SFM THEORY

82 IMPORTANT QUESTIONS FOR NOV 2019

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**Q5** What are the Categories of Swaption Styles?

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**THIS LIST IS PREPARED CONSIDERING THE QUESTION ASKED IN PREVIOUS ATTEMPT**

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Chapter 1

Financial Policy and Corporate Strategy

Q1. Explain Corporate Level Strategy.

Answer:
Corporate Level Strategy: We can simply say that corporate level strategies are concerned with questions about what business to compete in.

Corporate level strategies affect the entire organization and are considered delicate in the strategic planning process.

Examples:

1. **Growth Strategy:** A growth strategy could be implemented by expanding operations both globally and locally; an organization can also grow externally through mergers, acquisitions and strategic alliances.

2. **Diversification:** A company is diversified when it is in two or more lines of business operating in distinct and diverse market environments.

3. **Stability:** Stability strategies are mostly utilized by successful organizations operating in a reasonably predictable environment. It involves maintaining the current strategy that brought it success with little or no change.

4. **Retrenchment:** Retrenchment strategies are pursued when a company’s product lines are performing poorly. The strategy seeks to improve the performance of the company by eliminating the weakness pulling the company back.

3 Basic Questions that the Corporate Level Strategy should be able to answer

1. **Suitability:** Whether the strategy would work for the accomplishment of common objective of the company.

2. **Feasibility:** Determines the kind and number of resources required to formulate and implement the strategy.

3. **Acceptability:** It is concerned with the stakeholders’ satisfaction and can be financial and nonfinancial.

To sum up;
Corporate level Strategy we can simply say that corporate level strategies are concerned with questions about what business to compete in.

Corporate level strategies affect the entire organization and are considered delicate in the strategic planning process.

Q2. Explain Business Level Strategy.

Answer:
Business Level Strategy: Business-level strategy focuses on how to attain and satisfy customers, offer goods and services that meet their needs, and increase operating profits.

To do this, business-level strategy focuses on positioning itself against competitors and staying up to date on market trends and technology changes.
To sum up;

**Business-level strategy** focuses on how to attain and satisfy customers, offer goods and services that meet their needs, and increase operating profits.

To do this, business-level strategy focuses on positioning itself against competitors and staying up to date on market trends and technology changes.

Q3. **Explain Functional Level Strategy.**

Answer:

**Functional Level Strategy:**

- This is the day-to-day strategy that is going to keep your organization moving in the right direction.
- Just as some businesses fail to plan from a top-level perspective, other businesses fail to plan at this bottom-level.
- Functional level strategies in R&D, operations, manufacturing, marketing, finance, and human resources involve the development and coordination of resources through which business unit level strategies can be executed effectively and efficiently.

To sum up;

- **Functional Level Strategy** is the day-to-day strategy that is going to keep your organization moving in the right direction.
- Just as some businesses fail to plan from a top-level perspective, other businesses fail to plan at this bottom-level.
- Functional level strategies in R&D, operations, manufacturing, marketing, finance, and human resources involve the development and coordination of resources through which business unit level strategies can be executed effectively and efficiently.

Q4. **Write short notes on Financial Planning.**

Answer:

✓ Financial planning is the backbone of the business planning and corporate planning. Financial Planning = Business Planning + Corporate Planning
✓ Financial planning is the task of determining how a business will afford to achieve its strategic **goals and objectives**.
✓ Usually, a company creates a Financial Plan immediately after the vision and objectives have been set.
✓ The Financial Plan describes each of the activities, resources, equipment and materials that are needed to achieve these objectives, as well as the timeframes involved.
✓ There are 3 major components of Financial planning:
  1. Financial Resources (FR): The money available to a business for spending in the form of cash, liquid securities and credit lines.
  3. Financial Goals (FG)

\[ FR + FT = FG \]
✓ For an individual, financial planning is the process of meeting one’s life goals through proper management of the finances.
✓ These goals may include buying a house, saving for children's education or planning for retirement.
✓ It is a process that consists of specific steps that helps in taking a big-picture look at where you financially are.
✓ Using these steps you can work out where you are now, what you may need in the future and what you must do to reach your goals.

Q5. Explain the various Interface of Financial Policy and Strategic Management
Answer: 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.

1. Sources of Finances:
   ✓ The need for fund mobilization to support the expansion activity of firm is very vital for any organization.
   ✓ The generation of funds may arise out of ownership capital and or borrowed capital.
   ✓ A company may issue equity shares and/or preference shares for mobilizing ownership capital and debentures to raise borrowed capital.
   ✓ Public deposits, for a fixed time period, have also become a major source of short and medium term finance.
   ✓ Organizations may offer higher rates of interest than banking institutions to attract investors and raise fund.
   ✓ The overdraft, cash credits, bill discounting, bank loan and trade credit are the other sources of short term finance.

2. Capital Structure:
   ✓ Along with the mobilization of funds, policy makers should decide on the capital structure to indicate the desired mix of equity capital and debt capital.
   ✓ There are some norms for debt equity ratio which need to be followed for minimizing the risks of excessive loans.
   ✓ For instance, in case of public sector organizations, the norm is 1:1 ratio and for private sector firms, the norm is 2:1 ratio. However this ratio in its ideal form varies from industry to industry.
   ✓ It also depends on the planning mode of the organization. For capital intensive industries, the proportion of debt to equity is much higher. Similar is the case for high cost projects in priority sectors and for projects in under developed regions.

3. Investment Decisions:
   ✓ Project Evaluation
   ✓ Project Selection

   Planner’s task is to make the best possible allocation under resource constraints.
• A planner has to frame policies for regulating investments in fixed assets and for restraining of current assets.

• Investment proposals mooted by different business units may be divided into three groups.
  i. Addition of a new product by the firm.
  ii. Increase the level of operation of an existing product through either an increase in capacity in the existing plant or setting up of another plant for meeting additional capacity requirement.
  iii. The last is for cost reduction and efficient utilization of resources through a new approach and/or closer monitoring of the different critical activities.

• Now, given these three types of proposals a planner should evaluate each one of them by making within group comparison in the light of capital budgeting exercise.

4. **Dividend Decisions:**

In actual practice, 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.

Dividend policy decision deals with the extent of earnings to be distributed as dividend and the extent of earnings to be retained for future expansion scheme of the firm.

1. Stability of the dividend payment is a desirable consideration that can have a positive impact on share prices.

2. The alternative policy of paying a constant percentage of the net earnings may be preferable from the point of view of both flexibility of the firm and ability of the firm. It also gives a message of lesser risk for the investors.

3. Yet some other companies follow a different alternative. They pay a minimum dividend per share and additional dividend when earnings are higher than the normal earnings.

Alternatives like cash dividend and stock dividend are also to be examined while working out an ideal dividend policy that supports and promotes the corporate strategy of the company.

Q6. **Explain Balancing Financial Growth vis a vis Sustainable Growth.**

**Answer:**

In order to achieve high growth we are continuously destroying the environment.

Sustainable economic growth means a rate of growth which can be maintained without creating other significant economic problems, especially for future generations.

– Indeed, the sustainable growth rate formula is directly predicted on return on equity.

– Economists and business researchers contend that achieving sustainable growth is not possible without paying heed to twin cornerstones: growth strategy and growth capability.

– Often, a conflict can rise if growth objectives are not consistent with the value of the organization’s sustainable growth.
This concept forces managers to consider the financial consequences of sales increases and to set sales growth goals that are consistent with the operating and financial policies of the firm.

The concept of sustainable growth can be helpful for planning healthy corporate growth. Sustainable economic growth means a rate of growth which can be maintained without creating other significant economic problems, especially for future generations.

Sustainable growth is important to enterprise long-term development.

Too fast or too slow growth will go against enterprise growth and development, so financial should play important role in enterprise development, adopt suitable financial policy initiative to make sure enterprise growth speed close to sustainable growth ratio and have sustainable healthy development.

The sustainable growth rate is a measure of how much a firm can grow without borrowing more money.

\[
\text{Sustainable Growth} = \text{Return on Investment} \times \text{Retained Earnings}
\]

\[
\text{Sustainable Growth} = \text{Return on Investment} \times (1 - \text{Dividend Payout Ratio})
\]

Chapter 2

Indian Financial System – Deleted by ICAI from Syllabus

Chapter 3

Risk Management

Q1. Explain different types of Financial Risk.

Answer:

Financial Risk can be divided into following categories

a) Counter Party Risk:

- This risk occurs due to non-honoring of obligations by the counter party which can be failure to deliver the goods for the payment already made or vice-versa or repayment of borrowings and interest etc.

- Thus, this risk also covers the credit risk i.e. default by the counter party.

- Identifying Counterparty Risk:
  1. Necessary Resources
  2. Government Restrictions
  3. Hostile action of foreign government
  4. Let down by third party.
  5. Insolvent

- Managing Counterparty Risk:
  1. Due Diligence
  2. Do not over commit
b) Political Risk:

- Political risk is a type of risk faced by investors, corporations, and governments that political decisions, events, or conditions will significantly affect the profitability of a business actor or the expected value of a given economic action.

- Political decisions by governmental leaders about taxes, currency valuation, trade tariffs or barriers, investment, wage levels, labor laws, environmental regulations and development priorities, can affect the business conditions and profitability. Similarly, non-economic factors can affect a business. For example, political disruptions such as terrorism, riots, coups, civil wars, international wars, and even political elections that may change the ruling government, can dramatically affect businesses’ ability to operate.

- Identifying Political Risk:
  1. Confiscation of Overseas property
  2. Rationing of Remittance
  3. Restriction on conversion of local currency
  4. Restriction as borrowings.
  5. Invalidation of Patents
  6. Price control of products

- Managing Political Risk:
  1. Local sourcing of raw materials and labour.
  2. Entering into joint ventures
  3. Local financing
  4. Prior negotiations

c) Interest Rate Risk:

- Interest rate risk exposure arises when a change in interest rates has the potential to affect the value of a company’s assets and liabilities. As a consequence, interest rate risk could result in higher costs, a loss of earnings and diminished profits. Changing interest rates can impact companies in different ways and all companies are sensitive to interest rate movements in one form or another.

- Identifying Interest Rate Risk:
  2. Any action by Government such as demonetization etc.
  3. Economic Growth
  4. Release of Industrial Data
  5. Investment by foreign investors
  6. Stock market changes
• **Managing Interest Rate Risk:**
  1. Using Forward Rate Agreement
  2. Using Swaps
  3. Using Interest Rate Futures
  4. Using Caps, Collars, & Floors

d) **Currency Risk:**

• Currency risk is the potential risk of loss from fluctuating foreign exchange rates when an investor has exposure to foreign currency or in foreign-currency-traded investments.

• For example, if rupee depreciates vis-à-vis US$ receivables will stand to gain vis-à-vis to the importer who has the liability to pay bill in US$. The best case we can quote Infosys (Exporter) and Indian Oil Corporation Ltd. (Importer).

• **Identifying Currency Risk:**
  1. Government Action
  2. Nominal Interest Rate
  3. Inflation Rate
  4. Natural Calamities
  5. War, Coup, Rebellion etc.
  6. Change of Government

• **Managing Currency Risk:**
  1. Using Forward & Swaps Contract
  2. Using Futures & Options Contract
  3. Leading or Lagging,
  4. Home Currency Invoicing

Q2. **What are the features of VAR?**

   **Answer:**

   1. **Components of Calculations:** VAR calculation is based on following three components:
      
      I. Time Period
      II. Confidence Level – Generally 95% and 99%
      III. Loss in percentage or in amount

   2. **Statistical Method:** It is a type of statistical tool based on Standard Deviation.

   3. **Time Horizon:** VAR can be applied for different time horizons say one day, one week, one month and soon.

   4. **Probability:** Assuming the values are normally attributed, probability of maximum loss can be predicted.

   5. **Control Risk:** Risk can be controlled by selling limits for maximum loss.

   6. **Z score:** Z score indicates how many standard Deviations is away from Mean value of a population. When it is multiplied with Standard Deviation it provides VAR.
Q3. State the use or applications of VAR
Answer:
1. To measure the **maximum possible loss** on any portfolio or a trading position.
2. As a **benchmark for performance measurement** of any operation or trading.
3. To fix limits for individuals dealing in front office of a treasury department.
4. To enable the management to decide the **trading strategies**.
5. As a tool for **Asset and Liability Management** especially in banks.

Chapter 4

Security Analysis

Q1. Write short note on Barometer/Indicator Approach.
Answer:

✓ Various indicators are used to find out how the economy shall perform in the future. The indicators have been classified as under:

   1. **Leading Indicators**: They lead the economic activity in terms of their outcome. They relate to the time series data of the variables that reach high/low points in advance of economic activity.

   2. **Roughly Coincidental Indicators**: They reach their peaks and troughs at approximately the same in the economy.

   3. **Lagging Indicators**: They are time series data of variables that lag behind in their consequences Vis-a-vis the economy. They reach their turning points after the economy has reached its own already.

✓ All these approaches suggest direction of change in the aggregate economic activity but nothing about its magnitude.

✓ The various measures obtained from such indicators may give conflicting signals about the future direction of the economy.

✓ To avoid this limitation, use of diffusion/composite index is suggested whereby combining several indicators into one index to measure the strength/weaknesses in the movement of a particular set of indicators.

✓ Computation of diffusion indices is no doubt difficult not with standing the fact it does not eliminate irregular movements.

✓ Money supply in the economy also affects investment decisions.

✓ Rate of change in money supply in the economy affects GNP, corporate profits, interest rates and stock prices. Increase in money supply fuels inflation.

✓ As investment in stocks is considered as a hedge against inflation, stock prices go up during inflationary period.
Q2. **Write short note on Economic Model Building Approach.**  
**Answer:**
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. The steps used are as follows:

(i) Hypothesize total economic demand by measuring total income (GNP) based on political stability, rate of inflation, changes in economic levels.

(ii) Forecasting the GNP by estimating levels of various components viz. consumption expenditure, gross private domestic investment, government purchases of goods/services, net exports.

(iii) After forecasting individual components of GNP, add them up to obtain the forecasted GNP.

(iv) Comparison is made of total GNP thus arrived at with that from an independent agency for the forecast of GNP and then the overall forecast is tested for consistency. This is carried out for ensuring that both the total forecast and the component wise forecast fit together in a reasonable manner.

Q3. **Write Short Notes on Dow Theory.**  
**Answer:**
✓ The Dow Theory is one of the oldest and most famous technical theories.

✓ It was originated by Charles Dow, the founder of Dow Jones Company in late nineteenth century.

✓ It is a helpful tool for determining the relative strength of the stock market. It can also be used as a barometer of business.

✓ The Dow Theory is based upon the movements of two indices, constructed by Charles Dow, Dow Jones Industrial Average (DJIA) and Dow Jones Transportation Average (DJTA).

✓ The movements of the market are divided into three classifications, all going at the same time; the primary movement, the secondary movement, and the daily fluctuations.

i. **The primary movement** 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.

ii. **The secondary movement** of the market is shorter in duration than the primary movement, and is opposite in direction. It lasts from two weeks to a month or more.

iii. **The daily fluctuations** are the narrow movements from day-to-day. These fluctuations are not part of the Dow Theory interpretation of the stock market. However, daily movements must be carefully studied, along with
primary and secondary movements, as they go to make up the longer movement in the market.

✓ Thus, the Dow Theory’s purpose is to determine where the market is and where is it going, although not how far or high.

✓ Charles Dow proposed that the primary uptrend would have three moves up,
  i. The first one being caused by accumulation of shares by the far-sighted, knowledgeable investors,
  ii. The second move would be caused by the arrival of the first reports of good earnings by corporations, and the last move up would be caused by widespread report of financial well-being of corporations.
  iii. The third stage would also see rampant speculation in the market.

✓ Towards the end of the third stage, the far-sighted investors, realizing that the high earnings levels may not be sustained, would start selling, starting the first move down of a downtrend, and as the non-sustainability of high earnings is confirmed, the second move down would be initiated and then the third move down would result from distress selling in the market.

