ADVANCED FINANCIAL MANAGEMENT

THEORY BOOK

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DEDICATED TO MY LOVABLE FATHER [RAMESH JAIN]

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- Edition Three – Dec 2024
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Chapter 1 – Financial Policy and Corporate Strategy

1. Explain about the Advanced role of CFO in various matters including value creation? (OR) In the current scenario of globalization and growth in information and communication technologies etc. the responsibilities of CFOs have been drastically expanded. Explain. [May 2024 RTP]

- CFO's traditional role focused on **wealth maximization** for shareholders, but due to globalization, information and communication growth, and pandemics, their responsibilities have expanded due to complexity and changing expectations.
- CFOs now support **strategic and operational decision-making** in addition to governance, compliance, and business ethics.
- Following are the emerging roles of CFO:

• **Risk Management:** CFOs now responsible for managing an organization's risk management framework.
• **Supply Chain:** Post-pandemic challenges supply chain management, requiring CFOs to prioritize financial viability and sustainability for sustainable growth
• **Mergers, acquisitions, and Corporate Restructuring:** Recent growth and market share acquisitions have increased the importance of CFOs' role in strategic decisions, as errors can lead to business collapse.
• **Environmental, Social and Governance (ESG) Financing:** With the evolving concept of ESG, CFO role has been shifted from traditional financing to sustainability financing.

2. What are the three essential elements of any business?

Business need to have the following three fundamental essential elements

- A clear and realistic **strategy**,
- The **financial** resources, controls and systems to see it through and
- The right **management** team and processes to make it happen.

We may summarise this by saying that:

Strategy + Finance + Management = Fundamentals of Business

3. Write short note on strategy?

- Strategy may be defined **as the long-term direction** and scope of an organization to achieve competitive advantage through the **configuration of resources** within a changing environment for the **fulfilment of stakeholder's aspirations and expectations**.

4. What are the functions of Strategic Financial Management?

- Strategic Financial Management is a corporate strategic plan that involves **investment and financing decisions for achieving objectives**.
- It distinguishes between **strategic, tactical, and operational financial planning**, with senior management deciding strategy, middle management deciding tactics, and operational management overseeing operations.
- Investment and financial decisions will involve the following:
  - Continual search for best investment opportunities
  - Selection of the best profitable opportunities
  - Determination of optimal mix of funds for the opportunities
  - Establishment of systems for internal controls; and
  - Analysis of results for future decision-making

5. What are the key decisions falling within the scope of financial strategy? [Nov 2020 RTP, Nov 2019 (exam), Nov 2019 MTP, Jan 2021, May 2021 MTP, May 2023 MTP]

The key decisions falling within the scope of financial strategy include the following:

- **Financing decisions:** These decisions deal with the mode of financing or **mix of equity capital and debt capital**.
- **Investment decisions:** These decisions involve **the profitable utilization of firm's funds especially in long-term projects** (capital projects). Since the future benefits associated with such projects are not known with certainty, investment decisions necessarily involve risk. The projects are therefore evaluated in relation to their expected return and risk.

- **Dividend decisions:** These decisions **determine the division of earnings** between payments to shareholders and reinvestment in the company.
- **Portfolio decisions:** These decisions involve **evaluation of investments based on their contribution to the aggregate performance** of the entire corporation rather than on the isolated characteristics of the investments themselves.

6. Explain the different types of strategy? [Jan 2021, July 2021, Nov 2023 MTP]

Following are the three different types of strategy:

- **Corporate Level Strategy:** Corporate level strategy fundamentally is concerned with **selection of businesses in which a company should compete** and also with the development and coordination of that portfolio of businesses. Corporate level strategy should be able to answer three basic questions namely **suitability, feasibility and acceptability**
- **Business Unit Level Strategy:** Strategic business unit (SBO) may be any **profit centre that can be planned independently** from the other business units of a corporation. At the business unit level, the strategic issues are about practical coordination of operating units and **developing and sustaining a competitive advantage** for the products and services that are produced.
- **Functional Level Strategy:** The functional level is the level of the operating divisions and departments. The strategic issues at this level **are related to functional business processes and value chain**. 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.**

7. Describe the main function of corporate level strategy and state which three basic questions it should be able to answer. [Nov 2023, May 2024 MTP]

- Corporate level strategy fundamentally is concerned with selection of businesses in which a company should compete and with the development and coordination of that portfolio of businesses.
- Corporate level strategy should be able to answer three basic questions:
  - **Suitability:** Whether the strategy would work for the accomplishment of common objective of the company.
  - **Feasibility:** Determines the kind and number of resources required to formulate and implement the strategy.
  - **Acceptability:** It is concerned with the stakeholders' satisfaction and can be financial and non-financial

8. What is financial planning and what are the components of financial planning?

- Financial planning is the **backbone of the business planning and corporate planning**. It helps in **defining the feasible area of operation** for all types of activities and thereby defines the overall planning framework.
- Financial planning is a **systematic approach** whereby the financial planner helps the customer to **maximize his existing financial resources** by utilizing **financial tools** to achieve **his financial goals**.

