *Accumulation Phase* – During this phase, the far-sighted, knowledgeable investors are actively buying stock against the general opinion of the stock market. The prices do not change much because the knowledgeable investors are less in number.
(ii) *Absorption Phase / Public Participation Phase* – During this phase, the market catches up with the knowledgeable investors when trend followers and other technically oriented investors participate.

(iii) *Distribution Phase* – During this phase, there would be a wide speculation in the market caused by widespread report of financial well being of corporations. At the end of this phase, the knowledgeable investors realize that high earnings levels may not be sustained and start distributing their holdings.

C. Elliot Wave Theory

- According to this theory, markets exhibit certain repeated patterns or waves.
- A wave is a movement of the market price from one change in the direction to the next change in the same direction.
- Waves are resulted from buying and selling impulses emerging from the demand and supply pressures on the market.
- Waves can be classified into two parts:

(a) Impulsive Patterns-(Basic Waves) - In this pattern there will be 3 or 5 waves in a given direction (going upward or downward). These waves shall move in the direction of the basic movement. This movement can indicate bull phase or bear phase.

(b) Corrective Patterns- (Reaction Waves) - These 3 waves are against the direction of the basic movement. Correction involves correcting the earlier rise in case of bull market and fall in case of bear market.

One complete cycle consists of waves made up of two distinct phases, bullish and bearish. On completion of full one cycle i.e. termination of 8 waves movement, the fresh cycle starts with similar impulses arising out of market trading.

D. Random Walk Theory

Random Walk hypothesis states that the behavior of stock market prices is unpredictable because the stock prices are not a result of any underlying factors but are mere statistical ups and downs and no connection can be established between two successive peaks and troughs.

E. Market Indicators

(i) **Breadth Index** - It is an index that covers all securities traded. It is computed by dividing the net advances or declines in the market by the number of issues traded. It is an addition to the Dow Theory and the movement of the Dow Jones Averages.

(ii) **Transaction Volume** - A rising index/price with increasing volume would signal buy behavior and a falling market with increasing volume signals a bear market and the prices would be expected to fall further.

(iii) **Confidence Index** - It reveals how willing the investors are to take a chance in the market. It is the ratio of high-grade bond yields to low-grade bond yields. The confidence index is usually a leading indicator of the market and as such a rising confidence index is expected to precede a rising stock market, and a fall in the index is expected to precede a drop in stock prices.

(iv) **Relative Strength Analysis** - The relative strength concept suggests that the prices of some securities rise relatively faster in a bull market or decline more slowly in a bear market than other securities.

(v) **Odd-Lot Theory** – This theory assumes that the average person is usually wrong and that a wise course of action is to pursue strategies contrary to popular opinion. The odd-lot theory is used primarily to predict tops in bull markets, but also to predict reversals in individual securities.

F. Support and Resistance Levels

When the index/price goes down from a peak, the peak becomes the resistance level. When the index/price rebounds after reaching a trough subsequently, the lowest value reached becomes the support level. The price is then expected to move between these two levels.

Whenever the price approaches the resistance level, there is a selling pressure because all investors who failed to sell at the high would be keen to liquidate, while whenever the price approaches the support level, there is a buying pressure as all those investors who failed to buy at the lowest price would like to purchase the share.

A breach of these levels indicates a distinct departure from status quo, and an attempt to set newer levels.

G. Price Patterns

(a) Channel: A series of uniformly changing tops and bottoms gives rise to a channel formation. A downward sloping channel would indicate declining prices and an upward sloping channel would imply rising prices.

(b) Wedge: A wedge is formed when the tops (resistance levels) and bottoms (support levels) change in opposite direction, or when they are changing in the same direction at different rates over time.

(c) Triangle or Coil Formation represents a pattern of uncertainty and is difficult to predict which way the price will break out.

(d) Flags and Pennants form signifies a phase after which the previous price trend is likely to continue.

(e) Gap is the difference between the opening price on a trading day and the closing price of the previous trading day. The wider the gap the stronger the signal for a continuation of the observed trend.