Q4. Write short notes on Elliot Wave Theory.

Answer:
✓ Inspired by the Dow Theory and by observations found throughout nature, Ralph Elliot formulated Elliot Wave Theory in 1934.
✓ This theory was based on analysis of 75 years stock price movements and charts.
✓ From his studies, he defined price movements in terms of waves. Accordingly, this theory was named Elliot Wave Theory.
✓ Elliot found that the markets exhibited certain repeated patterns or waves. As per this theory wave is a movement of the market price from one change in the direction to the next change in the same direction.
✓ These waves are resulted from buying and selling impulses emerging from the demand and supply pressures on the market.

✓ Depending on the demand and supply pressures, waves are generated in the prices.

✓ As per this theory, waves can be classified into two parts:-
  • Impulsive patterns
  • Corrective patterns

**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.

[Diagram of Impulsive Patterns]

**Corrective Patterns- (Reaction Waves)** - These 3 waves are against the basic direction of the basic movement. Correction involves correcting the earlier rise in case of bull market and fall in case of bear market. As shown in the following diagram waves 1, 3 and 5 are directional movements, which are separated or corrected by wave 2 & 4, termed as corrective movements.

[Diagram of Corrective Patterns]
**Elliott Wave - Basic 5 Wave Sequence**

1, 3 and 5 are impulse or motive waves.
2 and 4 are corrective waves.

**Elliott Wave - Basic 3 Wave Correction**

Waves a and c are impulse waves.
Wave b is a corrective wave.

**Elliott Wave - Complete 8 Wave Cycle**

1, 3, 5, a and c are impulse waves.
2, 4 and b are corrective waves.

1-2-3-4-5 = Bigger Wave I
a-b-c = Bigger Wave II
Q5. Write short note on Efficient Market Hypothesis.

Answer:
This theory states that it is impossible for an investor to outperform the market as the available price sensitive information are already included in the market price of the securities. And thus investor cannot purchase the securities which are undervalued and sell it at inflated price.

This theory explains that market price of the share is fair price and investor can earn higher returns only by having riskier assets in her (his) portfolio.

Three forms of market efficiency

1. **Weak form efficiency**: Current market price captures all information contained in past stock price & volume data.
2. **Semi-strong form efficiency**: Current market price captures all publicly available information.
3. **Strong form efficiency**: Current market price captures all information both public and private.

Lessons of Market Efficiency

1. **Markets have no memory**: Price changes tomorrow are independent of price changes today.
2. **Fair Market Prices**: As the current market price captures all information the price quoted in the market is considered as fair market price.
3. **Read the entrails**: If the market is efficient it can suggest a great deal about the company’s future prospects.
Q6. What kinds of test are applied to verify the weak form of market efficiency? Or Write a short note on “Empirical Evidence on Weak form of Efficient Market Theory”

Answer:
Three types of tests have been employed to empirically verify the weak form of Efficient Market Theory- Serial Correlation Test, Run Test and Filter Rule Test.

(a) Serial Correlation Test:
✓ To test for randomness in stock price changes, one has to look at serial correlation. For this purpose, price change in one period has to be correlated with price change in some other period.
✓ Price changes are considered to be serially independent. Serial correlation studies employing different stocks, different time lags and different time period have been conducted to detect serial correlation but no significant serial correlation could be discovered.
✓ These studies were carried on short term trends viz. daily, weekly, fortnightly and monthly and not in long term trends in stock prices as in such cases. Stock prices tend to move upwards.

(b) Run Test:
✓ Given a series of stock price changes each price change is designated + if it represents an increase and – if it represents a decrease. The resulting series may be -, +, -, -, -, +, +, +.
✓ A run occurs when there is no difference between the sign of two changes. When the sign of change differs, the run ends and new run begins.
✓ To test a series of price change for independence, the number of runs in that series is compared with a number of runs in a purely random series of the size and in the process determines whether it is statistically different. By and large, the result of these studies strongly supports the Random Walk Model.

(c) Filter Rules Test:
✓ If the price of stock increases by at least N% buy and hold it until its price decreases by at least N% from a subsequent high.
✓ When the price decreases at least N% or more, sell it. If the behavior of stock price changes is random, filter rules should not apply in such a buy and hold strategy.
✓ By and large, studies suggest that filter rules do not out perform a single buy and hold strategy particular after considering commission on transaction.

Q7. Explain in brief “Support and Resistance” level.

Answer:
A support level is a level where the price tends to find support as it falls. This means that the price is more likely to "bounce" off this level rather than break through it. However, once the price has breached this level, by an amount exceeding some noise, it is likely to continue falling until meeting another support level.
A **resistance level** is the opposite of a support level. It is where the price tends to find resistance as it rises. Again, this means that the price is more likely to "bounce" off this level rather than break through it. However, once the price has breached this level, by an amount exceeding some noise, it is likely to continue rising until meeting another resistance level.
Q8. Write Short Note on Market Indicators.

Answer:

(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.
✓ The breadth index either supports or contradicts the movement of the Dow Jones Averages.
✓ If it supports the movement of the Dow Jones Averages, this is considered a sign of technical strength and if it does not support the averages, it is a sign of technical weakness i.e. a sign that the market will move in a direction opposite to the Dow Jones Averages.
Let us consider for example a stock market where 450 shares are listed. In one session, the prices of 290 shares rose and the prices of 160 shares fell. The ABI would thus result as: \( \frac{|290-160|}{450} = 0.29 \) or 29%. In another session, 130 shares rose and 320 shares fell. The ABI for that session is: \( \frac{|130-320|}{450} = 0.42 \) or 42%.

\[
\text{ABI} = \frac{(\text{No. of Advancing Stocks} - \text{No. of Declining Stocks})}{\text{Total Issues Traded}}
\]

Total Issues Traded = Advancing Stocks + Declining Stocks + Stocks

(ii) Volume of Transactions:

- The volume of shares traded in the market provides useful clues on how the market would behave in the near future.
- Volume is an important characteristic that is included at the bottom of many charts; Volume is used to assess the strength or conviction of buyers and sellers in determining a security’s price. For example, on a daily price chart, below the price section would be a column chart showing the volume traded for that day.

Some technicians consider volume information to be crucial. If volume increases during a time frame in which price is also increasing, that combination is considered positive and the two indicators are said to “confirm” each other. The signal would be interpreted to mean that over time, more and more investors are buying the financial instrument and they are doing so at higher and higher prices. This pattern is considered a positive technical development.
✓ Conversely, if volume and price diverge—for example, if a stock’s price rises while its volume declines—the implication is that fewer and fewer market participants are willing to buy that stock at the new price. If this trend in volume continues, the price rally will soon end because demand for the security at higher prices will cease.

✓ Thus, the volume concept is best used with another market indicator, such as the Dow Theory.

(iii) Confidence Index:

✓ The Barron’s Confidence Index is a ratio to calculate investors desire to assume additional risk during investment.

✓ The ratio is the average yield-to-maturity of Barron’s Best Grade bond list to average yield-to-maturity of its Intermediate Grade bond list.

\[
\text{Confidence Index} = \frac{\text{Avg YTM (Best Grade Bonds)}}{\text{Avg YTM (Intermediate Grade Bonds)}}
\]

✓ To arrive at the value, Barron’s will divide average yield-to-maturity (YTM) of Barron’s Best Grade bond list by the average yield-to-maturity of its Intermediate Grade bond list.

✓ The basis of the Barron’s Confidence Index is on the theory that if investors are optimistic they are more likely to invest in riskier bonds, driving yields downwards and the index upwards.

✓ 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.

✓ For example, if the average yield of the ten high-grade bonds is 4.5 percent and the average yield of the intermediate-grade bonds is 5 percent, the Barron’s Confidence Index is 90 percent (4.5 percent divided by 5 percent and multiplied by 100).

✓ When investors are confident about the economy’s future, they are willing to take more risk and buy more speculative bonds. The price of higher-quality bonds then goes down, which increases their yield. This dynamic indicates investors need lower premiums in returns to take on increased risk.

✓ An index around 80 percent is considered a bearish outlook for the stock market. When confidence in the economy is low, investors seek higher quality debt, which increases bond prices and lowers yields.

✓ While the raw index number is meaningful, it’s also useful to track its direction. A falling confidence number indicates decreasing confidence in the market; a rising value, of course, means increasing confidence.

✓ The confidence index is usually, but not always a leading indicator of the market. Therefore, it should be used in conjunction with other market indicators.

(iv) Relative Strength Analysis:

✓ Relative strength creates a point of comparison regarding the performance of a particular security (e.g. Reliance Industries Limited Stock) against the performance of a selected benchmark, such as a market index (e.g. Sensex, Nifty) as well as to other similar securities.
✓ 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 i.e. some securities exhibit relative strength.

✓ Investors will earn higher returns by investing in securities which have demonstrated relative strength in the past because the relative strength of a security tends to remain undiminished over time.

✓ Further, investors can apply relative strength trading to more than stocks and mutual funds, but also asset classes, ETFs, fixed income, commodities, sectors and other areas of the market.

✓ Calculating Relative Strength

There is more than one way to calculate an investment’s relative strength.

1. One method is to rank all investments within the same investment universe, such as tech stocks or mutual funds, and purchase the top performers.

2. Another is to take the rate of change in a stock’s price, recorded over a specified period of time, and divide it by the rate of change in a relevant index over the same time period. The stock’s rate of change is divided by the benchmark’s rate of change to get a relative strength value. If the value is greater than one, the investment is relatively strong; if the value is less than one, the investment is relatively weak.

\[
RSI = \frac{\% \text{ Change in Stock price}}{\% \text{ Change in Index}}
\]

3. For mutual funds, the rate of change within the NAV of a specified fund is calculated over a specified time period and compared to that of other mutual funds. For example, if a fund has a current NAV of ₹110, up from a previous six-month NAV of ₹100, the rate of change is 10%. If a second mutual fund has a current NAV of ₹92, up from a previous six-month NAV of ₹80, the rate of change is 15%. By comparing the two rates, the second mutual fund would be seen as having a higher relative strength when compared to the first.

Note: Relative strength, as a performance indicator, does not take into account the risk associated with a particular investment.

(v) Odd - Lot Theory:

✓ Odd lot trades are trade orders made by investors that include less than 100 shares in the transaction or are not a multiple of 100. These trade orders generally encompass individual investors which the theory believes are less educated and influential in the market overall.

✓ The odd lot theory uses the analysis of odd lot trades as its basis. It primarily focuses on trade orders of less than 100 shares (100 shares is called a round lot). Its premise is built on the notion that odd lot trades can be counterintuitive to market trends. Therefore, believers in the odd lot theory seek to trade against the direction of odd lot trades. Thus, when odd lotteries
are buying shares the theory would indicate a signal to sell shares and vice versa.

✓ Analysis of the odd lot theory, culminating in the 1990s, generally disproved its effectiveness. Discovering that individual investors are not generally prone to making bad investing decisions. Overall, the theory is no longer valid as many researchers and academics including Burton Malkiel have stated that the individual investor, also known as the odd lottery, is generally not as uninformed or as incorrect as the theory has stated.

Chapter 5
Security Valuation

Q1. What is Enterprise Value?
Answer:
✓ Enterprise value is the true economic value of a company.
✓ It is calculated by adding market capitalization, Long term Debt, Minority Interest minus cash and cash equivalents. (Also minus Equity investments like affiliates, investment in any company and also long term investments.)

\[
EV = \text{market value of common stock} + \text{market value of preferred equity} + \text{market value of debt} + \text{minority interest} - \text{cash and investments.}
\]

✓ Often times, the minority interest and preferred equity is effectively zero, although this need not be the case. In that case the formula of Enterprise becomes

\[
EV = \text{market value of common stock} + \text{market value of debt} - \text{cash and investments.}
\]

✓ Enterprise value (EV) can be thought of as the theoretical takeover price if a company were to be bought.

✓ EV differs significantly from simple market capitalization in several ways, and many consider it to be a more accurate representation of a firm's value. The value of a firm's debt, for example, would need to be paid off by the buyer when taking over a company, thus, enterprise value provides a much more accurate takeover valuation because it includes debt in its value calculation.

✓ Why doesn't market capitalization properly represent a firm's value? It leaves a lot of important factors out, such as a company's debt on the one hand and its cash reserves on the other. Enterprise value is basically a modification of market cap, as it incorporates debt and cash for determining a company's valuation

✓ For example, let's assume Company XYZ has the following characteristics:

<table>
<thead>
<tr>
<th>Shares Outstanding</th>
<th>1,000,000</th>
<th>Current Share Price</th>
<th>$5</th>
<th>Total Debt: $1,000,000</th>
<th>Total Cash: $500,000</th>
</tr>
</thead>
</table>

Based on the formula above, we can calculate Company XYZ's enterprise value as follows:

\[
($1,000,000 \times $5) + $1,000,000 - $500,000 = $5,500,000
\]
Q2. Explain the Term Structure theories?

Answer: Note- The following text explains the term structure theories logically and is not a part of the ICAI Material. Students can skip this topic, however it is recommended to go through it if you want to understand the topic as the text given in ICAI Material for this topic is not sufficient.

1. Unbiased Expectation Theory: (Pure or Local Expectation Theory)
   
   ✓ Unbiased Expectations Theory states that current long-term interest rates contain an implicit prediction of future short-term interest rates.
   
   ✓ More specifically, the theory posits that an investor should earn the same amount of interest from an investment in a single two-year bond today as that person would with two consecutive investments in one-year bonds.
   
   ✓ The two one-year bonds would each have a lower interest rate individually compared with the two-year bond. However, because of compounding interest, Unbiased Expectations Theory predicts that the net outcome would be equal.
   
   ✓ If we assume the theory to be true, we can use it to make practical predictions about the future of bond yields for our own investing.
   
   ✓ For example if you invest in 1 year 9% bond and use the proceeds to invest for another 1 year 11% bond then it will give the same results as investment made in 2 year 10% Bond
   
   1. ₹100 x 1.09 x 1.11 = ₹121
   2. ₹100 x 1.10 x 1.10 = ₹121
   
   *This the same concept that we will learn in Forward Rate Topic

2. Liquidity Preference Theory:
   
   ✓ Whereas the unbiased expectations theory leaves no room for risk aversion, liquidity preference theory attempts to account for it.
   
   ✓ Liquidity preference theory asserts that liquidity premiums exist to compensate investors for the added interest rate risk they face when lending long term and that these premiums increase with maturity.
   
   ✓ Thus, given an expectation of unchanging short-term spot rates, liquidity preference theory predicts an upward-sloping yield curve. The forward rate provides an estimate of the expected spot rate that is biased upward by the amount of the liquidity premium, which invalidates the unbiased expectations theory.
   
   ✓ For example, the US Treasury offers bonds that mature in 30 years. However, the majority of investors have an investment horizon that is shorter than 30 years.
   
   ✓ For investors to hold these bonds, they would demand a higher return for taking the risk that the yield curve changes and that they must sell the bond prior to maturity at an uncertain price. That incrementally higher return is the liquidity premium.
   
   ✓ Note that this premium is not to be confused with a yield premium for the lack of liquidity that thinly traded bonds may bear. Rather, it is a premium applying to all long-term bonds, including those with deep markets.
3. **Segment Market Theory:**

- Unlike expectations theory and liquidity preference theory, segmented markets theory allows for lender and borrower preferences to influence the shape of the yield curve.
- The result is that yields are not a reflection of expected spot rates or liquidity premiums. Rather, they are solely a function of the supply and demand for funds of a particular maturity.
- That is, each maturity sector can be thought of as a segmented market in which yield is determined independently from the yields that prevail in other maturity segments.
- The theory is consistent with a world where there are asset/liability management constraints, either regulatory or self-imposed. In such a world, investors might restrict their investment activity to a maturity sector that provides the best match for the maturity of their liabilities. Doing so avoids the risks associated with an asset/liability mismatch.
- In summary, the segmented markets theory assumes that market participants are either unwilling or unable to invest in anything other than securities of their preferred maturity.
- It follows that the yield of securities of a particular maturity is determined entirely by the supply and demand for funds of that particular maturity.