There are 3 major components of Financial planning:

- Financial Resources (FR)
- Financial Tools (FT)
- Financial Goals (FG)

Financial Planning: FR + FT = FG

9. Explain outcomes of the Financial Planning? [Nov 2022 MTP, May 2022, Nov 2021 MTP, Nov 2022 MTP]

- Outcomes of the financial planning are the **financial objectives, financial decision-making and financial measures** for the evaluation of the corporate performance.
- Financial objectives are to be decided at the very outset so that rest of the decisions can be taken accordingly. The objectives need to be consistent with the corporate mission and corporate objectives.
- Financial decision making helps in analyzing the financial problems that are being faced by the corporate and accordingly deciding the course of action to be taken by it.

- The financial measures like ratio analysis, analysis of cash flow statement are used to evaluate the performance of the Company. The selection of these measures again depends upon the Corporate objectives.

10. Explain the interface between financial policy and strategic management? [May 2018, Nov 2020, May 2024, SM]

- The interface of strategic management and financial policy will be clearly understood if we appreciate the fact that the **starting point of an organization is money** and the **end point of that organization is also money**.
- **Sources of finance and capital structure** are the most important dimensions of a strategic plan. The need for fund mobilization to support the expansion activity of firm is very vital for any organization.
- 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
- Another important dimension of strategic management and financial policy interface is **the investment and fund allocation decisions**. A planner has to frame policies for regulating investments in fixed assets and for restraining of current assets
- **Dividend policy is yet another area** for making financial policy decisions affecting the strategic performance of the company. A close interface is needed to frame the policy to be beneficial for all
- Thus, the **financial policy of a company cannot be worked out in isolation of other functional policies.** It has a wider appeal and closer link with the overall organizational performance and direction of growth

11. How financial goals can be balanced with vis-à-vis sustainable growth? [May 2020 RTP, Nov 2018 MTP, May 2019 MTP, Nov 2022 MTP, SM]

- The concept of **sustainable growth can be helpful for planning healthy corporate 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.
- Often, a conflict can arise if growth objectives are not consistent with the value of the organization's sustainable growth. **Question concerning right distribution of resources may take a difficult shape if we take into consideration the rightness not for the current stakeholders but for the future stakeholders also**.
- To take an illustration, **let us refer to fuel industry where resources are limited in quantity and a judicial use of resources is needed to cater to the need of the future customers along with the need of the present customers**.
- One may have noticed the **save fuel campaign, a demarketing campaign that deviates from the usual approach of sales growth strategy and preaches for conservation of fuel** for their use across generation. This is an example of stable growth strategy adopted by the oil industry as a whole under resource constraints and the long run objective of survival over years.
- **Incremental growth strategy, profit strategy and pause strategy are other variants of stable growth strategy.**
- 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

12. What makes an organization financially sustainable? [May 2021 MTP, May 2021 RTP, May 2023, Nov 2023 MTP, May 2022 MTP]

To be financially sustainable, an organisation must:

- have more than one source of income;
- have more than one way of generating income;
- do strategic, action and financial planning regularly;
- have adequate financial systems;
- have a good public image;
- be clear about its values (value clarity); and
- have financial autonomy.

13. Write short note on sustainable growth rate (SGR)? (OR) "Sustainable growth is important to enterprise long-term development". Explain this statement in context of planning healthy corporate growth [OR] Explain the concept of Sustainable Growth Rate and also state assumptions of Sustainable growth model. [Nov 2020 MTP, May 2024 MTP]

- ❖ The sustainable growth rate (SGR), concept by Robert C. Higgins, of a firm is the **maximum rate of growth in sales that can be achieved**, given the firm's profitability, asset utilization, and desired dividend payout and debt (financial leverage) ratios.
- ❖ The sustainable growth rate is a measure of **how much a firm can grow without borrowing more money**. After the firm has passed this rate, it must borrow funds from another source to facilitate growth.
- ❖ Variables typically include the net profit margin on new and existing revenues; the asset turnover ratio, which is the ratio of sales revenues to total assets; the assets to beginning of period equity ratio; and the retention rate, which is defined as the fraction of earnings retained in the business.