H. Moving Averages

- Moving averages are frequently plotted with prices to make buy and sell decisions.
- The two types of moving averages used are Arithmetic Moving Average (AMA) and the Exponential Moving Average (EMA).
- An *n*-period AMA, at period *t* is the simple average of the last *n* period prices.
- While AMA assigns equal weight to each price, EMA assigns decreasing weights, with the highest weight assigned to the latest price. The weights decrease exponentially, according to a scheme specified by the exponential smoothing constant.
- EMA = [(Closing price of the day – EMA of the Previous day) X Exponent] + Previous day EMA

Practical Question

Closing values of BSE Sensex from 6th to 17th day of the month of January of the year 2019 were as follows:

Days	Date	Day	Sensex
1	6	THU	14522
2	7	FRI	14925
3	8	SAT	No Trading
4	9	SUN	No Trading
5	10	MON	15222
6	11	TUE	16000
7	12	WED	16400
8	13	THU	17000
9	14	FRI	No Trading
10	15	SAT	No Trading
11	16	SUN	No Trading
12	17	MON	18000

Calculate Exponential Moving Average (EMA) of Sensex during the above period. The 30 days simple moving average of Sensex can be assumed as 15,000. The value of exponent for 30 days EMA is 0.062. Give detailed analysis on the basis of your calculations.

I. Evaluation of Technical Analysis

Arguments in favor of Technical Analysis

The advocates of technical analysis offer the following argument in their favor:

(a) Under influence of crowd psychology trend persist for some time. Tools of technical analysis help in identifying these trends early and help in investment decision making.

(b) Shift in demand and supply are gradual rather than instantaneous. Technical analysis helps in detecting this shift rather early and hence provides clues to future price movements.

(c) Fundamental information about a company is observed and assimilated by the market over a period of time. Hence price movement tends to continue more or less in same direction till the information is fully assimilated in the stock price.

Arguments against technical analysis

(a) Most technical analysts are not able to offer a convincing explanation for the tools employed by them.

(b) Empirical evidence in support of random walk hypothesis cast its shadow over the usefulness of technical analysis.

(c) By the time an uptrend and down trend may have been signaled by technical analysis it may already have taken place.

(d) Ultimately technical analysis must be self defeating proposition. With more and more people employing it, the value of such analysis tends to decline.

In a nutshell, it may be concluded that in a rational, well ordered and efficient market, technical analysis may not work very well. However with imperfection, inefficiency and irrationalities that characterizes the real world market, technical analysis may be helpful. If technical analysis is used in conjunction with fundamental analysis, it might be useful in providing proper guidance to investment decision makers.

III. DIFFERENCES BETWEEN FUNDAMENTAL ANALYSIS AND TECHNICAL ANALYSIS

Fundamental Analysis	*Technical Analysis*
1. It involves estimating the intrinsic value of the company.	1) It is a statistical method used to find patterns in stock prices with a view to predict future price movements based on market data.
2. It examines financial data and industry trends and economic outlook	2) It examines price movements and market psychology
3. It is a long-term approach to investing	3) It is a short-term approach to investing
4. It looks both back-ward as well as forward	4) It looks only backward.
5. It gathers data from financial statements.	5) It gathers data from price charts.
6. Its focus is on investing	6) Its focus is on trading

IV. Efficient Market Theory (Efficient Market Hypothesis)

- As per this theory, at any given time, all available price sensitive information is fully reflected in securities' prices.
- The theory implies that no investor can consistently outperform the market through expert stock selection or market timing.
- The only way an investor can obtain high returns is by purchasing riskier investments.
- The theory express the following view points:

(a) Information is freely and instantaneously available to all market participants.
(b) Keen competition among the market participants more or less ensures that market will reflect intrinsic values. This means that they will fully impound all available information.
(c) Price change only response to new information that is unrelated to previous information and therefore unpredictable.

Levels of Market Efficiency

(i) *Weak form efficiency* – Prices reflect all information found in the record of past prices and volumes.
(ii) *Semi – Strong efficiency* – Price reflect not only all information found in the record of past prices and volumes but also all other publicly available information.
(iii) *Strong form efficiency* – Price reflect all available information public as well as private.

Practical Question

The closing value of Sensex for the month of October, 2007 is given below:

Date Closing	Sensex Value
1.10.07	2800
3.10.07	2780
4.10.07	2795
5.10.07	2830
8.10.07	2760
9.10.07	2790
10.10.07	2880
11.10.07	2960
12.10.07	2990
15.10.07	3200
16.10.07	3300
17.10.07	3450
19.10.07	3360
22.10.07	3290
23.10.07	3360
24.10.07	3340
25.10.07	3290
29.10.07	3240
30.10.07	3140
31.10.07	3260

You are required to test the weak form of efficient market hypothesis by applying the run test at 5% and 10% level of significance. Following value can be used:

- Value of t at 5% is 2.101 at 18 degrees of freedom
- Value of t at 10% is 1.734 at 18 degrees of freedom
- Value of t at 5% is 2.086 at 20 degrees of freedom.
- Value of t at 10% is 1.725 at 20 degrees of freedom.