4. **Preferred Habitat Theory:**

- The preferred habitat theory is similar to the segmented markets theory in proposing that many borrowers and lenders have strong preferences for particular maturities but it does not assert that yields at different maturities are determined independently of each other.
- However, the theory contends that if the expected additional returns to be gained become large enough, institutions will be willing to deviate from their preferred maturities or habitats.
- For example, if the expected returns on longer-term securities exceed those on short-term securities by a large enough margin, money market funds will lengthen the maturities of their assets.
- And if the excess returns expected from buying short-term securities become large enough, life insurance companies might stop limiting themselves to long-term securities and place a larger part of their portfolios in shorter-term investments.
- The preferred habitat theory is based on the realistic notion that agents and institutions will accept additional risk in return for additional expected returns.
- In accepting elements of both the segmented markets theory and the unbiased expectations theory, yet rejecting their extreme polar positions, the preferred habitat theory moves closer to explaining real-world phenomena. In this theory, both market expectations and the institutional factors emphasized in the segmented markets theory influence the term structure of interest rates.
Q3. **What is Immunization?**

**Answer:**
We know that when interest rate goes up although return on investment improves but value of bond falls and vice versa. Thus, the price of Bond is subject to following two risk:

1. Price Risk (Discussed in next question)
2. Reinvestment Rate Risk (Discussed in next question)

Further, with change in interest rates these two risks move in opposite direction. Through the process of immunization selection of bonds shall be in such manner that the effect of above two risks shall offset each other.

**Teachers Note:**

✓ Normally, interest rates affect bond prices inversely. When interest rates go up, bond prices go down. But when a bond portfolio is immunized, the investor receives a specific rate of return over a given time period regardless of what happens to interest rates during that time. In other words, the bond is "immune" to fluctuating interest rates.

✓ To immunize a bond portfolio, you need to know the duration of the bonds in the portfolio and adjust the portfolio so that the portfolio's duration equals the investment time horizon.

✓ For example, suppose you need to have $50,000 in five years for your child's education. You might decide to invest in bonds. You can immunize your bond portfolio by selecting bonds that will equal exactly $50,000 in five years regardless of interest rate changes.

1. You can buy one zero-coupon bond that will mature in five years to equal $50,000, or
2. several coupon bonds each with a five year duration, or
3. several bonds that "average" a five-year duration

✓ Duration measures a bond's market risk and price volatility in response to a given change in interest rates. Duration is a weighted average of the bond's cash flows over its life. \( \text{MACD} = \sum \text{Weight} \times \text{Year} \). The weights are the present value of each interest payment as a percentage of the bond's full price. \( \text{Weights} = \frac{PV}{\sum PV} \). The longer the duration of a bond, the greater its price volatility. Duration is used to determine how a bond will react to changing interest rates. For example, if interest rates rise 1%, a bond with two-year duration will fall about 2% in value.

Q4. **Explain the Effects of Bond Immunization?**

**Answer:**

✓ Changes to interest rates \( \Delta Y \) actually affect two parts of a bond's value. One of them is a change in the bond's price, or price effect \( \Delta P \). When interest rates change before the bond matures, the bond's final value changes, too. An increase in interest rates means new bond issues offer higher earnings, so the prices of older bonds decline on the secondary market.

✓ Interest rate fluctuations also affect a bond's reinvestment risk. When interest rates rise, a bond's coupon may be reinvested at a higher rate. When they decrease, bond coupons can only be reinvested at the new, lower rates.

✓ Interest rate changes have opposite effects on a bond's price and reinvestment opportunities. While an increase in rates hurts a bond's price, it helps the bond's
reinvestment rate. The goal of immunization is to offset these two changes to an investor’s bond value, leaving its worth unchanged.

<table>
<thead>
<tr>
<th>Interest Rate</th>
<th>Bonds Price</th>
<th>Reinvestment Rate</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase</td>
<td>Decrease</td>
<td>Increase</td>
<td>Means the bad part is the decreased bonds market price and good part is we can re-invest the coupons at higher rate</td>
</tr>
<tr>
<td>Decrease</td>
<td>Increase</td>
<td>Decrease</td>
<td>Means the good part is the increased bonds market price and bad part is coupons will be reinvested at lower rate</td>
</tr>
</tbody>
</table>

✓ A portfolio is immunized when its duration equals the investor’s time horizon. At this point, any changes to interest rates will affect both price and reinvestment at the same rate, keeping the portfolio’s rate of return the same. Maintaining an immunized portfolio means rebalancing the portfolio’s average duration every time interest rates change, so that the average duration continues to equal the investor’s time horizon.

Q5. A portfolio is immunized when its duration equals the investor’s time horizon. Explain

Answer:
Consider a 15.30% Rs.1000 Bond with 7 years to maturity is currently yielding at 10%

Following table shows the Duration, Bonds Price and Reinvested Coupons at the end of every year at the original yield of 10% and when the yield increases to 11%

<table>
<thead>
<tr>
<th>Time</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maturity</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Coupon Principal</td>
<td>1,000.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Scenario I</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>YTM</td>
<td>10.00%</td>
<td>10.00%</td>
<td>10.00%</td>
<td>10.00%</td>
<td>10.00%</td>
<td>10.00%</td>
<td>10.00%</td>
<td>10.00%</td>
</tr>
<tr>
<td>Duration</td>
<td>5</td>
<td>4.50</td>
<td>3.94</td>
<td>3.33</td>
<td>2.64</td>
<td>1.87</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Bond Price</td>
<td>1,258.03</td>
<td>1,230.83</td>
<td>1,200.91</td>
<td>1,168.00</td>
<td>1,131.80</td>
<td>1,091.98</td>
<td>1,048.18</td>
<td>1,000.00</td>
</tr>
<tr>
<td>Reinv Coupons</td>
<td>153</td>
<td>321.3</td>
<td>506.43</td>
<td>710.073</td>
<td>934.0803</td>
<td>1,180.49</td>
<td>1,451.54</td>
<td></td>
</tr>
<tr>
<td><strong>Scenario II</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>YTM</td>
<td>11.00%</td>
<td>11.00%</td>
<td>11.00%</td>
<td>11.00%</td>
<td>11.00%</td>
<td>11.00%</td>
<td>11.00%</td>
<td>11.00%</td>
</tr>
<tr>
<td>Duration</td>
<td>4.95</td>
<td>4.47</td>
<td>3.92</td>
<td>3.32</td>
<td>2.64</td>
<td>1.87</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Bond Price</td>
<td>1,202.62</td>
<td>1,181.91</td>
<td>1,158.92</td>
<td>1,133.41</td>
<td>1,105.08</td>
<td>1,073.64</td>
<td>1,038.74</td>
<td>1,000.00</td>
</tr>
<tr>
<td>Reinv Coupons</td>
<td>153</td>
<td>322.83</td>
<td>511.34</td>
<td>720.59</td>
<td>952.85</td>
<td>1,210.67</td>
<td>1,496.84</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1,258.03</td>
<td>1,383.83</td>
<td>1,522.21</td>
<td>1,674.43</td>
<td>1,841.88</td>
<td>2,026.06</td>
<td>2,228.67</td>
<td>2,451.54</td>
</tr>
<tr>
<td>Δ: II-I</td>
<td>-55.4</td>
<td>-48.92</td>
<td>-40.46</td>
<td>-29.69</td>
<td>-16.21</td>
<td>0.43</td>
<td>20.74</td>
<td>45.3</td>
</tr>
</tbody>
</table>

Following table shows the Duration, Bonds Price and Reinvested Coupons at the end of every year at the original yield of 10% and when the yield decreases to 9%
From the tables we see that:

- 5 years is the duration of the bond at time 0.
- At year 5, whether y goes up or down, our portfolio value suffers only a minor change in value.
- At time zero, if we set the duration equal to the target date (a point at which we must fund some known obligation, e.g., ₹2,026 in 5 years), and if we set the bond’s future value at the target date equal to the amount of the obligation (i.e., the bond’s current value equal to the current value of the obligation), then we are not greatly affected by changes in y.
- In general, as long as target date = duration, and current value of assets = current value of liabilities, we are said to be immunized

Summary

**Target Period = Duration**

**PV of Assets = PV of Liabilities**

**Bond Portfolio Duration = \( \sum W_i D_i \)**
Chapter 6
Portfolio Management

Q1. Distinguish between Systematic Risk and Unsystematic Risk.
Answer:

<table>
<thead>
<tr>
<th>Particulars</th>
<th>Systematic Risk</th>
<th>Unsystematic Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meaning</td>
<td>Risk inherent to the entire market or entire market segment.</td>
<td>Risk inherent to the specific company or industry.</td>
</tr>
<tr>
<td>Control</td>
<td>Uncontrollable by an organization</td>
<td>Controllable by an organization</td>
</tr>
<tr>
<td>Nature</td>
<td>Macro in nature</td>
<td>Micro in nature</td>
</tr>
<tr>
<td>Types</td>
<td>Interest rate risk, market risk, purchasing power / inflationary risk</td>
<td>Business/Liquidity risk, financial/credit risk</td>
</tr>
<tr>
<td>Also known as</td>
<td>Market risk, Non diversifiable risk</td>
<td>Diversifiable risk</td>
</tr>
<tr>
<td>Example</td>
<td>Recession and wars all represent sources of systematic risk because they affect the entire market and cannot be avoided through diversification.</td>
<td>Sudden strike by the employees of a company you have shares in, is considered to be unsystematic risk.</td>
</tr>
</tbody>
</table>

So in short what matters the most to the investor is to know the systematic risk of his investment. Systematic risk is measured by a statistical measure called BETA.

Q2. Write a short note on Objectives of Portfolio Management
Answer:

1. Security of the Principal Investment
Portfolio management not only involves keeping the investment intact but also contributes towards the growth of its purchasing power over the period. The motive of a financial portfolio management is to ensure that the investment is absolutely safe.

2. Consistency of returns (Stability of Income)
Portfolio management also ensures to provide the stability of returns by reinvesting the ask me earned returns in profitable and good portfolios.

3. Risk reduction (Diversification)
Portfolio management is purposely designed to reduce the risk of loss of capital and/or income by investing in different types of securities available in a wide range of industries. The investors shall be aware of the fact that there is no such thing as a zero risk investment.

4. Capital growth
Portfolio management guarantees the growth of capital by reinvesting in growth securities or by the purchase of growth securities.

5. Liquidity
Portfolio management is planned in such a way that it facilitates to take maximum advantage of various good opportunities upcoming in the market. The portfolio should always ensure that there are enough funds available at short notice to take care of the investor’s liquidity requirements.
6. **Marketability**  
Portfolio management ensures the flexibility to the investment portfolio. A portfolio consists of such investment, which can be marketed and traded.

7. **Favorable tax treatment**  
Portfolio management is planned in such a way to increase the effective yield an investor gets from his surplus invested funds. By minimizing the tax burden, yield can be effectively improved.

Q3. **Write a short note on Modern Portfolio Theory or Write a short note on Markowitz model of Risk Return Optimization.**  
**Answer:**  
Harry M Markowitz is credited for the introduction of new concepts of risk measurement and their application to the selection of portfolios. He started with the idea of risk aversion of average investors and their desire to maximize the expected return with least risk.

- This theory is for the analysis of risk and return and their inter-relationships.
- Harry Markowitz is regarded as the father of Modern Portfolio Theory.
- Markowitz explains an efficient portfolio as expected to yield the highest return for a given level of risk or lowest risk for a given level of return.
- Markowitz emphasized that quality of portfolio will be different from the quality of individual assets within it. Thus the combined risk of two assets taken separately is not the same risk of the two assets together.
- Investors take into account the two major aspects of the investment 1) Risk and 2) Return.
- The Modern Portfolio Theory emphasizes the tradeoff between risk and return. If the investor wants a higher return, he has to take the higher risk. But he prefers the high returns for low risk and hence the need for a trade off arises.
- The modern portfolio theory explains the risk of each security is different from that of others and by proper combination of securities, called diversification risk of one is offset partly or fully by that of the other.

Q4. **State the assumptions of Markowitz Model or Modern Portfolio Theory**  
**Answer: Assumptions of Markowitz Theory (As per ICAI)**

(i) The return on an investment adequately summarizes the outcome of the investment.
(ii) The investors can visualize a probability distribution of rates of return.
(iii) The investors' risk estimates are proportional to the variance of return they perceive for security or portfolio.
(iv) Investors base their investment decisions on two criteria i.e. expected return and variance of return.
(v) All investors are risk averse. For a given expected return he prefers to take minimum risk, for a given level of risk the investor prefers to get maximum expected return.
(vi) Investors are assumed to be rational in so far as they would prefer greater returns to lesser ones given equal or smaller risk and are risk averse. Risk aversion in this
context means merely that, as between two investments with equal expected returns, the investment with the smaller risk would be preferred.

(vii) ‘Return’ could be any suitable measure of monetary inflows like NPV but yield has been the most commonly used measure of return, so that where the standard deviation of returns is referred to it is meant the standard deviation of yield about its expected value.

Note: The above text is taken from ICAI Material as it is. You can strike off point (v) as Point (vi) explains the same thing. It has been purposely kept in the notes to explain the same in class

Alternatively- Assumptions in other words

1. Investors are rational and desire to maximize their returns with the money available for investment.
2. The investors have free access to fair information of returns and risk.
3. The markets are efficient and absorb the information quickly and perfectly.
4. Investors are risk averse and are in search of maximizing returns and minimizing risk.
5. Standard deviation or variance and expected returns are the basis for investors to take the decision.
6. Investor prefers higher returns for a given level of risk.

Q5. What is Efficient Frontier?

Answer:
Markowitz has formalised the risk return relationship and developed the concept of efficient frontier. For selection of a portfolio, comparison between combinations of portfolios is essential. As a rule, a portfolio is not efficient if there is another portfolio with:

(a) A higher expected value of return and a lower standard deviation (risk).
(b) A higher expected value of return and the same standard deviation (risk)
(c) The same expected value but a lower standard deviation (risk)

Markowitz has defined the diversification as the process of combining assets that are less than perfectly positively correlated in order to reduce portfolio risk without sacrificing any portfolio returns. If an investors’ portfolio is not efficient he may:

a) Increase the expected value of return without increasing the risk.
b) Decrease the risk without decreasing the expected value of return, or
c) Obtain some combination of increase of expected return and decrease risk.

This is possible by switching to a portfolio on the efficient frontier.
✓ If all the investments are plotted on the risk-return space, individual securities would be dominated by portfolios, and the efficient frontier would be containing all Efficient Portfolios

✓ An Efficient Portfolio has the highest return among all portfolios with identical risk and the lowest risk among all portfolios with identical return.

✓ Fig – 1 depicts the boundary of possible investments in securities, A, B, C, D, E and F; and B, C, D, are lying on the efficient frontier.

✓ The best combination of expected value of return and risk (standard deviation) depends upon the investors’ utility function.

✓ The individual investor will want to hold that portfolio of securities which places him on the highest indifference curve, choosing from the set of available portfolios.

✓ The dark line at the top of the set is the line of efficient combinations, or the efficient frontier. The optimal portfolio for an investor lies at the point where the indifference curve for the concerned investor touches the efficient frontier.

✓ This point reflects the risk level acceptable to the investor in order to achieve a desired return and provide maximum return for the bearable level of risk. The concept of efficient frontier and the location of the optimal portfolio are explained with help of Fig-2.
✓ In Fig-2 A, B, C, D, E and F define the boundary of all possible investments out of which investments in B, C and D are the efficient portfolios lying on the efficient frontier.