SGR = ROE x (1- Dividend payment ratio)

- ❖ Sustainable growth models assume that the business wants to:
  - o maintain a target capital structure without issuing new equity;
  - o maintain a target dividend payment ratio; and
  - o increase sales as rapidly as market conditions allow.

14. Are Sustainable Growth Rate and Internal Growth Rate being same concepts? Explain [Nov 2021 MTP]

- Although both concepts appear to be same but there are some differences between them.
- The Internal Growth Rate can be defined as the maximum growth that a firm can achieve from using internal sources of fund i.e. without resorting to external funding.
- The Sustainable Growth Rate of a firm is the maximum rate of growth in sales that can be achieved, given the firm's profitability, asset utilization, and desired dividend payout and debt (financial leverage) ratios. The sustainable growth rate is a measure of how much a firm can grow without borrowing more money.

15. Often, a conflict can arise if growth objectives are not consistent with the value of the organization's sustainable growth. EXPLAIN [May 2022 MTP]

- The concept of sustainable growth can be helpful for planning healthy corporate 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.
- **Often, a conflict can arise if growth objectives are not consistent with the value of the organization's sustainable growth.** Question concerning right distribution of resources may take a difficult shape if we take into consideration the rightness not for the current stakeholders but for the future stakeholders also.
- To take an illustration, let us refer to fuel industry where resources are limited in quantity and a judicial use of resources is needed to cater to the need of the future customers along with the need of the present customers.
- One may have noticed the save fuel campaign, a demarketing campaign that deviates from the usual approach of sales growth strategy and preaches for conservation of fuel for their use across generation. This is an example of stable growth strategy adopted by the oil industry as a whole under resource constraints and the long run objective of survival over years.
- Incremental growth strategy, profit strategy and pause strategy are other variants of stable growth strategy. 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

16. What makes an organization sustainable? [May 2021 MTP, May 2023 MTP]

In order to be sustainable, an organisation must:

- have a clear **strategic direction;**
- be able to scan its environment or context to **identify opportunities for its work**;
- be able to attract, manage and **retain competent staff**;

- have an adequate **administrative and financial infrastructure**;
- be able to demonstrate its effectiveness and impact in order to **leverage further resources**; and
- get community support for, and involvement in its work.

17. Sustainable growth rate [Nov 2022 SA]

Mr. X has submitted the following data:

Particulars	Amount in lacs
Total Assets	250
Total Liabilities	220
Net Income	12
Dividend Paid	4.50
Sales	100

Mr. X wants to know to what extent sales can be increased without going for additional borrowings by using Sustainable Growth Rate (SGR) concept?

Answer:

Sustainable growth rate = ROE x Retention Ratio

$$\text{ROE} = \frac{\text{Net income}}{\text{Equity}} = \frac{12}{250 - 220} \text{ x } 100 = \mathbf{40.00}\%$$

$$\text{Retention Ratio} = \frac{\text{Retained earnings}}{\text{Total earnings}} = \frac{12 - 4.50}{12} \text{ x } 100 = 62.50\%$$

Sustainable growth rate = ROE x Retention Ratio = 40.00% x 62.50% = 25.00%

- Maximum sales that can be increased without going for additional borrowings is equal to Rs.125 lacs (100 + 25%)

Chapter 2 – Risk Management

1. What are the different types of risks faced by an organization? (May 2022)

Strategic Risk	❖ Strategic risk is a risk in which a **company's strategy becomes less effective and it struggles to achieve its goal**. ❖ It could be due to technological changes, a new competitor entering the market, shifts in customer demand, increase in the costs of raw materials, or any number of other large-scale changes
Compliance Risk	❖ **Non-compliance with rules and regulations is known as compliance risk** and the same can lead to penalties in the form of fine and imprisonment ❖ If the company **fails to comply with laws related to a new area or industry or sector**, it will pose a **serious threat to its survival**
Operational Risk	❖ Operational risk (**also known as internal risk**) relates to failure on the part of the **company to cope with day to day operational problems**. Operational risk relates to 'people' as well as 'process'.
Financial Risk	❖ Financial Risk is referred as the **unexpected changes in financial conditions** such as prices, exchange rate, Credit rating, and interest rate etc.