Challenges to Efficient Market Theory

(a) *Information Inadequacy* – Efficient market theory suggests that all information is freely and instantly available to all market participants. However, in reality, information is neither freely available nor rapidly transmitted to all participants.

(b) *Limited Information processing capabilities* – Even if the required information is available, human limitations may not permit the information to be processed entirely.

(c) *Irrational behavior* – Efficient market theory assumes that investors behave rationally and accordingly market prices reflect intrinsic values. But in practice, investors act irrationally and act largely on hit or miss tactics rather than on the basis of informed beliefs about the long-term prospects of individual enterprises.

(d) *Monopolistic influence* – Efficient market theory assumes that market is highly competitive and no single buyer or seller can have undue influence over prices. In practice, powerful institutions and big operators wield great influence over the market. The monopolistic power enjoyed by them diminishes the competitiveness of the market.

CHAPTER-6: SECURITIZATION

I. Concept of Securitization

- Some companies or firms who are involved in sending the money or making credit sale must have a huge balance of receivables in their Balance Sheet.
- Though they have a huge receivable but still they may face liquidity crunch to run their business.
- To overcome the liquidity problem the concept of 'securitization' is used.
- The process of securitization typically involves the creation of pool of assets from the illiquid financial assets and re-packaging such assets in the form of marketable securities.

II. Mechanism of Securitization / Steps in Securitization process

1. The process of securitization begins with creation of pool of assets by segregation of assets backed by similar type of mortgages in terms of interest rate, risk, maturity and concentration units.
2. One assets have been pooled, they are transferred to Special Purpose Vehicle (SPV) especially created for this purpose.
3. Sometime before the sale of securitized instruments credit rating can be done to assess the risk of the issuer.
4. SPV designs the instruments based on nature of interest, risk, tenure etc. based on pool of assets. These instruments can be Pass Through Security or Pay Through Certificates.
5. The administration of assets in subcontracted back to originator which collects principal and interest from underlying assets and transfer it to SPV.
6. Performance of securitized instruments depends on the performance of underlying assets and unless specified, in case of default they go back to originator from SPV.
7. SPV will repay the funds to the investors in form of interest and principal that arises from the assets pooled.

III. Features of Securitization

1. Securitized instruments are *additional financial products* backed by collaterals.
2. Securitization involves *Bundling* (pooling of similar assets) and *Unbundling* (breaking the pool into instruments of fixed denomination).
3. Securitization made on non-recourse basis acts as a *risk management tool* as the risk of default is transferred to the investors.
4. In the process of securitization, financial instruments are *tailored/structured* to meet the requirements of investors.
5. Pool of similar assets are splitted into various *'Tranches'* based on risk and return.
6. Under each tranche assets of *homogeneous* nature are pooled.

IV. Benefits of Securitization

A. Benefits to the Originator

1. Securitization results in off Balance Sheet financing as the proceeds realized from sale of assets does not reflect as liability in balance sheet unlike obtaining finance on the basis of security of assets.
2. Securitization results in improved liquidity position which helps in expanding the business of the company.
3. By transferring the assets the entity could concentrate more on core business as servicing of loan is transferred to SPV.
4. Securitization made on non-recourse basis acts as a *risk management tool* as the risk of default is transferred to the investors.
5. Securitization helps Financial Institutions in improving their ratios such as Capital-to-Weighted Assets Ratio.
6. Due to credit rating and other credit enhancements securitized instruments can be issued at reduced rate resulting in reduced cost of borrowings.

B. Benefits to the Investor

1. Purchase of securities backed by different types of assets provides the *diversification* of portfolio resulting in reduction of risk.
2. Acquisition, by investors, of assets backed belonging to a particular industry helps investors to meet regulatory requirements relating to sector specific investments.
3. In case of recourse arrangement if there is any default, then the investors can fall back on the originator for compensation.