✓ The attractiveness of the investment proposals lying on the efficient frontier depends on the investors’ attitude to risk. At point B, the level of risk and return is at optimum level. The returns are highest at point D, but simultaneously it carries higher risk than any other investment.

![Graph showing efficient frontier]

The shaded area represents all attainable or feasible portfolios, that is all the combinations of risk and expected return which may be achieved with the available securities. The efficient frontier contains all possible efficient portfolios and any point on the frontier dominates any point to the right of it or below it.

Consider the portfolios represented by points B and E. B and E promise the same expected return $E(R_1)$ but the risk associated with B is $\sigma(R_1)$ whereas the associated with E is $\sigma(R_2)$. Investors, therefore, prefer portfolios on the efficient frontier rather than interior portfolios given the assumption of risk aversion; obviously, point A on the frontier represents the portfolio with the least possible risk, whilst D represents the portfolio with the highest possible rate of return with highest risk. The investor has to select a portfolio from the set of efficient portfolios lying on the efficient frontier. This will depend upon his risk-return preference. As different investors have different preferences, the optimal portfolio of securities will vary from one investor to another.

Q6. Write a short note on Active and Passive Portfolio Strategy

Answer:

Active and Passive Portfolio Strategy

Portfolio Management Strategies refer to the approaches that are applied for the efficient portfolio management in order to generate the highest possible returns at lowest possible risks. There are two basic approaches for portfolio management including Active Portfolio Management Strategy and Passive Portfolio Management Strategy.

A. Active Portfolio Management Strategy

The Active portfolio management relies on the fact that particular style of analysis or management can generate returns that can beat the market. It involves higher than average costs and it stresses on taking advantage of market inefficiencies. It is
implemented by the advices of analysts and managers who analyze and evaluate market for the presence of inefficiencies.

The active management approach of the portfolio management involves the following styles of the stock selection.

**Top-down Approach:** In this approach, managers observe the market as a whole and decide about the industries and sectors that are expected to perform well in the ongoing economic cycle. After the decision is made on the sectors, the specific stocks are selected on the basis of companies that are expected to perform well in that particular sector.

**Bottom-up:** In this approach, the market conditions and expected trends are ignored and the evaluations of the companies are based on the strength of their product pipeline, financial statements, or any other criteria. It stresses the fact that strong companies perform well irrespective of the prevailing market or economic conditions.

### B. Passive Portfolio Management Strategy

Passive asset management relies on the fact that markets are efficient and it is not possible to beat the market returns regularly over time and best returns are obtained from the low cost investments kept for the long term.

The passive management approach of the portfolio management involves the following styles of the stock selection.

**Efficient market theory:** This theory relies on the fact that the information that affects the markets is immediately available and processed by all investors. Thus, such information is always considered in evaluation of the market prices. The portfolio managers who follows this theory, firmly believes that market averages cannot be beaten consistently.

**Indexing:** According to this theory, the index funds are used for taking the advantages of efficient market theory and for creating a portfolio that impersonate a specific index. The index funds can offer benefits over the actively managed funds because they have lower than average expense ratios and transaction costs.

Apart from Active and Passive Portfolio Management Strategies, there are three more kinds of portfolios including Patient Portfolio, Aggressive Portfolio and Conservative Portfolio.

**Patient Portfolio:** This type of portfolio involves making investments in well-known stocks. The investors buy and hold stocks for longer periods. In this portfolio, the majority of the stocks represent companies that have classic growth and those expected to generate higher earnings on a regular basis irrespective of financial conditions.

**Aggressive Portfolio:** This type of portfolio involves making investments in “expensive stocks” that provide good returns and big rewards along with carrying big risks. This portfolio is a collection of stocks of companies of different sizes that are rapidly growing and expected to generate rapid annual earnings growth over the next few years.

**Conservative Portfolio:** This type of portfolio involves the collection of stocks after carefully observing the market returns, earnings growth and consistent dividend history.
Q7. Discuss Principles and Management of Hedge Funds

Answer:

**Principle and Management of Hedge Funds**

Hedge funds are aggressively managed portfolio of investments that uses advanced investment strategies such as leverage, long, short and derivative positions in both domestic and international markets with the goal of generating high returns (either in an absolute sense or over a specified market benchmark).

A hedge fund is an investment vehicle that is structured as a corporation or partnership. The fund is managed by an investment manager in the form of an organization or company that is legally and financially distinct from the hedge fund and its portfolio of assets. Many investment managers utilize service providers for operational support. Service providers include prime brokers, banks, administrators, distributors and accounting firms.

A hedge fund is a collective investment scheme, often structured as a limited partnership that invests private capital speculatively to maximize capital appreciation. Hedge funds tend to invest in a diverse range of markets, investment instruments, and strategies.

Hedge funds are often open-ended and allow additions or withdrawals by their investors. A hedge fund's value is calculated as a share of the fund's net asset value, meaning that increases and decreases in the value of the fund's investment assets (and fund expenses) are directly reflected in the amount an investor can later withdraw.

Most hedge fund investment strategies aim to achieve a positive return on investment regardless of whether markets are rising or falling ("absolute return").

**Types of funds**

1. **Open-ended hedge funds** continue to issue shares to new investors and allow periodic withdrawals at the net asset value ("NAV") for each share.

2. **Closed-ended hedge funds** issue a limited number of tradable shares at inception.

**Features of Hedge Funds**

1. Hedge funds utilize a variety of financial instruments to reduce risk, enhance returns and minimize the correlation with equity and bond markets. Many hedge funds are flexible in their investment options (can use short selling, leverage, derivatives such as puts, calls, options, futures etc).

2. Hedge funds vary enormously in terms of investment returns, volatility and risk. Many, but not all, hedge fund strategies tend to hedge against downturns in the markets being traded.

3. Many hedge funds have the ability to deliver non market correlated returns.

4. Many hedge funds have as an objective consistency of returns and capital preservation rather than magnitude of returns.

5. Many hedge funds are managed by experienced investment professionals who are generally disciplined and diligent.

**Hedging Strategies**

1. Selling Short: Selling shares without owning them, hoping to buy them back at a future date at a lower price in the expectation that their price will drop.

2. Using Arbitrage: Seeking to exploit pricing inefficiencies between related securities- for example, can be long convertible bonds and short the underlying issuer’s equity.
3. Trading options and derivatives: Contracts whose values are based on the performance of any underlying financial asset, index or other investment.
4. Investing in anticipation of a specific Event: Merger transaction, hostile takeover, spin-off, exiting of bankruptcy proceedings etc.
5. Investing in Deeply Discounted securities: of companies about to enter or exit financial distress or bankruptcy, often below liquidation value.

Benefits of Hedge Funds
1. Many hedge funds strategies have the ability to generate positive returns in both rising and falling equity and bond markets.
2. Inclusion of hedge funds in a balanced portfolio reduces overall portfolio risk and volatility and increases returns.
3. Huge variety of hedge fund investment styles- many uncorrelated with each other-provides investors with a wide choice of hedge fund strategies to meet their investment objectives. Academic research proves hedge funds have higher returns and lower overall risk than traditional investment funds.
4. Hedge funds provide an ideal long term investment solution, eliminating the need to correctly time entry and exit from markets.
5. Adding hedge funds to an investment portfolio provides diversification not otherwise available in traditional investing.

Reasons for investing in Hedge Funds
1. Potential for higher returns, especially in a bear market
2. It provides diversification benefits

Q8. What is Alternative Investment?
Answer:
An alternative investment is an asset that is not one of the conventional investment types, such as stocks, bonds and cash.
✓ Most alternative investment assets are held by institutional investors or accredited, high-net-worth individuals because of the complex natures and limited regulations of the investments.
✓ Alternative investments include private equity, hedge funds, managed futures, real estate, commodities and derivatives contracts

Q9. What are the features or characteristics of Alternative Investment?
Answer:
Though here may be many features of Alternative Investment but following are some common features.
1. High Fees – Being a specific nature product the transaction fees are quite on higher side.
2. Limited Historical Rate – The data for historic return and risk is verity limited where data for equity market for more than 100 years in available.
3. Illiquidity – The liquidity of Alternative Investment is not good as next buyer not be easily available due to limited market.
4. Less Transparency – The level of transparency is not adequate due to limited public information available.
5. **Extensive Research Required** – Due to limited availability of market information the extensive analysis is required by the Portfolio Managers.

6. **Leveraged Buying** – Generally investment in alternative investments is highly leveraged.

Q10. **What are the different types of Alternative Investments?**

**Answer:**

Over the time various types of AIs have been evolved but some of the important AIs are as follows:

1. Mutual Funds
2. Real-estate
3. Exchange Traded Funds
4. Private Equity
5. Hedge Funds
6. Closely Held Companies
7. Distressed Securities
8. Commodities
9. Managed Futures
10. Mezzanine Finance

Q11. **What approaches are used for Real Estate Valuation?**

**Answer:**

Generally, following four approaches are used in valuation of Real-estate:

1. **Sales Comparison Approach** – It is like Price Earning Multiplier as in case of equity shares. Benchmark value of similar type of property can be used to value Real Estate.

2. **Income Approach** – This approach like value of Perpetual Debenture or unredeemable Preference Shares. In this approach the perpetual cash flow of potential net income (after deducting expense) is discounted at market required rate of return.

3. **Cost Approach** – In this approach, the cost is estimated to replace the building in its present form plus estimated value of land. However, adjustment of other factors such as good location, neighbourhood is also made in it.

4. **Discounted After Tax Cash Flow Approach** – In comparison to NPV technique, PV of expected inflows at required rate of return is reduced by amount of investment.
Q12. What is Venture Capital Fund?
Answer:
Venture capital means funds made available for start-up firms and small businesses with
exceptional growth potential. Venture capital is money provided by professionals who
alongside management invest in young, rapidly growing companies that have the potential
to develop into significant economic contributors.
Venture Capitalists generally:
✓ Finance new and rapidly growing companies
✓ Purchase equity securities
✓ Assist in the development of new products or services
✓ Add value to the company through active participation.

Q13. What are the characteristics of venture capital fund?
Answer:
1. Long time horizon: The fund would invest with a long time horizon in mind. Minimum period of investment would be 3 years and maximum period can be 10 years.
2. Lack of liquidity: When VC invests, it takes into account the liquidity factor. It assumes that there would be less liquidity on the equity it gets and accordingly it would be investing in that format. They adjust this liquidity premium against the price and required return.
3. High Risk: VC would not hesitate to take risk. It works on principle of high risk and high return. So higher riskiness would not eliminate the investment choice for a venture capital.
4. Equity Participation: Most of the time, VC would be investing in the form of equity of a company. This would help the VC participate in the management and help the company grow.

Q14. What are the advantages of bringing venture capital into the company?
Answer:
✓ It injects long-term equity finance which provides a solid capital base for future growth.
✓ The venture capitalist is a business partner, sharing both the risks and rewards. Venture capitalists are rewarded with business success and capital gain.
✓ 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.
✓ The venture capitalist also has a network of contacts in many areas that can add value to the company.
✓ The venture capitalist may be capable of providing additional rounds of funding should it be required to finance growth.
✓ Venture capitalists are experienced in the process of preparing a company for an initial public offering (IPO) of its shares onto the stock exchanges or overseas stock exchange such as NASDAQ.

✓ They can also facilitate a trade sale.

Q15. Discuss the stages of funding in Venture Capital Finance.

Answer:
1. **Seed Money**: Low level financing needed to prove a new idea.
2. **Start-up**: Early stage firms that need funding for expenses associated with marketing and product development.
3. **First-Round**: Early sales and manufacturing funds.
4. **Second-Round**: Working capital for early stage companies that are selling product, but not yet turning in a profit.
5. **Third Round**: Also called Mezzanine financing, this is expansion money for a newly profitable company.
6. **Fourth-Round**: Also called bridge financing, it is intended to finance the "going public" process.

Q16. Discuss the venture capital investment process.

Answer:
The entire VC Investment process can be segregated into the following steps:

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.
   Before sourcing the deal, the VC would inform the intermediary or its employees about the following so that the sourcing entity does not waste time:
   ✓ Sector focus
   ✓ Stages of business focus
   ✓ Promoter focus
   ✓ Turn over focus
   Here the company would give a detailed business plan which consists of business model, financial plan and exit plan. All these aspects are covered in a document which is called Investment Memorandum (IM). A tentative valuation is also carried out in the IM.

2. **Screening**: Once the deal is sourced the same would be sent for screening by the VC. The screening is generally carried out by a committee consisting of senior level people of the VC. Once the screening happens, it would select the company for further processing.

3. **Due Diligence**: The screening decision would take place based on the information provided by the company. Once the decision is taken to proceed further, the VC would now carry out due diligence. This is mainly the process by which the VC would try to
verify the veracity of the documents taken. This is generally handled by external bodies, mainly renowned consultants. The fees of due diligence are generally paid by the VC.
However, in many cases this can be shared between the investor (VC) and Investee (the company) depending on the veracity of the document agreement.

4. **Deal Structuring**: Once the case passes through the due diligence it would now go through the deal structuring. The deal is structured in such a way that both parties win. In many cases, the convertible structure is brought in to ensure that the promoter retains the right to buy back the share. Besides, in many structures to facilitate the exit, the VC may put a condition that promoter has also to sell part of its stake along with the VC. Such a clause is called tag- along clause.

5. **Post Investment Activity**: In this section, the VC nominates its nominee in the board of the company. The company has to adhere to certain guidelines like strong MIS, strong budgeting system, strong corporate governance and other covenants of the VC and periodically keep the VC updated about certain mile-stones. If milestone has not been met the company has to give explanation to the VC. Besides, VC would also ensure that professional management is set up in the company.

6. **Exit plan**: At the time of investing, the VC would ask the promoter or company to spell out in detail the exit plan. Mainly, exit happens in two ways: one way is ‘selling to third party (ies)’. This sale can be in the form of IPO or Private Placement to other VCs. The second way to exit is that promoter would give a buy back commitment at a pre-agreed rate (generally between IRR of 18% to 25%). In case the exit is not happening in the form of IPO or third party sell, the promoter would buy back. In many deals, the promoter buyback is the first refusal method adopted i.e. the promoter would get the first right of buyback.

Q17. **What is a distressed security?**

**Answer:**

✓ It is a kind of purchasing the securities of companies that are in or near bankruptcy.

✓ Since these securities are available at very low price, the main purpose of buying such securities is to make efforts to revive the sick company.

✓ Further, these securities are suitable for those investors who cannot participate in the market and those who wants avoid due diligence.

✓ Now, question arises how profit can be earned from distressed securities. We can see by taking long position in debt and short position in equity, how investor can earn arbitrage profit.

1. In case company’s condition improves because of priority, the investor will get his interest payment which shall be more than the dividend on his short position in equity shares.
2. If company is condition further deteriorates the value of both share ad debenture goes down. He will make good profit from his short position.
Chapter 7
Securitization

Q1. What are the features of Securitization?
Answer:
The securitization has the following features:

1. **Creation of Financial Instruments** – The process of securitization can be viewed as the process of creation of additional financial product of securities in market backed by collaterals.
2. **Bundling and Unbundling** – When all the assets are combined in one pool it is bundling and when these are broken into instruments of fixed denomination it is unbundling.
3. **Tool of Risk Management** – In case of assets are securitized on non-recourse basis, then securitization process acts as risk management as the risk of default is shifted.
4. **Structured Finance** – In the process of securitization, financial instruments are tailor structured to meet the risk return trade of profile of investor, and hence, these securitized instruments are considered as best examples of structured finance.
5. **Trenching** – Portfolio of different receivable or loan or asset are split into several parts based on risk and return they carry called ‘Trenched’. Each Trench carries a different level of risk and return.
6. **Homogeneity** – Under each trench the securities are issued of homogenous nature and even meant for small investors the who can afford to invest in small amounts.

Q2. What are the benefits of Securitization?
Answer:

From the angle of Originator: Originator (entity which sells assets collectively to Special Purpose Vehicle) achieves the following benefits from securitization.