2. What are the various types of financial risk? [May 2022 MTP, Nov 2023]

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. ❖ This risk also covers the **credit risk** i.e. default by the counter party.
Political Risk	❖ This type of risk is **faced by overseas investors**, as the adverse action by the government of host country may lead to huge loses. ❖ This can arise due to confiscation or destruction of properties, rationing of remittance to home country, restriction on borrowings, invalidation of patents, price control of products, restriction on conversion of local currency of host country into foreign country
Interest rate risk	❖ This risk occurs **due to change in interest rate** resulting in change in asset and liabilities ❖ This risk is **more important for banking companies** as their balance sheet's items are more interest sensitive and their base of earning is spread between borrowing and lending rates.
Currency risk	❖ This risk **mainly affects the organization dealing with foreign exchange** as their cash flows changes with the movement in the currency exchange rates.
Liquidity risk	❖ This can be defined as **inability of organization to meet it liabilities** whenever they become due

3. What is financial risk? Also the financial risk can be viewed from different perspective. Explain? [Nov 2020 RTP, Nov 2018, May 2018 MTP, Nov 2018 MTP, May 2020 MTP, May 2021 MTP, Nov 2023 MTP, Nov 2021 MTP, Nov 2022 MTP, SM]

❖ Financial Risk is **referred as the unexpected changes in financial conditions such as prices, exchange rate, Credit rating, and interest rate** etc. Though political risk is not a financial risk in direct sense but same can be included as any unexpected political change in any foreign country may lead to country risk which may ultimately result in financial loss

❖ **From stakeholder's point of view:** Major stakeholders of a business are **equity shareholders and they view financial gearing** i.e. ratio of debt in capital structure of company as risk since in event of winding up of a company they will be least prioritized. Even **for a lender, existing gearing is also a risk** since company having high gearing faces more risk in default of payment of interest and principal repayment.

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

❖ **From Government's point of view:** From Government's point of view, **the financial risk can be viewed as failure of any bank or (like Lehman Brothers) down grading of any financial institution leading to spread of distrust among society at large**. Even this risk also includes willful defaulters. This can also be extended to sovereign debt crisis

4. **What is value-at-risk (VAR) and explain its features and application? [May 2018 RTP, May 2020 RTP, May 2019, May 2018 MTP, Nov 2018 MTP, May 2022 MTP, May 2023 MTP, May 2024 MTP, SM]**

Meaning	VAR is a **measure of risk of investment**. VAR answers two basic questions namely (i) What is the worst-case scenario? And (ii) What will be the loss?
Features	❖ **Components of calculations:** VAR is based on time period, confidence level (95% or 99%) and loss in percentage or amount ❖ **Statistical method:** It is type of statistical tool based on standard deviation ❖ **Time horizon:** VAR can be applied for different time horizons say one day, one week, one month and so on. ❖ **Probability:** Assuming the values are normally attributed, probability of maximum loss can be predicted. ❖ **Control Risk:** Risk can be controlled by setting limits for maximum loss. ❖ **Z score:** Z Score **indicates how many standard Deviations is away from Mean value** of a population. VAR = Z score x standard deviation
Application	❖ to measure the **maximum possible loss** on any portfolio or a trading position. ❖ as a **benchmark for performance measurement** of any operation or trading. ❖ to **fix limits for individuals** dealing in front office of a treasury department. ❖ to enable the management to **decide the trading strategies**. ❖ as a tool for **Asset and Liability Management** especially in banks.

5. **What are the various hints indicating counter party risk and how to manage the same? [Nov 2019 MTP, Dec 2021, Nov 2023 MTP]**

Hints	❖ Failure to **obtain necessary resources** to complete the project or transaction undertaken. ❖ Any **regulatory restrictions** from the Government. ❖ **Hostile action** of foreign government. ❖ **Let down** by third party. ❖ Have become **insolvent**
Techniques to manage	❖ Carrying out **Due Diligence** before dealing with any third party. ❖ Do not **over commit** to a single entity or group or connected entities. ❖ Know your **exposure limits**. ❖ Review the limits and procedure for **credit approval** regularly. ❖ **Rapid action** in the event of any likelihood of defaults. ❖ Use of **performance guarantee**, insurance or other instruments

6. **How to assess political risk and techniques to manage the same? [OR] Explain how an organization interested in making investment in foreign country can assess Country risk and mitigate the risk? [May 2021 RTP]**