V. Participants in Securitization

A. Primary Participants

1. Originator - It is an entity which sells the assets lying in its books and receives the funds generated through the sale of such assets.
2. Special Purpose Vehicle – It purchases the assets from originator and holds the legal title and beneficial interest on such assets. It is created especially for the purpose of securitization only and could be in form of a company, a firm, a society or a trust.
3. Investors: They are the buyers of securitized instruments. They may be individuals or institutional investor such as mutual funds, provident funds, insurance companies etc.

B. Secondary Participants

1. Obligors:

   ⇒ They are the parties who owe money to the Originator.

   ⇒ Their credit standing is of paramount importance in the whole process.

2. Rating Agencies:

⇒ They asses the credit quality of underlying pool of assets based on Strength of the Cash Flows, Liquidity support and Strength of legal framework to enforce the contractual obligations.

3. Servicer / Administrator:
   ⇒ It collects the payments due from obligors and passes it to SPV.
   ⇒ It also follow up with defaulting borrower and if required initiate appropriate legal action against them.
   ⇒ Generally, an originator or its affiliates acts as servicer.

4. Trustee:

⇒ They are appointed to oversee that all parties to the deal perform in the true spirit of terms of agreement.

⇒ Normally, it takes care of interest of investors who acquires the securities.

5. Credit Enhancements:

⇒ These provide comfort to the investors.

⇒ They may be provided by originator in the form of over collateralization or may be provided by third party in the form of surety bonds etc.

6. Structures:

⇒ These are investment bankers also called arrangers of the deal.

⇒ They bring together the originator, investors, credit enhancers and other parties to the deal of securitization.

⇒ They ensure that deal meets all legal, regulatory, accounting and tax laws requirements.

VI. Problems in Securitization

1. *Stamp Duty* – High stamp duty on mortgage debt instruments (some times up to 12%) may impede the growth of securitization.

However, recognizing the specialized nature of securitized instruments, some states have reduced stamp duty on securitized instruments.

2. *Taxation*

a. In the absence of any specific provision relating to securitized instruments in Income Tax Act experts' are differing in their opinion.

b. Some are of opinion that SPV as a trustee is liable to be taxed in a representative capacity while others are of view that investors will be taxed on their share of income.

c. Clarity is also required on the issues of capital gain implications on passing payments to the investors.

3. *Accounting*

a. Accounting and reporting of securitized assets in the books of originator is another area of concern.

b. Problem arises especially when assets are transferred without recourse.

4. *Lack of standardization* - Every originator is following his own format for documentation and administration. Lack of standardization hinders the growth of securitization.

5. *Inadequate Debt Market* - Lack of existence of a well-developed debt market in India is another obstacle that hinders the growth of secondary market of securitized or asset backed securities.

6. *Ineffective Foreclosure laws* - Foreclosure laws are not supportive to lending institutions which makes securitized instruments less attractive as lenders face difficulty in transfer of property in event of default by the borrower.

VII. Securitized Instruments

A. *Pass Through Certificates (PTC's)*

1. They enable the investors to take a direct exposure on the performance of the securitized assets.
2. All receipts of interest and principal are transferred to the investors.
3. Delay in cash flows are protected to the extent of credit enhancements.
4. As the prepayments are also passed on to the investors, the investors shall bear the re-investment risk.
5. On completion of securitization by the final payment of assets, all the securities are terminated simultaneously.
6. Since all cash flows are transferred the investors carry proportional beneficial interest in the asset held in the trust by SPV.

B. *Pay Through Securities (PTS)*

a. This structure permits desynchronization of servicing of securities from cash flow generating from the asset.

b. This structure permits the SPV to reinvest surplus funds for short term as per their requirement.

c. This structure provides the freedom to SPV to issue several debt tranches with varying maturities.

d. These securities gives only a charge against the securitized assets, while the assets themselves are owned by the SPV.

e. Different issues of securities can be ranked and hence priced differentially.

VIII. Stripped Securities

a. Stripped Securities are created by dividing the cash flows associated with underlying securities into two or more new securities.

b. The holder of Interest - Only securities receives only interest, while the holders of Principle - Only securities receives only principal.

c. In case yield to maturity in market rises, PO price tends to fall as borrower prefers to postpone the payment on cheaper loans. Whereas if interest rate in market falls, the borrower tends to repay the loans as they prefer to borrow fresh at lower rate of interest.

d. Value of IO's securities increases when interest rate goes up in the market as more interest is calculated on borrowings. However, when interest rates fall value of IO's tend to fall due to prepayments of principals.

e. Perception of investors determines the prices of IO's and PO's

f. Being highly volatile in nature these securities are less preferred by investors.