1. **Off – Balance Sheet Financing**: When loan/receivables are securitized it release a portion of capital tied up in these assets resulting in off Balance Sheet financing leading to improved liquidity position which helps expanding the business of the company.
2. **More specialization in main business**: By transferring the assets the entity could concentrate more on core business as servicing of loans transferred to SPV. Further, in case of non-recourse arrangement even the burden of default is shifted.
3. **Helps to improve financial ratios**: Especially in case of Financial Institutions and Banks, it helps to manage Capital –To-Weighted Asset Ratio effectively.
4. **Reduced borrowing Cost**: Since securitized papers are rated due to credit enhancement even they can also be issued at reduced rate as of debts and hence the originator earns a spread, resulting in reduced cost of borrowings.

From the angle of Investor

Following benefits accrues to the investors of securitized securities.

1. **Diversification of Risk**: Purchase of securities backed by different types of assets provides the diversification of portfolio resulting in reduction of risk.
2. **Regulatory requirement**: Acquisition of asset backed belonging to a particular industry say micro industry helps banks to meet regulatory requirement of investment of fund in industry specific.

3. **Protection against default**: In case of recourse arrangement if there is any default by any third party then originator shall make good the least amount. Moreover, there can be insurance arrangement for compensation for any such default.

Q3. **Explain the mechanism of Securitization.**

**Answer:**

Let us discuss briefly the steps in securitization mechanism:

1. **Creation of Pool of Assets**
   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. **Transfer to SPV**
   One asset have been pooled, they are transferred to Special Purpose Vehicle (SPV) especially created for this purpose.

3. **Sale of Securitized Papers**
   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, (discussed later).

4. **Administration of assets**
   The administration of assets in subcontracted back to originator which collects principal and interest from underlying assets and transfer it to SPV, which works as a conduct.

5. **Recourse to Originator**
   Performance of securitized papers depends on the performance of underlying assets and unless specified in case of default they go back to originator from SPV.

6. **Repayment of funds**
   SPV will repay the funds in form of interest and principal that arises from the assets pooled.

7. **Credit Rating to Instruments**
   Sometime before the sale of securitized instruments credit rating can be done to assess the risk of the issuer.

Q4. **Discuss about the Securitization Instruments.**

**Answer:**

On the basis of different maturity characteristics, the securitized instruments can be divided into following three categories:

1. **Pass Through Certificates (PTCs)**
   - As the title suggests originator (seller of eh assets) transfers the entire receipt of cash in form of interest or principal repayment from the assets sold. Thus, these securities represent direct claim of the investors on all the assets that has been securitized through SPV.
   - Since all cash flows are transferred the investors carry proportional beneficial interest in the asset held in the trust by SPV.
✓ It should be noted that since it is a direct route any prepayment of principal is also proportionately distributed among the securities holders. Further, due to these characteristics on completion of securitization by the final payment of assets, all the securities are terminated simultaneously.

✓ Skewness of cash flows occurs in early stage if principals are repaid before the scheduled time.

2. Pay Through Securities (PTS)

✓ As mentioned earlier, since, in PTCs all cash flows are passed to the performance of the securitized assets. To overcome this limitation and limitation to single mature there is another structure i.e. PTS.

✓ In contrast to PTC in PTS, SPV debt securities backed by the assets and hence it can restructure different tranches from varying maturities of receivables.

✓ In other words, this structure permits resynchronizations of servicing of securities issued from cash flow generating from the asset. Further, this structure also permits the SPV to reinvest surplus funds for short term as per their requirement.

✓ Since, in Pass Through, all cash flow immediately in PTS in case of early retirement of receivables plus cash can be used for short term yield. This structure also provides the freedom to issue several debt trances with varying maturities.

3. Stripped Securities

✓ Stripped Securities are created by dividing the cash flows associated with underlying securities into two or more new securities. Those two securities are as follows:

  (1) Interest Only (IO) Securities
  (2) Principle Only (PO) Securities

✓ As each investor receives a combination of principal and interest, it can be stripped into two portions of Interest and Principle.

✓ Accordingly, the holder of IO securities receives only interest while PO security holder receives only principal. Being highly volatile in nature these securities are less preferred by investors.

✓ 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.

✓ In contrast, value of IO’s securities increases when interest rate goes up in the market as more interest is calculated on borrowings.

✓ However, when interest rate due to prepayments of principals, IO’s tends to fall.

✓ Thus, from the above, it is clear that it is mainly perception of investors that determines the prices of IOs and Pos
Chapter 8
Mutual Funds

Q1. CLOSED ENDED V/S OPEN ENDED MUTUAL FUNDS?
Answer:-

<table>
<thead>
<tr>
<th>Basis</th>
<th>Closed Ended Funds</th>
<th>Open Ended Funds</th>
</tr>
</thead>
<tbody>
<tr>
<td>No of units outstanding</td>
<td>Fixed as decided in NFO</td>
<td>Can issue units regularly based on demand</td>
</tr>
<tr>
<td>Term</td>
<td>Difficult to exit before the end of term of the Scheme</td>
<td>There are no entry-exit terms</td>
</tr>
<tr>
<td>Units to be sold</td>
<td>The unit cost and number of units to be sold are fixed</td>
<td>There is no such restriction regarding number of units to be sold</td>
</tr>
<tr>
<td>Timing</td>
<td>You can enter only in a small window time, open during NFO</td>
<td>You can invest anytime and choose your own investment time</td>
</tr>
<tr>
<td>Popularity</td>
<td>Less popular and holds about 12% assets of Mutual Funds</td>
<td>Much more popular and holds about 88% assets of Mutual Funds</td>
</tr>
</tbody>
</table>

Q2. DIFFERENCE BETWEEN ETFS AND MUTUAL FUNDS?
Answer:-

<table>
<thead>
<tr>
<th>Basis</th>
<th>ETFs</th>
<th>Mutual Funds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traded</td>
<td>These are traded on Stock Exchange and need Demat account to buy/sell.</td>
<td>These are not traded on stock exchange and can be bought only through Fund houses.</td>
</tr>
<tr>
<td>Operating Expense</td>
<td>There is very low fund management fee in an ETF, it is as low as 0.07%; plus, stock brokerage charges are applied. Therefore, operating costs in ETFs are low.</td>
<td>Mutual Funds have higher operating costs as these funds are actively managed by fund managers. Expenses can be as high as 2.5%.</td>
</tr>
<tr>
<td>Minimum Investment</td>
<td>There is no minimum investment amount for ETFs. You just need to buy minimum 1 ETF unit, which costs a few hundred rupees.</td>
<td>You can invest an amount as low as ₹500 in mutual funds.</td>
</tr>
<tr>
<td>Quoted Price</td>
<td>ETF's NAV changes real time with the stock market at trading hours.</td>
<td>The price of mutual fund units gets fixed at the end of the day once the market gets closed.</td>
</tr>
<tr>
<td>Returns</td>
<td>ETFs in India lag Actively Managed Mutual Funds in terms of returns.</td>
<td>Actively Managed Mutual Funds mostly perform better than ETFs in India.</td>
</tr>
</tbody>
</table>
Q3. INDEX FUNDS V/S ETF?
Answer:-

<table>
<thead>
<tr>
<th>Basis</th>
<th>Index Funds</th>
<th>ETFs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structure</td>
<td>These keep higher percentage of assets as Cash and equivalent to manage redemptions etc. This leaves tracking error, higher the error greater the deviation from Index returns.</td>
<td>These too hold some cash or equivalent for liquidity but it is much lesser than Index Funds. These track the Index more efficiently than Index Funds.</td>
</tr>
<tr>
<td>Transaction</td>
<td>You can buy or sell them like any other mutual fund. You can also do systematic transactions (SIP, STP, SWP)</td>
<td>As the name suggests, they are bought and sold on exchange and need a Demat account to execute transaction. Systematic transactions cannot be done on ETF.</td>
</tr>
<tr>
<td>Charges</td>
<td>Though lesser than other Equity Funds, they do have some fund management charges like other Mutual Funds, which you must incur yearly.</td>
<td>ETFs have almost negligible fund management charges and you just need to pay your regular brokerage and Demat account charges, which mostly is less than Index Funds unless you buy &amp; sell ETFs too many times.</td>
</tr>
<tr>
<td>Liquidity</td>
<td>No liquidity risk as Fund house would invest directly in the underlying index stocks</td>
<td>High liquidity risk as one ETF unit is bought and sold as single stock and since ETFs are not very popular in India, trading volumes are very low which leads to liquidity risk.</td>
</tr>
</tbody>
</table>

Q4. WHAT IS SIP (SYSTEMATIC INVESTMENT PLAN)?
Answer:-
A Systematic Investment Plan or SIP is a mode of regular investments in mutual funds. SIP allows you to invest a certain pre-determined amount at a regular interval (weekly, monthly, quarterly, etc.). One of the best ways of entering equity market is through Systematic Investment Plans (SIPs) in equity mutual funds, as it brings in an investment discipline for your future cash flows and helps in Rupee cost averaging.

Few features of investment through SIP:
1. A SIP is a flexible and easy investment plan. Your money is auto-debited from your bank account and invested into a specific mutual fund scheme.
2. You are allocated certain number of units of Mutual Fund based on the ongoing market rate (called NAV or net asset value) for the day of SIP. Every time you invest money, additional units of the scheme are purchased at the market rate and added to your account. Hence, units are bought at different rates and investors benefit from Rupee-Cost Averaging, which means you get more units when market is low and less units when market is high and hence market averaging happens.
3. SIPs are done only in open-ended funds in which the investors can invest and take out the money anytime.
4. There is no fixed tenure for running SIP. Even if you select a SIP tenure, if you wish you can stop it in between or you could continue it even after the tenure ends by placing a request with respective mutual fund company. You can also do a perpetual SIP.
5. Full and partial withdrawal is possible during or after the SIP tenure is over.
6. SIP amount can be increased or decreased.
7. SIP is an ideal tool of Mutual Fund investment for investors earning regular monthly income.
8. SIP is a method of investment in Mutual fund and hence its risk profile is equivalent to the type of asset you invest in.

Q5. WHY SHOULD I INVEST THROUGH SIP METHOD?

Answer:-

Pros and Cons
- SIP instills a habit of savings- Half the work is done if you start a good habit. Through SIP an investor saves a part of his income first and then manages the expenses from what is left over. This habit of saving alone makes SIP method a winner among all.
- Reduces overall risk of investment- With SIP, you avoid timing the stock market investment. You invest in each stage of market i.e. the highs and lows of the market, which results in steady capital appreciation.
- Power of Compounding- SIP helps in an early start of investments as you can start small. Also, SIPs are mostly done for long term financial goals. These two factors of early start and long-term investment help you multiply your returns due to power of compounding.
- Convenience- You can send a one-time instruction to your bank to allow auto debit of the investment amount each month from your savings bank account allowing systematic investments without worrying about missing out on any monthly investment.
## Chapter 9
Derivatives Analysis and Valuation

### Q1. Distinguish between Cash and Derivatives Market.

**Answer:**

<table>
<thead>
<tr>
<th>Basis</th>
<th>Cash Market</th>
<th>Derivatives Market</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assets Traded</td>
<td>Tangible assets are traded</td>
<td>Contracts based on tangible or intangibles assets like index or rates are traded</td>
</tr>
<tr>
<td>Quantity Traded</td>
<td>Even one share can be purchased</td>
<td>In Futures and Options minimum lots are fixed</td>
</tr>
<tr>
<td>Risk</td>
<td>More Risky</td>
<td>Less Risky</td>
</tr>
<tr>
<td>Purpose</td>
<td>Cash assets may be meant for consumption or investment</td>
<td>Derivatives contracts are for hedging, arbitrage or speculation</td>
</tr>
<tr>
<td>Amount Required</td>
<td>Buying securities in cash market involves putting up all the money upfront</td>
<td>Buying futures simply involves putting up the margin money.</td>
</tr>
<tr>
<td>Ownership</td>
<td>The holder becomes part owner of the company</td>
<td>While in futures it does not happen.</td>
</tr>
</tbody>
</table>

### Q2. Distinguish between Forward Contract and Futures Contract

**Answer:**

<table>
<thead>
<tr>
<th>Basis</th>
<th>Forward Contract</th>
<th>Future Contract</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trading</td>
<td>Traded in Over-the Counter OTC market.</td>
<td>Traded on an Exchange</td>
</tr>
<tr>
<td>Default Risk</td>
<td>Traded privately and hence bears the risk of default</td>
<td>Are exchange traded who provides the protection and hence no default risk.</td>
</tr>
<tr>
<td>Margin requirement</td>
<td>Involves no margin payment.</td>
<td>Initial margin is required to be paid as good faith money.</td>
</tr>
<tr>
<td>Uses</td>
<td>Used for hedging purposes</td>
<td>Used for both hedging and speculating purposes.</td>
</tr>
<tr>
<td>Transparency</td>
<td>Not transparent as the contract is private in nature.</td>
<td>Transparency is maintained and is reported by the exchange.</td>
</tr>
<tr>
<td>Delivery</td>
<td>Settled by physical delivery.</td>
<td>Settled by net cash payment only and very few by actual delivery.</td>
</tr>
<tr>
<td>Size of contract</td>
<td>No Standardised size.</td>
<td>Standard in terms of quantity or amount as the case may be.</td>
</tr>
<tr>
<td>Maturity</td>
<td>Any valid business date agreed to by the two parties.</td>
<td>Standard Date. Usually one delivery date such as the second Tuesday of every month.</td>
</tr>
<tr>
<td>Currencies Traded</td>
<td>All currencies</td>
<td>Major Currencies</td>
</tr>
<tr>
<td>Cash Flow</td>
<td>None until maturity date</td>
<td>Initial margin plus ongoing variation margin because of mark to market and final payment on maturity date.</td>
</tr>
</tbody>
</table>
Q3. What are the benefits of trading in Index Futures compared to any other security?

Answer:
An investor can trade the ‘entire stock market’ by buying index futures instead of buying individual securities with the efficiency of a mutual fund.

The advantages of trading in Index Futures are:

1. The contracts are highly liquid
2. Index Futures provide higher leverage than any other stocks
3. It requires low initial capital requirement
4. It has lower risk than buying and holding stocks
5. It is just as easy to trade the short side as the long side
6. Only have to study one index instead of 100s of stocks.