Identification of Political risk	❖ This can be identified through actions of the host country Government. Actions such as insistence of local labour, restriction on currency conversion, take-over of assets by Government or price fixation
Ways to assess Country risk	**Country risk** is main component of political risk and the same can be identified with the following: ❖ By referring **political ranking** published by different business magazines. ❖ By evaluating **country's macro-economic conditions**. ❖ By **analyzing the popularity** of current government and assess their stability. ❖ By taking advises from the **embassies** of the home country in the host countries.
Techniques to manage	❖ Local sourcing of raw materials and labour. ❖ Entering into joint ventures ❖ Local financing ❖ Prior negotiations

7. **How to identify interest rate risk?**

Identification of interest rate risk:

- ❖ Monetary Policy of the Government.
- ❖ Any action by Government such as demonetization etc.
- ❖ Economic Growth
- ❖ Release of Industrial Data
- ❖ Investment by foreign investors
- ❖ Stock market changes

8. DESCRIBE the various parameters to identity the currency risk? [Nov 2018 RTP, Nov 2019 RTP, Nov 2019 MTP, Nov 2022 MTP, May 2023 MTP, Nov 2023, My 2024 MTP]

Identification of currency risk:

- ❖ **Government Action:** The Government action of any country has visual impact in its currency.
- ❖ **Nominal Interest Rate:** As per interest rate parity (IRP) the currency exchange rate depends on the nominal interest of that country.
- ❖ **Inflation Rate:** Purchasing power parity theory discussed in later chapters impact the value of currency.
- ❖ **Natural Calamities:** Any natural calamity can have negative impact.
- ❖ **War, Coup, Rebellion etc.:** All these actions can have far reaching impact on currency's exchange rates.
- ❖ **Change of Government:** The change of government and its attitude towards investment also helps to identify the currency risk.

9. Risk exposure (Nov 2020 MTP):

TRC Cables Ltd. (an Indian Company) is in the business of manufacturing Electrical Cables and Data Cables including Fiber Optics cables. While mainly it exports the manufactured cables to other countries it has also established its production facilities at some African countries' due availability of raw material and cheap labour there. Some of the major raw material such as copper, aluminum and other non-ferrous metals are also imported from foreign countries. Hence overall TRC has frequent receipts and expenditure items denominated in Non-INR currencies.

Though TRC make use of Long-Term Debts and Equity to meet its long term fund requirements but to finance its operations it make use of short-term financial instruments such as Commercial Papers, Bank Credit and Term Loans from the banks etc. If any surplus cash is left with TRC it is invested in interest yielding securities. Recently due to stiff competition from its competitors TRC has relaxed its policy for granting credit and to manage receivables it has formed a separate credit division.

Further to hedge itself against the various risk it has entered into various OTC Derivatives Contracts settled outside the Exchange.

Required:

Evaluate the major risks to which TRC Ltd. is exposed to

Answer:

Following are main categories of risks to which TRC Cables is exposed to:

(i) Financial Risks: TRC is exposed to following financial risks:

- **Currency Risk:** Since most of the Receipts and Payments of TRC are denominated in Non-INR currencies it is exposed to Currency Risk.
- **Commodity Risk:** As major constituents of production of TRC are commodities such copper, aluminum etc. it is subject to Commodity Risk.
- **Interest Rate Risk:** As TRC borrows and invest money in short-term instruments it is exposed to Interest Rate Risk.
- **Counter Party Risk:** Due to relaxation of norms for granting credits certainly the receivable amount must have increased resulting in increased in Credit Risk.
- **Liquidity Risk:** Since for short-term funding requirements TRC is using Commercial Papers etc. they are exposed to Liquidity Risk as in time of need if funds are not available from these sources then securities shall be sold at discounted price.
- **Political Risk:** As TRC is operating in various other countries it is also exposed to Political Risks such as Restriction on Conversion of local earnings into foreign currency, restrictions on remittance etc.

(ii) Settlement Risk: The use of OTC Derivatives by TRC also expose it to the sett lement risk as the parties with whom it has entered into the contract may not honor the same.

Chapter 3 – Advanced Capital Budgeting Decisions

1. What is the impact of inflation on capital budgeting decision? [SM]

- Adjustment for inflation is a necessity for capital investment appraisal. **This is because inflation will raise the revenues & costs of the project**. The net revenues after adjustment for inflation shall be equal to net revenues in current terms
- Depreciation charges are based on historical costs. Tax benefits accruing from depreciation charges do not keep parity with inflation
- Costs of capital considered for investment appraisals contain a premium for anticipated inflation. Due to inflation investors require the nominal rate of return to be equal to **Required Rate of Return in real terms plus Rate of Inflation.**

2. Explain about the impact of change in technology on capital budgeting decision?

- Capital budgeting decisions often focus on monetary terms, **neglecting critical factors like technology**.
- Analyzing the impact of technology change on capital budgeting is crucial for understanding future cash flows and **determining the need for replacement machinery with improved technology**.