IX. Pricing of Securitized Instruments

Pricing of securitized instruments in an important aspect of securitization. Pricing of instruments should be acceptable to both originators as well as to the investors.

A. From Originator's View

From originator's point of view, the instruments can be priced at a rate at which originator has to incur an outflow and if that outflow can be amortized over a period of time by investing the amount raised through securitization.

B. From Investor's view

From an investor's view security prices can be determined by discounting estimated future cash flows using yield to maturity of a comparable security. Such yield can also be adjusted for differences in credit quality of the securitized instruments.

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CHAPTER-14: START UP FINANCE

I. Ways to Finance a Start-up

A. ***Personal Finance*** – It is important for the new entrepreneurs to put their own money in to their venture as the outside investors will not put their money unless the promoters also contributed money from their personal sources.

B. ***Personal Credit Lines*** – These are based on one's personal credit history. These can be availed only when the business has enough cash flow to repay the credit availed.

C. ***Family and Friends*** – Finance can be obtained from those who has faith on the promoter regardless of the idea. It is advisable that loan obligations from friends and relatives should be in writing. E.g., Promissory Notes.

D. ***Peer-to-Peer Lending*** – Small business groups having similar interest support each other in their start-up ventures.

E. ***Crowd Funding*** – It refers to the use of small amounts of capital from a large number of investors to finance a new business initiative. It makes use of social media and dedicated crowdfunding web sites to bring investors and entrepreneurs together.

F. ***Vendor Financing*** – This form of financing takes place when the supplier supplies goods to its customers on deferred payment terms.

G. ***Purchase order Financing*** - In this mode of financing, a start-up business having obtained a large purchase order approaches the lenders who in turn transfer funds directly to the supplier.

H. ***Factoring*** – In this mode of financing, a start-up entity having sold the goods on credit transfers the resultant receivable to a financing firm called "factor" who will make the upfront payment to the start-up entity after deducting factor commission, interest and other charges.

II. Pitch Presentation

It is a brief power point presentation made to the investors to provide a quick overview of the business plan and aims to convince the investors to put some money into the business.

It can be made either during face-to-face meetings or online meetings with potential investors.

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Following are some of the aspects to be highlighted in the pitch presentation:

1. Brief introduction about the promoter and the milestones, if any, achieved.
2. Brief introduction about the team working with the promoter.
3. Problem which the start-up is attempting to solve.
4. Start-up's plans as to how the problem should be solved.
5. Size of the market, Target Customers and the company's plans to attract the customers.
6. Projected financial statements comprising of Income Statement, Balance Sheet and Cash Flow Statement.
7. How the start-up's product or services is different from the competitors.
8. Start-up's business model to generate revenues and profits.
9. Details of finances already raised, if any, and its utilization.

III. Boot Strapping

1. An individual is said to be boot strapping when he attempts to found and build a company from personal finances or from the operating revenues of the new company.
2. Investment of own savings by promoters leads to cautious approach and curbs wasteful expenditure.
3. Some of the methods in which a start-up firm can boot strap include Trade Credit, Factoring and Leasing.

IV. Angel Investors

1. Angel investors are among an entrepreneur's family and friends.
2. The capital angel investors provide may be a one-time investment or an ongoing injection of money.
3. Angel investors provide more favorable terms compared to other lenders, since they usually invest in the entrepreneur starting the business rather than the viability of the business.
4. Angel investors typically use their own money.
5. Though angel investors usually represent individuals, the entity that actually provides the fund may be a limited liability company, a business, a trust or an investment fund.
6. Professional angel investors look for opportunities for a defined exit strategy, acquisitions or initial public offerings.

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V. Structure of Venture Capital Funds

A. *Domestic Funds*

⇒ These funds raise money domestically.
⇒ They are usually structured as:
1. A domestic vehicle for the pooling of funds from the investor;
2. A separate investment adviser that carries duties of asset manager.

B. *Off shore Structure*

⇒ Under this structure, an investment vehicle (an LLC or an LP incorporated outside India) makes investments directly into Indian portfolio companies.
⇒ Assets are managed by an offshore manager.
⇒ Investment advisor in India carries out the due diligence and identifies deals.