Q4. Difference between Futures and Options

Answer:

<table>
<thead>
<tr>
<th>Basis</th>
<th>Futures Contract</th>
<th>Options Contract</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right</td>
<td>Both the parties have right</td>
<td>Only buyer of the option has the right</td>
</tr>
<tr>
<td>Risk</td>
<td>For both the parties</td>
<td>Only for seller of the option</td>
</tr>
<tr>
<td>Obligation</td>
<td>For both the parties</td>
<td>Only for seller of the option</td>
</tr>
<tr>
<td>Premium</td>
<td>None of the parties is required to</td>
<td>Buyer of the option is required to pay</td>
</tr>
<tr>
<td></td>
<td>pay for it</td>
<td>it upfront</td>
</tr>
<tr>
<td>Settlement</td>
<td>Here settlement is must, it never</td>
<td>It can simply expires without being</td>
</tr>
<tr>
<td></td>
<td>expires</td>
<td>exercised</td>
</tr>
<tr>
<td>Nature</td>
<td>It is not a pure hedging tool</td>
<td>It is a pure hedging tool</td>
</tr>
<tr>
<td>Margin</td>
<td>Both the parties are required to</td>
<td>In this only the seller of the option is</td>
</tr>
<tr>
<td></td>
<td>deposit the margin</td>
<td>required to deposit it</td>
</tr>
</tbody>
</table>

Q5. What are the assumptions of Black Scholes Model

Answer:

1. Options considered are **European options** means the options which are redeemed only on the expiry date.
2. The underlying security **does not pay a dividend**.
3. There is **no arbitrage opportunity**.
4. It is possible to borrow and lend cash at known **risk free interest rate**.
5. It is possible to buy and sell even the **fraction of the share**.
6. The above transaction **does not incur any fees or cost**. i.e. no transaction cost
7. Stock price movement follows **random walk**.
8. Stock **returns are normally distributed** over a period of time.
9. The **variance of the return is constant** over the life of the option.
Q6. Write a short note on Factors affecting Option Valuation

Answer:

| Factors Affecting Option Valuation (Option Premium) |
|-----------------|-----------------|-----------------|
| Factor | Call | Explanation | Put | Explanation |
| Stock Price | Increase | For a given strike price (55) \( \text{increase in the stock price}(60,70,80) \) increases the demand for call hence higher premium and vice-versa | Decrease | For a given strike price (55) \( \text{increase in the stock price}(30,40,50) \) decreases the demand for put hence lower premium and vice-versa |
| Exercise Price | Increase | For a given stock price (55) \( \text{increase in the strike price}(30,40,50) \) decreases the demand for call hence lower premium and vice-versa | Decrease | For a given stock price (55) \( \text{increase in the strike price}(60,70,80) \) increases the demand for put hence higher premium and vice-versa |
| Time to Expiration | More | More the time to expiry, more are the chances for Option to be \( \text{In The Money}, \) hence higher premium & vice-versa | Less | More the time to expiry, more are the chances for Option to be \( \text{In The Money}, \) hence higher premium & vice-versa |
| Volatility | More | More the volatility, more are the chances for Option to be \( \text{In The Money}, \) hence higher premium & vice-versa | Less | More the volatility, more are the chances for Option to be \( \text{In The Money}, \) hence higher premium & vice-versa |
| Interest Rate | Increase | \( \text{Increase in interest rate increases the interest income that can be earned on money saved in buying call option, which increases demand for call and premium thereon} \) | Decrease | \( \text{Increase in interest rate increases the opportunity cost of interest income on put option which decreases demand for put and premium thereon (however less practical)} \) |

I. Factors affecting value of the option

- **Stock price**
  - The value of particular option depends upon the movement in price of the stock. Rise in the stock price causes the increase in the premium of call option while decrease in the premium of put option. On the other hand if the price of the underlying falls, premium of the call option decreases while that of the put option increases.
  - Consider a call option. If you want to own an option that gives you the right to buy stock at ₹50 per share. When you would be ready to pay more premium, when the stock is trading at ₹65 or ₹55?.
  - In the first case you are benefited by ₹15 (65-50) by exercising the option but in the second case the benefit is just ₹5 (55-50). Surely you would pay more premium for that call if the stock is trading at ₹65 than when it is trading at ₹55. The higher the stock price the more a call option is worth.
  - Similarly, the lower the stock price, the more a put option is worth. If you want to have the right to sell stock at ₹30, you would pay more for that put option when the stock is ₹20 than when it is ₹25. The lower the call stock price, the more a put is worth.
Exercise price

- Of course you would always prefer the right to buy stock at a lower price any day of the week! Thus, calls become more expensive as the strike price moves lower.
- Likewise, puts become more expensive in value as the strike price increases.
- You would pay more for the right to buy stock at ₹60 than for the right to pay ₹70. Thus, calls increase in value as the strike price moves lower. And puts increase in value as the strike price increases (the right to sell at ₹45 is more valuable than the right to sell at ₹40).

Time to expiration

- Ideally, the more time the option has until expiration the higher its premium is. The reason being the underlying has more time to fluctuate in value.
- Time increases the chances that at some time the option will move In The Money and become profitable for buyer and risky for seller and hence seller will charge increased premium.
- The options time value goes on declining as the options approaches the expiration because the time remaining goes on decreasing as well.

Volatility of the stock price

- There is increased price risk associated with the volatile market and hence the cost of getting insurance through options is also higher.
- The same reason being the option is more likely to move in the money in volatile market and become profitable for the buyer.
- Sellers who try to avoid losses bear more risk in such kind of volatile market and hence require higher premium.
- Thus it is possible that the three months option premium is higher in volatile market as compared to five months stable market.

Interest rate

- When interest rates increase, the call option prices increase while the put option prices decrease.
- Let’s look at the logic behind this. Let’s say you are interested in buying a stock which sells at $10 per share. You buy 1,000 shares at $10 each with a total investment of $10,000. Instead of directly buying the stock, you could also have purchases a call option selling for only $1, making a total investment of $1 x 1,000 = $1,000. If you choose to buy the call option instead of the underlying stock directly, you could have used the remaining $9,000 to earn some interest. The higher the interest rates, the higher your interest income would be. This makes the call option more attractive and more expensive.
- For put options, the opposite holds true, that is, the higher the interest rates the lower the put option price. This is because if interest rates are high you will have to hold the asset for a longer time to deliver it under the put option. Simply selling the asset and using the proceeds to invest at a higher rate would be a better option.
This makes the put option less attractive and hence less costly when interest rates are high.

Q7. Write a short note on Option Greeks

Answer:
You might’ve heard options traders peppering their speech with the names of various Greek letters. It’s no secret fraternity code; these letters simply refer to common measures of how options prices are expected to change in the marketplace.

Just like implied volatility, the options Greeks are determined by using an option pricing model. Although the Greeks collectively indicate how the marketplace expects an option’s price to change, the Greek values are theoretical in nature. There is no guarantee that these forecasts will be correct.

The most common Greeks are “delta”, “theta” and “vega.” Although you may also hear “gamma” or “rho” mentioned from time to time.

a. Delta: Beginning options traders sometimes assume that when a stock moves ₹1, the cost of all options based on it will also move ₹1. That’s pretty silly when you think about it. The option usually costs much less than the stock. Why should you reap the same benefits as if you owned the stock? Besides, not all options are created equal. How much the option price changes compared to a move in the stock price depends on the option’s strike price relative to the actual price of the stock?

So the question is, how much will the price of an option move if the stock moves ₹1? “Delta” provides the answer: it’s the amount an option will move based on a rupee change in the underlying stock. If the delta for an option is 0.50, in theory, if the stock moves ₹1 the option should move approximately 50 paise. If delta is 0.25, the option should move 25 paise for every rupee the stock moves. And if the delta is 0.75, how much should the option price change if the stock price changes ₹1?

That’s right. 75 rupee.

Typically, the delta for an at-the-money option will be about 0.50, reflecting a roughly 50 percent chance the option will finish in-the-money. In-the-money options have a delta higher than 0.50. The further in-the-money an option is, the higher the delta will be.

Out-of-the-money options have a delta below 0.50. The further out-of-the-money an option is, the lower its delta will be. Since call options represent the ability to buy the stock, the delta of calls will be a positive number (.50). Put options, on the other hand, have deltas with negative numbers (-.50). This is because they reflect the right to sell stock.

b. Gamma: It measures how fast the delta changes for small changes in the underlying stock price. i.e. delta of the delta.

The option's gamma is a measure of the rate of change of its delta. The gamma of an option is expressed as a percentage and reflects the change in the delta in response to a one point movement of the underlying stock price.

Like the delta, the gamma is constantly changing, even with tiny movements of the underlying stock price. It generally is at its peak value when the stock price is near the
strike price of the option and decreases as the option goes deeper into or out of the money. Options that are very deeply into or out of the money have gamma values close to 0.

**Example**

Suppose for a stock XYZ, currently trading at ₹47, there is a FEB 50 call option selling for ₹2 and let's assume it has a delta of 0.4 and a gamma of 0.1 or 10 percent. If the stock price moves up by ₹1 to ₹48, then the delta will be adjusted upwards by 10 percent from 0.4 to 0.5.

However, if the stock trades downwards by ₹1 to ₹46, then the delta will decrease by 10 percent to 0.3.

c. **Theta:** The change in option price given a one day decrease in time to expiration. Basically it is a measure of time decay.

The theta value indicates how much value a stock option's price will diminish per day with all other factors being constant. If a stock option has a theta value of -0.012, it means that it will lose 1.2 cents a day. Such a stock option contract will lose 2.4 cents over a weekend. (Yes, the effect of theta value and time decay is active even when markets are closed!)

The nearer the expiration date, the higher the theta and the farther away the expiration date, the lower the theta.

**Example**

A call option with a current price of ₹2 and a theta of -0.05 will experience a drop in price of ₹0.05 per day. So in two days' time, the price of the option should fall to ₹1.90.

d. **Rho:** The change in option price given a 1% change in the risk free interest rate. It is sensitivity of option value to change in interest rate.

**Example**

If an option or options portfolio has a rho of 0.017, then for every percentage-point increase in interest rates, the value of the option increases ₹0.017. However, it is not normally needed for calculation for most option trading strategies.

e. **Vega:** The option's vega is a measure of the impact of changes in the underlying volatility on the option price. Specifically, the vega of an option expresses the change in the price of the option for every 1% change in underlying volatility.

Options tend to be more expensive when volatility is higher. Thus, whenever volatility goes up, the price of the option goes up and when volatility drops, the price of the option will also fall. Therefore, when calculating the new option price due to volatility changes, we add the vega when volatility goes up but subtract it when the volatility falls.

**Example**

A stock XYZ is trading at ₹46 in May and a JUN 50 call is selling for ₹2. Let's assume that the vega of the option is 0.15 and that the underlying volatility is 25%.
If the underlying volatility increased by 1% to 26%, then the price of the option should rise to \( \text{Rs} 2 + 0.15 = \text{Rs} 2.15 \).

However, if the volatility had gone down by 2% to 23% instead, then the option price should drop to \( \text{Rs} 2 - (2 \times 0.15) = \text{Rs} 1.70 \)

Keep in mind: vega doesn’t have any effect on the intrinsic value of options; it only affects the “time value” of the option’s price. Here’s an odd fact for you: Vega is not actually a Greek letter. But since it starts with a ‘V’ and measures changes in volatility, this made-up name stuck.

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### Options Greeks

<table>
<thead>
<tr>
<th>Greeks</th>
<th>Symbol</th>
<th>Represents</th>
<th>Formula,</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delta</td>
<td>( \delta )</td>
<td>Delta represents the change in the Option value with 1% change in the Stock Price</td>
<td>( \text{Delta} (\delta) = \frac{\Delta V_0}{\Delta S_0} )</td>
</tr>
<tr>
<td>Gamma</td>
<td>( \gamma )</td>
<td>Gamma represents the change in the Options Delta with 1% change in the Stock Price</td>
<td>( \text{Gamma} (\gamma) = \frac{\Delta \delta}{\Delta S_0} )</td>
</tr>
<tr>
<td>Rho</td>
<td>( \rho )</td>
<td>Rho represents the change in the Options Value with 1% change in the Interest Rates</td>
<td>( \text{Rho} (\rho) = \frac{\Delta V_0}{\Delta r} )</td>
</tr>
<tr>
<td>Theta</td>
<td>( \theta )</td>
<td>Theta represents the change in the Options Value with 1 day change in the time to expiry</td>
<td>( \text{Theta} (\theta) = \frac{\Delta V_0}{\Delta t} )</td>
</tr>
<tr>
<td>Vega</td>
<td>( \nu )</td>
<td>Vega represents the change in the Options Value with 1% change in the volatility of the stock</td>
<td>( \text{Vega} (\nu) = \frac{\Delta V_0}{\Delta \sigma} )</td>
</tr>
</tbody>
</table>

*Where, \( V_0 \) value of the option, \( S_0 \) Spot price of the stock, \( r \) rate of Interest, \( t \) time to expiration.*

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**Chapter 10**

**Interest Rate Risk Management**

**Q1. Write short note on Gap Exposure**

**Answer:**

- A gap or mismatch risk arises from holding assets and liabilities and off-balance sheet items with different principal amounts, maturity dates or re-pricing dates, thereby creating exposure to unexpected changes in the level of market interest rates.

- This exposure is more important in relation to banking business.

- The positive Gap indicates that banks have more interest Rate Sensitive Assets (RSAs) than interest Rate Sensitive Liabilities (RSLs).

- A positive or asset sensitive Gap means that an increase in market interest rates could cause an increase in Net Interest Income (NII). Conversely, a negative or liability sensitive Gap implies that the banks’ NII could decline as a result of increase in market interest rates.

- A negative gap indicates that banks have more RSLs than RSAs. The Gap is used as a measure of interest rate sensitivity.
Positive or Negative Gap is multiplied by the assumed interest rate changes to derive the Earnings at Risk (EaR). The EaR method facilitates to estimate how much the earnings might be impacted by an adverse movement in interest rates.

The changes in interest rate could be estimated on the basis of past trends, forecasting of interest rates, etc. The banks should fix EaR which could be based on last/current year’s income and a trigger point at which the line management should adopt on-or off-balance sheet hedging strategies may be clearly defined.

IRG=Interest Bearing Assets – Interest Bearing Liabilities

Q2. Write short note on Swaptions

Answer:

An interest rate swaption is simply an option on an interest rate swap. It gives the holder the right but not the obligation to enter into an interest rate swap at a specific date in the future, at a particular fixed rate and for a specified term.

There are two types of swaption contracts:

a) A fixed rate payer swaption gives the owner of the swaption the right but not the obligation to enter into a swap where they pay the fixed leg and receive the floating leg.

b) A fixed rate receiver swaption gives the owner of the swaption the right but not the obligation to enter into a swap in which they will receive the fixed leg, and pay the floating leg.

Q3. State the features of Swaptions

Answer:

1) A swaption is effectively an option on a forward-start IRS, where exact terms such as the fixed rate of interest, the floating reference interest rate and the tenor of the IRS are established upon conclusion of the swaption contract.

2) A 3-month into 5-year swaption would therefore be seen as an option to enter into a 5-year IRS, 3 months from now.

3) The 'option period' refers to the time which elapses between the transaction date and the expiry date.

4) The swaption premium is expressed as basis points.

5) Swaptions can be cash-settled; therefore at expiry they are marked to market off the applicable forward curve at that time and the difference is settled in cash.

Q4. What are the uses of the Swaptions?

Answer:

a. Swaptions can be applied in a variety of ways for both active traders as well as for corporate treasurers.

b. Swap traders can use them for speculation purposes or to hedge a portion of their swap books.
c. Swaptions have become useful tools for hedging embedded optionality which is common to the natural course of many businesses.

d. Swaptions are useful to borrowers targeting an acceptable borrowing rate.

e. Swaptions are also useful to those businesses tendering for contracts.

f. Swaptions also provide protection on callable/puttable bond issues.

Q5. What are the Categories of Swaption Styles

Answer:

There are three main categories of Swaption, although exotic desks may be willing to create customised types, analogous to exotic options, in some cases. The standard varieties are

i. Bermudian swaption, in which the owner is allowed to enter the swap on multiple specified dates.

ii. European swaption, in which the owner is allowed to enter the swap only on the expiration date. These are the standard in the marketplace.

iii. American swaption, in which the owner is allowed to enter the swap on any day that falls within a range of two dates.

Chapter 11

Foreign Exchange Exposure and Risk Management

Q6. Write short note on Types of Foreign Exchange Exposure

Answer:

Types of exposure in foreign exchange: Foreign currency exposures are generally categorized into following three distinct types-

1. Transaction Exposure:

It measures the effect of an exchange rate change on outstanding obligations that existed before exchange rates changed but were settled after the exchange rate changes. Thus, it deals with cash flows that result from existing contractual obligations.

Example: If an Indian exporter has a receivable of $100,000 due in six months hence and if the dollar depreciates relative to the rupee a cash loss occurs. Conversely, if the dollar appreciates relative to the rupee, a cash gain occurs.

✓ The above example illustrates that whenever a firm has foreign currency denominated receivables or payables, it is subject to transaction exposure and their settlements will affect the firm’s cash flow position.
✓ It measures the changes in the value of outstanding financial obligation incurred prior to a change in exchange rates but not due to be settled until after the exchange rates change.
✓ Thus, it deals with the changes in the cash flow which arises from existing contractual obligation.
✓ In fact, the transaction exposures are the most common ones amongst all the exposures. Let’s take an example of a company which exports to US, and the export receivables are also denominated in USD. While doing budgeting the company had assumed USDINR rate of 62 per USD.
✓ By the time the exchange inward remittance arrives. USD INR could move down to 57 leading to wiping off of commercial profit for exporter. Such transaction exposures arise whenever a business has foreign currency denominated receipts or payments.
✓ The risk is an adverse movement of the exchange rate from the time the transaction is budgeted till the time the exposure is extinguished by sale or purchase of the foreign currency against the domestic currency.

2. Translation Exposure:

Also known as accounting exposure, it refers to gains or losses caused by the translation of foreign currency assets and liabilities into the currency of the parent company for consolidation purposes.
Translation exposure, also called as accounting exposure, is the potential for accounting derived changes in owner’s equity to occur because of the need to “translate” foreign currency financial statements of foreign subsidiaries into a single reporting currency to prepare worldwide consolidated financial statements.
Translation exposures arise due to the need to “translate” foreign currency assets and liabilities into the home currency for the purpose of finalizing the accounts for any given period. A typical example of translation exposure is the treatment of foreign currency loans.
✓ Consider that a company has taken a medium term loan to finance the import of capital goods worth dollars 1 million. When the import materialized, the exchange rate was, say, USD/INR-55. The imported fixed asset was, therefore, capitalized in the books of the company at ₹550 lacs through the following accounting entry:

Debit fixed assets ₹550 lacs
Credit dollar loan ₹550 lacs

✓ In the ordinary course, and assuming no change in the exchange rate, the company would have provided depreciation on the asset valued at ₹550 lacs, for finalizing its account for the year in which the asset was purchased.

✓ However, what happens if at the time of finalization of the accounts the exchange rate has moved to say USD/INR-58. Now the dollar loan will have to be “translated” at ₹58, involving a “translation loss” of ₹30 lacs. It shall have to be capitalized by increasing the book value of the asset, thus making the figure ₹380
lacs and consequently higher depreciation will have to be provided, thus reducing the net profit.

✓ It will be readily seen that both transaction and translation exposures affect the bottom line of a company. The effect could be positive as well if the movement is favorable – i.e., in the cited examples, in case the USD would have appreciated in case of Transaction Exposure example, or the USD would have depreciated in case of Translation Exposure, for example, against the rupee.

 ✓ An important observation is that the translation exposure, of course, becomes a transaction exposure at some stage: the dollar loan has to be repaid by undertaking the transaction of purchasing dollars.

3. Operating Exposure:

It refers to the extent to which the economic value of a company can decline due to changes in exchange rate. It is the overall impact of exchange rate changes on the value of the firm. The essence of economic exposure is that exchange rate changes significantly alter the cost of a firm’s inputs and the prices of its outputs and thereby influence its competitive position substantially.

Q7. Explain the strategies for Exposure Management

Answer:

Strategies for Exposure Management: A company’s attitude towards risk, financial strength, nature of business, vulnerability to adverse movements etc. shapes its exposure management strategies. There can be no single strategy which is appropriate to all businesses. Four strategy options are feasible for exposure management:

(a) **Low Risk: Low Reward**

Involves automatic hedging of exposure as soon as they arise, no matter how much attractive the forward rate is. Management here is not required to invest any time and money and can focus on their core area of business. But this option is hardly likely to result in optimum costs. Businesses whose cost significantly depends on the commodity prices can hardly afford not to take views on the price of the commodity. Hence this does not seem to be an optimum strategy.

(b) **Low Risk: Reasonable Reward**

This strategy requires selective hedging of exposures whenever forward rates are attractive but keeping exposures open whenever they are not.

(c) **High Risk: Low Reward**

Leaving all the exposures unhedged is the worst strategy. Only the benefit is that management is not required to invest any time or investment.

(d) **High Risk: High Reward**

This strategy involves trading actively in the currency market through continuous cancellations and re-bookings of forward contracts. Few of the larger companies are adopting this strategy in India.
Q8. Write a short note on Nostro, Vostro and Loro Account

Answer:

**NOSTRO Account**

Italian word 'nostro' means 'ours'. Hence, Nostro account points at - "Our account with you"

Nostro accounts are generally held in a foreign country (with a foreign bank), by a domestic bank (from our perspective, our bank). It obviates that account is maintained in that foreign currency.

For example, SBI account with Bank of America is Nostro for SBI

**VOSTRO Account**

Italian word 'vostro' means 'yours'. Hence, Vostro account points at - "Your account with us"

Vostro accounts are generally held by a foreign bank in our country (with a domestic bank). It generally maintained in Indian Rupee (if we consider India)

For example, SBI account with Bank of America is Vostro for Bank of America

**LORO Account**

Again, Italian word 'loro' means 'theirs'. Therefore, it points at - "Their account with them"

Loro accounts are generally held by a 3rd party bank, other than the account maintaining bank or with whom account is maintained.

For example, ICICI wants to transact with Bank of America, but doesn't have any account, while SBI maintains an account with Bank of America. Then ICICI could use that account, it will be called as Loro account for ICICI Bank

<table>
<thead>
<tr>
<th>Nostro Account</th>
<th>Vostro Account</th>
<th>Loro Account</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Our account with your bank”</td>
<td>“Your account with our bank”</td>
<td>“Your account with their bank”</td>
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<tr>
<td>Nostro accounts are generally held in a foreign country (with a foreign bank), by a domestic bank (from our perspective, our bank). It obviates that account is maintained in that foreign currency.</td>
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Chapter 12
International Financial Management

Q1. Discuss the complexities involved in International Capital Budgeting

Answer:

Multinational Capital Budgeting has to take into consideration the different factors and variables which affect a foreign project and are complex in nature than domestic projects. The factors crucial in such a situation are:

1. Cash flows from foreign projects have to be converted into the currency of the parent organization.
2. Parent cash flows are quite different from project cash flows.
3. Profits remitted to the parent firm are subject to tax in the home country as well as the host country.
4. Effect of foreign exchange risk on the parent firm’s cash flow.
5. Changes in rates of inflation causing a shift in the competitive environment and thereby affecting cash flows over a specific time period.
6. Restrictions imposed on cash flow distribution generated from foreign projects by the host country.
7. Initial investment in the host country to benefit from the release of blocked funds.
8. Political risk in the form of changed political events reduce the possibility of expected cash flows.
9. Concessions/benefits provided by the host country ensures the upsurge in the profitability position of the foreign project.
10. Estimation of the terminal value in multinational capital budgeting is difficult since the buyers in the parent company have divergent views on acquisition of the project.

Q2. Write short notes on American Depository Receipts (ADRs).

Answer:

✓ Introduced to the financial markets in 1927, an American Depository Receipt (ADR) is a stock that trades in the United States but represents a specified number of shares in a foreign corporation. ADRs are bought and sold on U.S. stock markets just like regular stocks and are issued/sponsored in the U.S. by a bank or brokerage.

✓ ADRs were introduced in response to the difficulty of buying shares from other countries which trade at different prices and currency values.

✓ U.S. banks simply purchase a large lot of shares from a foreign company, bundle the shares into groups and reissue them on either the NYSE, AMEX or Nasdaq.
✓ The depository bank sets the ratio of U.S. ADRs per home country share. This ratio can be anything less than or greater than 1. For example, a ratio of 4:1 means that one ADR share represents four shares in the foreign company.

Advantages of Investing in ADR
✓ ADRs allow US Investor to invest in companies outside North America with greater ease.
✓ By investing in different countries, you have the potential to capitalize on emerging economies.

Disadvantages of Investing in ADR
✓ ADRs come with more risks, involving political factors, exchange rates and so on.
✓ Language barriers and a lack of standards regarding financial disclosure can make it difficult to research foreign companies.

Q3. Write short notes on Global Depository Receipts (GDRs).

Answer:
✓ A global depositary receipt (GDR) is similar to an ADR, but is a depositary receipt sold outside of the United States and outside of the home country of the issuing company. Most GDRs are, regardless of the geographic market, denominated in United States dollars, although some trade in Euros or British sterling.
✓ It is not a different financial instrument, as it may sound, from that of ADR. In fact if the Indian Company which has issued ADRs in the American market wishes to further extend it to other developed and advanced countries such as Europe, then they can sell these ADRs to the public of Europe and the same would be named as GDR.
✓ GDR can be particularly helpful to those persons who are not resident of a country in which they want to invest. Because through GDR those persons can invest in the shares of the company without any problem and hence it is a great alternative of investment for them.
✓ Prices of GDR are often close to values of related shares, but they are traded and settled separately than the underlying share.

Advantages of GDR to issuing company
- Accessibility to foreign capital markets
- Rise in the capital because of foreign investors

Advantages of GDR to investor
- Helps in diversification, hence reducing risk
- More transparency since competitor’s securities can be compared
Q4. How the centralized cash management helps MNCs?

Answer:

A centralised cash system helps MNCs as follows:

1. To maintain minimum cash balance during the year
2. To manage judiciously liquidity requirements of the centre
3. To optimally use various hedging strategies so that MNC’s foreign exchange exposure is minimized
4. To aid the centre to generate maximum returns by investing all cash resources optimally
5. To aid the centre to take advantage of multinational netting so that transaction costs and currency exposure are minimized
6. To make maximum utilization of transfer pricing mechanism so that the firm enhances its profitability and growth
7. To exploit currency movement correlations:
   a) Payables & receivables in different currencies having positive correlations
   b) Payables of different currencies having negative correlations
   c) Pooling of funds allows for reduced holding – the variance of the total cash flows for the entire group will be smaller than the sum of the individual variances.

Q5. Write a short note on International Inventory Management? Or what do you mean by Stock Piling?

Answer:

 ✓ An international firm possesses normally a bigger stock than EOQ and this process is known as stock piling. The different units of a firm get a large part of their inventory from sister units in different countries. This is possible in a vertical set up.
 ✓ For political disturbance there will be bottlenecks in import. If the currency of the importing country depreciates, imports will be costlier thereby giving rise to stock piling.
 ✓ To take a decision against stock piling the firm has to weigh the cumulative carrying cost vis-à-vis expected increase in the price of input due to changes in exchange rate. If the probability of interruption in supply is very high, the firm may opt for stock piling even if it is not justified on account of higher cost.
 ✓ Also in case of global firms, lead time is larger on various units as they are located far off in different parts of the globe. Even if they reach the port in time, a lot of customs formalities have to be carried out. Due to these factors, re-order point for international firm lies much earlier.
 ✓ The final decision depends on the quantity of goods to be imported and how much of them are locally available. Relying on imports varies from unit to unit but it is very much large for a vertical set up.
Chapter 13
Corporate Valuation

Q1. Write a short note on Geared and Ungeared Beta

Answer:

Firms must provide a return to compensate for the risk faced by investors, and even for a well-diversified investor, this systematic risk will have two causes:

1. The risk resulting from its business activities
2. The finance risk caused by its level of gearing.

Consider therefore two firms A and B:
Both are identical in all respects including their business operations but A has higher gearing than B:
- A would need to pay out higher returns
- Any beta extrapolated from A's returns will reflect the systematic risk of both its business and its financial position and would therefore be higher than B's.

Therefore there are two types of beta:

\[
\beta_{\text{Asset}} \text{ reflects purely the systematic risk of the business area} \\
\beta_{\text{Equity}} \text{ reflects the systematic risk of the business area and the company-specific financial structure.}
\]

**Formula**

Logically \( \beta_{\text{Asset}} \) is the weighted average of the equity beta and debt beta.

\[
\beta_a = \beta_e \left( \frac{E}{E + D(1 - t)} \right) + \beta_d \left( \frac{D}{E + D(1 - t)} \right)
\]
However in many situations, $\beta_d$ will be assumed to be zero. This means that the asset beta formula can be simplified to

$$\beta_a = \beta_e \left( \frac{E}{E + D(1-t)} \right)$$

$$\left( \frac{\beta_a}{E} \right) = \beta_e$$

$$\beta_e = \beta_a \times \left( \frac{E + D(1-t)}{E} \right)$$

$$\beta_e = \beta_a \times \left( \frac{E}{E + D(1-t)} \right)$$

$$\beta_e = \beta_a \times \left( 1 + \frac{D}{E} (1-t) \right)$$

$\beta_e$ = Equity Beta = Levered Beta = $\beta_L$

$\beta_a$ = Asset Beta = Unlevered Beta = $\beta_U$

$$\beta_L = \beta_U \times \left( 1 + \frac{D}{E} (1-t) \right)$$

Q2. **Explain the concept of “Relative Valuation”**

**Answer:**

The Relative valuation, also referred to as ‘Valuation by multiples,’ uses financial ratios to derive at the desired metric (referred to as the ‘multiple’) and then compares the same to that of comparable firms. (Comparable firms would mean the ones having similar asset and risk dispositions, and assumed to continue to do so over the comparison period).

In the process, there may be extrapolations set to the desired range to achieve the target set. To elaborate –

1. **Find out the ‘drivers’ that will be the best representative for deriving at the multiple.**
   
   Thereby, one can have two sets of multiple based approaches depending on the tilt of the drivers –
   
   ✓ Enterprise value based multiples, which would consist primarily of EV/EBITDA, EV/Invested Capital, and EV/Sales.
   
   ✓ Equity value based multiples, which would comprise of P/E ratio and PEG.

2. **Determine the results based on the chosen driver(s) through financial ratios**

   ✓ Choosing the right financial ratio is a vital part of success of this model.

   ✓ A factor based approach may help in getting this correct – for example – a firm that generates revenue mostly by exports will be highly influenced by future foreign exchange fluctuations.

   ✓ A pure P/E based ratio may not be reflective of this reality, which couldn’t pre-empt the impacts that Brexit triggered on currency values.
Likewise, an EV/Invested Capital would be a misfit for a company which may be light on core assets, or if has significant investment properties.

3. **Find out the comparable firms, and perform the comparative analysis, and**

   Arriving at the right mix of comparable firms: This is perhaps the most challenging of all the steps – No two entities can be same – even if they may seem to be operating within the same risk and opportunity perimeter.

   So, a software company ‘X’ that we are now comparing to a similar sized company ‘Y’ may have a similar capital structure, a similar operative environment, and head count size– so far the two firms are on even platform for returns forecast and beta values.

   On careful scrutiny, it is now realized that the revenue generators are different – X may be deriving its revenues from dedicated service contracts having FTE pricing, whereas Y earns thru UTP pricing model.

   This additional set of information dramatically changes the risk structure – and this is precisely what the discerning investor has to watch for. In other words, take benchmarks with a pinch of salt.

   The comparable firm can either be from a peer group operating within the same risks and opportunities perimeter, or alternatively can be just take closely relevant firms and then perform a regression to arrive at the comparable metrics.

4. **Iterate the value of the firm obtained to smoothen out the deviations**

   It means find out the deviations if any in valuation and make changes to recalculate the value of the firm
Chapter 14
Mergers, Acquisitions and Corporate Restructuring

Q1. Discuss the different types of mergers.
Answer:

1) A Horizontal Merger is usually between two companies in the same business sector. The example of horizontal merger would be if a health care system buys another health care system. This means that synergy can obtained through many forms including such as; increased market share, cost savings and exploring new market opportunities.

2) A Vertical Merger represents the buying of supplier of a business. In the same example as above if a health care system buys the ambulance services from their service suppliers is an example of vertical buying. The vertical buying is aimed at reducing overhead cost of operations and economy of scale.

3) Conglomerate Merger is the third form of M&A process which deals the merger between two irrelevant companies. The example of conglomerate M&A with relevance to above scenario would be if the health care system buys a restaurant chain. The objective may be diversification of capital investment.

4) Congeneric Merger is a merger where the acquirer and the related companies are related through basic technologies, production processes or markets. The acquired company represents an extension of product line, market participants or technologies of the acquirer. These mergers represent an outward movement by the acquirer from its current business scenario to other related business activities.