C. *Unified Structure*

⇒ When domestic investors are expected to participate in off-shore funds, a unified structure is used.

⇒ Overseas investors pool their assets in an offshore vehicle that invests in a locally managed trust. Domestic investors directly contribute to the trust.

⇒ Local trust is used to make the local portfolio investments.

VI. Characteristics of Venture Capital Financing

1. Venture Capital Financing is usually for long-time horizon. Min.3 to Max. 10 Years.
2. As the equity obtained by VC investor is less liquid, an appropriate liquidity premium is adjusted while computing required return.
3. VC works on the principle of high risk and high return. Therefore, a project involving higher risk would not eliminate the investment choice for a Venture Capitalist.
4. Mostly Venture capital is invested in the form of equity so as to enable the VC to participate in the management and board decisions of the investee entity.

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VII. Advantages of Venture Capital Investment

1. Long- term equity finance injected by VC provides a solid capital base for future growth.
2. The venture capitalist is able to provide practical advice and assistance to the company based on past experience with other companies which were in similar situations.
3. The venture capitalist also has a network of contacts in many areas that can add value to the company.
4. The venture capitalist may be capable of providing additional rounds of funding required to finance the growth of investee entity.
5. Venture capitalists are experienced in the process of preparing a company for an initial public offering (IPO).

VIII. Stages of Funding

1. ***Seed Money*** - At this stage, funding is provided to prove a new idea.
2. ***Start-up*** - Funding at this stage is meant to meet expenses of marketing and product development.
3. ***First-Round:*** - Funding at this stage is provided to produce and sell the product.
4. ***Second-Round*** – This stage funding is provided to meet working capital requirements of an entity which is selling products and not yet making profits.
5. ***Third Round*** – At this stage funding is provided for expansion of a profit-making company. This is known as "Mezzanine Financing".
6. ***Fourth-Round***: At this stage funding is provided to meet the expenses associated with public issue process. This is also known as " Bridge financing".

Risk and Investment Horizon of funding at various stages is given below:

Funding Stage	*Investment Horizon (Duration of funds blocked)*	*Risk Involved*
Seed Money	7 – 10 Years	Extreme Risk
Start-Up	5 – 9 Years	Very High Risk
First Stage	3 – 7 Years	High Risk
Second Stage	3 – 5 Years	Sufficiently High Risk
Third Stage	1 – 3 Years	Medium Risk
Fourth Stage	1 – 3 Years	Low Risk

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IX. Steps Involved in Venture Capital Investment Process

1. *Deal Origination* :

⇒ VC operates directly or through intermediaries. Mainly many practicing Chartered Accountants would work as intermediary and through them VC gets the deal.

⇒ Investee Company should provide an Investment Memorandum containing business model, financial plan, tentative valuation and exit options.

2. *Screening* – Once the deal is sourced, it is sent for screening by a committee consisting of senior level people of the VC.

3. *Due Diligence* :

⇒ Due Diligence is done to verify the authenticity of information provided by the investee company.

⇒ This is generally done by renowned consultants in the field of investee company.

4. *Deal Structuring*

⇒ The deal is structured in such a way that both parties win.

⇒ In many cases, the convertible structure is used to ensure that the promoter retains the right to buy back the share.

5. *Post Investment Activity*

⇒ At this stage, the VC nominates its nominee in the board of the investee company.

⇒ The investee company has to adhere to certain guidelines like strong MIS, strong budgeting system, strong corporate governance.

⇒ If milestone has not been met the company has to give explanation to the VC.

6. *Exit plan*

⇒ Mainly, exit happens in two ways viz., 'sale to a third party by way of IPO or Private Placement or other VCF or Buy-Back by promoter at a pre-agreed rate.

⇒ In many deals, the promoter buyback is the first refusal method adopted i.e. the promoter would get the first right of buyback.

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X. Start-Up - Legal Definition

For the purpose of availing benefits under various government schemes, a start-up entity should meet the following criteria:

1. Entity should have been incorporated as a Private Limited Company, a Registered Partnership Firm or a Limited Liability Partnership.
2. Period of existence and operations should not be exceeding 10 years from the Date of Incorporation.
3. Turnover of an entity should not exceed Rs. 100 crore for any of the financial years since its Incorporation.
4. Entity should not have been formed by splitting up or reconstructing an already existing business.
5. Entity should work towards development or improvement of a product, process or service and/or have scalable business model with high potential for creation of wealth & employment