5) Reverse Merger Such mergers involve acquisition of a public (Shell Company) by a private company, as it helps private company to by-pass lengthy and complex process required to be followed in case it is interested in going public.

Q2. Write short note Gains from Mergers or Synergy.
Answer:

✓ The first step in merger analysis is to identify the economic gains from the merger.
✓ There are gains, if the combined entity is more than the sum of its parts. That is, Combined value > (Value of acquirer + Stand alone value of target)
✓ The difference between the combined value and the sum of the values of individual companies is usually attributed to synergy.

\[
\text{Value of acquirer} + \text{Stand alone Value of target} + \text{Value of synergy} = \text{Combined value}
\]

✓ There is also a cost attached to an acquisition. The cost of acquisition is the price premium paid over the market value plus other costs of integration.
✓ Therefore, the net gain is the value of synergy minus premium paid.

\[
\begin{align*}
V_A & = ₹100 \\
V_B & = ₹50 \\
V_{AB} & = ₹175
\end{align*}
\]

Where,
VA = Value of Acquirer
VB = Standalone value of target
And, VAB = Combined Value
So, Synergy = VAB – (VA + VB) = 175 - (100 + 50) = 25
If premium is ₹10, then,
Net gain = Synergy – Premium = 25 – 10 = 15

✓ Acquisition need not be made with synergy in mind. It is possible to make money from no synergistic acquisitions as well. As can be seen from Exhibit, operating improvements are a big source of value creation.
✓ Better post-merger integration could lead to abnormal returns even when the acquired company is in unrelated business.
✓ Obviously, managerial talent is the single most important instrument in creating value by cutting down costs, improving revenues and operating profit margin, cash flow position, etc.
✓ Many a time, executive compensation is tied to the performance in the post-merger period. Providing equity stake in the company induces executives to think and behave like shareholders.

Q3. Explain the various Takeover Strategies.

Answer:

Various takeover Strategies

1. Tender Offer: Tender offer is a corporate finance term denoting a type of takeover bid. The tender offer is a public, open offer or invitation (usually announced in a newspaper advertisement) by a prospective acquirer to all stockholders of a publicly traded corporation (the target corporation) to tender their stock for sale at a specified price during a specified time, subject to the tendering of a minimum and maximum number of shares.

In a tender offer, the bidder contacts shareholders directly; the directors of the company may or may not have endorsed the tender offer proposal. To induce the shareholders of the target company to sell, the acquirer's offer price usually includes a premium over the current market price of the target company's shares.

2. Street Sweep: In street sweep the larger number of target company's shares are quickly purchased by the acquiring company before it makes an open offer. Thus, anyhow Target Company has to accept the offer of the takeover made by the acquiring company. It is also known as market sweep.

3. Bear Hug: A buyout offer so favorable to stockholders of a company targeted for acquisition that there is little likelihood they will refuse the offer. Not only does a bear hug offer a price significantly above the market price of the target company's stock, but it is likely to offer cash payments as well.
4. **Strategic Alliance:** SA is a kind of partnership between two entities in which they take advantage of each other’s core strengths like proprietary processes, intellectual capital, research, market penetration, manufacturing and/or distribution capabilities etc. They share their core strengths with each other. They will have an open-door relationship with another entity and will mostly retain control. The length of the agreement could have a sunset date or could be open-ended with regular performance reviews. However, they simply would want to work with the other organizations on a contractual basis, and not as a legal partnership.

Example: HP and Oracle had a strategic alliance wherein HP recommended Oracle as the perfect database for their servers by optimizing their servers as per Oracle and Oracle also did the same.

5. **Brand Power:** This refers to entering into an alliance with powerful brands to displace the target’s brands and as a result, buyout the weakened company.

Q4. **How to defend a Takeover Bid (Antitakeover strategy)?**

**Answer:**

Takeover defences include actions by managers to resist having their firms acquired by other companies. There are several methods to defend a takeover.

1. **Crown Jewel Defense:** The target company has the right to sell off the entire or some of the company’s most valuable assets when facing a hostile bid in the hope to make the company less attractive in the eyes of the acquiring company and to force a drawback of the bid.

2. **Poison Pill:** Poison pill can be described as shareholders’ rights, preferred rights, stock warrants, stock options which the target company offers and issues to its shareholders. The logic behind the pill is to dilute the targeting company’s stock in the company so much that bidder never manages to achieve an important part of the company without the consensus of the board.

3. **Poison Put:** Here the company issue bonds which will encourage the holder of the bonds to cash in at higher prices which will result in Target Company being less attractive.

4. **Greenmail:** Where the bidders are interested in short term profit rather than long term corporate control then the effective strategy will be to use Greenmail also known as Goodbye Kiss. Greenmail involves repurchasing a block of shares which is held by a single shareholder or other shareholders at a premium over the stock price in return for an agreement called as standstill agreement. In this agreement it is stated that bidder will no longer be able to buy more shares for a period of time often longer than five years.

5. **White Knight:** The target company seeks for a friendly company which can acquire majority stake in the company and is therefore called a white knight. The intention of the white knight is to ensure that the company does not lose its management. In the hostile takeover there are lots of chances that the acquired changes the management.

6. **White squire:** A different variation of white knight is white squire. Instead of acquiring the majority stake in the target company white squire acquires a smaller portion, but enough
to hinder the hostile bidder from acquiring majority stake and thereby fending off an attack.

7. **Golden Parachutes**: A golden parachute is an agreement between a company and an employee (usually upper executive) specifying that the employee will receive certain significant benefits if employment is terminated. This will discourage the bidders and hostile takeover can be avoided.

8. **Pac-man defense**: The target company itself makes a counter bid for the Acquirer Company and let the acquirer company defense itself which will call off the proposal of takeover.

Q5. **What is Divestiture and what are the reasons for divestment or demerger?**

**Answer:**

Divestiture means it means a company selling one of the portions of its divisions or undertakings to another company or creating an altogether separate company.

There are various reasons for divestment or demerger viz.,

1. To pay attention on core areas of business;
2. The Division’s/business may not be sufficiently contributing to the revenues;
3. The size of the firm may be too big to handle;
4. The firm may be requiring cash urgently in view of other investment opportunities.

Q6. **Explain the different ways of demerger or divestment.**

**Answer:**

1. **Sell off**: It refers to the selling a particular division, asset, product line, subsidiary or factory to another entity for an agreed upon sum which may be payable either in cash or securities.

2. **Spin-off**: It refers to the separation of the part of the existing business and creating a new entity. Shareholders of the existing company continue to be the shareholders of the new entity with proportionate ownership. There is no inflow of cash as compared to sell off strategy. The reason behind spin off divestiture is the intention of the management to have specialization in a particular area.

   Example: Kishore Biyani led Future Group spin off its consumer durables business, Ezone, into a separate entity in order to maximize value from it.

3. **Split-up**: A corporate action in which a single company splits into two or more separately run companies. Shares of the original company are exchanged for shares in the new companies, with the exact distribution of shares depending on each situation. This is an effective way to break up a company into several independent companies. After a split-up, the original company ceases to exist.

   Example: Philips, the Dutch conglomerate that started life making light bulbs 123 years ago, is splitting off its lighting business in a bold step to expand its higher-marg health and consumer divisions. The new structure should save 100
million euro’s ($128.5 million) next year and 200 million euro’s in 2016. It expects restructuring charges of 50 million euro’s from 2014 to 2016.

4. **Equity Carve outs**: This is like spin off, however, some shares of the new company are sold in the market by making a public offer, so this brings cash. More and more companies are using equity carve-outs to boost shareholder value. A parent firm makes a subsidiary public through an initial public offering (IPO) of shares, amounting to a partial sell-off. A new publicly-listed company is created, but the parent keeps a controlling stake in the newly traded subsidiary.

A carve-out is a strategic avenue a parent firm may take when one of its subsidiaries is growing faster and carrying higher valuations than other businesses owned by the parent. A carve-out generates cash because shares in the subsidiary are sold to the public, but the issue also unlocks the value of the subsidiary unit and enhances the parent’s shareholder value.

The new legal entity of a carve-out has a separate board, but in most carve-outs, the parent retains some control over it. In these cases, some portion of the parent firm’s board of directors may be shared. Since the parent has a controlling stake, meaning that both firms have common shareholders, the connection between the two is likely to be strong. That said, sometimes companies carve-out a subsidiary not because it is doing well, but because it is a burden. Such an intention won’t lead to a successful result, especially if a carved-out subsidiary is too loaded with debt or trouble, even when it was a part of the parent and lacks an established track record for growing revenues and profits.

5. **Sale of a Division**: In the case of sale of a division, the seller company is demerging its business whereas the buyer company is acquiring a business. For the first time the tax laws in India propose to recognise demergers.

Q7. **Explain the reasons why mergers fail to achieve their objective**

**Answer:**

7 reasons why mergers fail to achieve their objective

1. **No common vision**: In the absence of a clear statement of what the merged company will stand for, how the organisation will operate, what it will feel like, and what will be different compared to how things are today.

2. **Nasty surprises resulting from poor due diligence**: This sounds basic, but happens so often.

3. **Poor governance**: Lack of clarity as to who decides what, and process. Integrating the organization brings up a myriad of issues that need fast resolution or else the project comes to a stand-still.

4. **Poor communication**: Messages too frequently lack relevance to their audience and often hover at the strategic level when what employees want to know is why the organisation is merging, why a merger is the best course action it could take.
5. **Poor program management**: Insufficiently detailed implementation plans and failure to identify key interdependencies between the many work streams brings the project to a halt, or requires costly rework, extends the integration timeline and causes frustration.

6. **Lack of courage**: Delaying some of the tough decisions that are required to integrate the two organizations can only result in a disappointing outcome.

7. **Weak leadership**: Integrating two organizations is like sailing through a storm: you need a strong captain, someone whom everyone can trust to bring the ship to its destination, someone who projects energy, enthusiasm, clarity, and who communicates that energy to everyone. If senior managers do not walk the talk, if their behaviours and ways of working do not match the vision and values the company aspires to, all credibility is lost and the merger’s mission is reduced to meaningless words.

Q8. Write short note on Cross Border M&A.

**Answer:**

Cross-border M&A is a popular route for global growth and overseas expansion. Cross-border M&A is also playing an important role in global M&A.

This is especially true for developing countries such as India. Kaushik Chatterjee, CFO, of Tata Steel in an interview with McKenzie Quarterly in September 2009 articulates this point very clearly. To the following question:

The Quarterly: Last year was the first in which Asian and Indian companies acquired more businesses outside of Asia than European or US multinationals acquired within it. What’s behind the Tata Group’s move to go global?

His response is as follows:

“India is clearly a very large country with a significant population and a big market, and the Tata Group’s companies in a number of sectors have a pretty significant market share. India remains the main base for future growth for Tata Steel Group, and we have substantial investment plans in India, which are currently being pursued. But meeting our growth goals through organic means in India, unfortunately, is not the fastest approach, especially for large capital projects, due to significant delays on various fronts. Nor are there many opportunities for growth through acquisitions in India, particularly in sectors like steel, where the value to be captured is limited—for example, in terms of technology, product profiles, the product mix, and good management.”

Other major factors that motivate multinational companies to engage in cross-border M&A in Asia include the following:

- Globalization of production and distribution of products and services.
- Integration of global economies.
- Expansion of trade and investment relationships on international level.
- Many countries are reforming their economic and legal systems, and providing generous investment and tax incentives to attract foreign investment.
- Privatization of state-owned enterprises and consolidation of the banking industry.
Chapter 15
Startup Finance

Q1. What are the sources of funding for the Startups?

Answer

a. **Personal financing.** It may not seem to be innovative but you may be surprised to note that most budding entrepreneurs never thought of saving any money to start a business. This is important because most of the investors will not put money into a deal if they see that you have not contributed any money from your personal sources.

b. **Personal credit lines.** One qualifies for personal credit line based on one’s personal credit efforts. Credit cards are a good example of this. However, banks are very cautious while granting personal credit lines. They provide this facility only when the business has enough cash flow to repay the line of credit.

c. **Family and friends.** These are the people who generally believe in you, without even thinking that your idea works or not. However, the loan obligations to friends and relatives should always be in writing as a promissory note or otherwise.

d. **Peer-to-peer lending.** In this process group of people come together and lend money to each other. Peer to peer to lending has been there for many years. Many small and ethnic business groups having similar faith or interest generally support each other in their start up endeavors.

Platform that offers peer to peer lending services

   a. Len Den Club
   b. OHMY Technologies Pvt Ltd.
   c. Fair cent
   d. Rupaiya Exchange
   e. Lend box
   f. i2ifunding.com

e. **Crowd funding.** Crowd funding is the use of small amounts of capital from a large number of individuals to finance a new business initiative. Crowd funding makes use of the easy accessibility of vast networks of people through social media and crowd funding websites to bring investors and entrepreneurs together.

Platform that offers crowd funding services

   d. Millap
   e. Ketto
   f. Impact guru
   d. Wish berry
   e. Fuel A Dream
   f. Bit giving

f. **Microloans.** Microloans are small loans that are given by individuals at a lower interest to a new business ventures. These loans can be issued by a single individual or aggregated across a number of individuals who each contribute a portion of the total amount.
g. **Vendor financing.** Vendor financing is the form of financing in which a company lends money to one of its customers so that he can buy products from the company itself. Vendor financing also takes place when many manufacturers and distributors are convinced to defer payment until the goods are sold. This means extending the payment terms to a longer period for e.g. 30 days payment period can be extended to 45 days or 60 days. However, this depends on one’s credit worthiness and payment of more money.

h. **Purchase order financing.** The most common scaling problem faced by startups is the inability to find a large new order. The reason is that they don’t have the necessary cash to produce and deliver the product. Purchase order financing companies often advance the required funds directly to the supplier. This allows the transaction to complete and profit to flow up to the new business.

i. **Factoring accounts receivables.** In this method, a facility is given to the seller who has sold the good on credit to fund his receivables till the amount is fully received. So, when the goods are sold on credit, and the credit period (i.e. the date up to which payment shall be made) is for example 6 months, factor will pay most of the sold amount upfront and rest of the amount later. Therefore, in this way, a startup can meet his day to day expenses.

### Q2. Write short note on Pitch Presentation and points to be covered.

**Answer:**

✓ Pitch deck presentation is a short and brief presentation (not more than 20 minutes) to investors explaining about the prospects of the company and why they should invest into the startup business.

✓ So, pitch deck presentation is a brief presentation basically using PowerPoint to provide a quick overview of business plan and convincing the investors to put some money into the business.

✓ Pitch presentation can be made either during face to face meetings or online meetings with potential investors, customers, partners, and co-founders. Here, some of the methods have been highlighted below as how to approach a pitch presentation:

1. Introduction
2. Team
3. Problem
4. Solution
5. Marketing
6. Projections or Milestone
7. Competition
8. Business Model
9. Financing

### Q3. Write short notes on Bootstrapping

**Answer**

1. An individual is said to be boot strapping when he or she attempts to found and build a company from personal finances or from the operating revenues of the new company.

2. Professionals who engage in bootstrapping are known as boots trappers.
(3) Because the business does not have to rely on other sources of funding, initial business owners do not have to worry about diluting ownership between investors.

(4) Compared to using venture capital, boot strapping can be beneficial, as the entrepreneur is able to maintain control over all decisions.

(5) Methods of Bootstrapping
   a) Trade Credit
   b) Factoring
   c) Leasing
   d) State tax credits and programs
   e) Free and discounted resources

Q4. What is the definition of Startup under Startup India Initiative?

Answer: (Updated definition as of 31st July 2019)

Startup means an entity, incorporated or registered in India

1. Up to 10 years from its date of incorporation

2. Incorporated as either a Private Limited Company or a Registered Partnership Firm or a Limited Liability Partnership

3. Should have an annual turnover not exceeding 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. 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