Impact of change in technology:

- Change in technology can significantly **alter production process**
- Changes can also yield benefits such as **improved quality, delivery time greater flexibility, etc**.
- Changed technology can also result in **reduction in cost of capital**
- **Improved cash inflows** can be achieved through technological changes
- There may be need to incur additional cost in the form of **additional capital expenditure**
- The sale volume can be impacted as the **anticipated life cycle of the product can be shortened** because of change in consumer preference

Incorporation of risk in capital budgeting decisions:

- Capital Budgeting decisions can incorporate technology change impact **using techniques like sensitivity analysis, scenario analysis, and simulation analysis**.
- After launching a project, analyze its positive or negative impact and revise monetary estimates.
- If continuation is unviable, consider **abandonment options** and adjust discounting rates accordingly.

3. Write short note on impact of change in Government policies on Capital Budgeting Decisions?

- Government policies significantly impact capital budgeting decisions, as they affect future cash flows for firms. **These policies can affect suppliers, buyers, customers, and service providers**. Analyzing and revising estimates is crucial, and firms should consider abandoning projects if necessary.
- Government policy changes impact domestic and international capital budgeting decisions.
- Government policies change over time, with some lasting five to ten years, while others change quarterly to a year. The impact of each policy varies.
- Some policies which are frequently announced/reviewed within a year are **Fiscal policy and Monetary Policy**. Fiscal policy involves government spending, taxation, and borrowing to influence economic activity and growth. Monetary policy regulates money and credit availability to promote economic growth, price stability, and balance of payments equilibrium

4. Explain about the impact of change in Government policies on Domestic Capital Budgeting Decision?

- **Revision in interest rates:** Government-determined interest rate changes can impact the cost of capital, as the cost of debt is dependent on bank interest rates. While not significantly affecting capital budgeting, **they can significantly impact working capital decisions due to the impact on bank overdrafts and cash flow estimation**. Small changes in interest rates can be ignored, but major changes, like 100 basis points, can impact cash flows and require revision of estimates.
- **Fiscal policy:** Additionally, changes in fiscal policy, tax rates, and annual cash flows may also require revision of estimated cash flows

5. How does a change in government policies impact international capital budgeting decisions?

- **Monetary policy:** Foreign exchange rate plays a crucial role in International Capital Budgeting decisions. Changes in bank rates and money supply, may require revision of estimates.
- **Fiscal policy:** Change in Tax Rates relating to Foreign Income or changes in provisions of Double Tax Avoiding Agreement (DTAA) as decided in Fiscal Policy may call revision of estimates
- Forecasting policy changes and incorporating proper provisions in expected cash flows are essential.

6. What is risk and uncertainty?

Risk: Risk is a situation where: ❖ Several outcomes are possible ❖ Within this, any one outcome can occur ❖ Each outcome has a known probability ❖ Such probabilities are assessed with respect to past information	**Uncertainty:** Uncertainty is a situation where ❖ The range of outcomes is unknown ❖ The probability of outcomes is not known

Note: RISK CAN BE MEASURED WHEREAS UNCERTAINTY CANNOT BE MEASURED

7. Why risk is required to be adjusted in capital budgeting decisions?

❖ There is an **opportunity cost involved while investing in a project for the level of risk**. Adjustment of risk is necessary to help make the decision as to whether the returns out of the project are proportionate with the risks borne and whether it is worth investing in the project over the other investment options available

❖ Risk adjustment is required to know **the real value of the Cash Inflows**

8. What are the various sources of risk?

Internal Factors	
Project specific risk	Risks which are **related to a particular project and affects the project's cash flows,** it includes completion of the project in scheduled time, error of estimation in resources and allocation, estimation of cash flows etc.
Company specific risk	**Risk which arise due to company specific factors** like downgrading of credit rating, changes in key managerial persons, cases for violation of Intellectual Property Rights (IPR) and other laws and regulations, dispute with workers etc
External Factors	
Industry specific risk	These are the risks **which effects the whole industry in which the company operates**. The risks include regulatory restrictions on industry, changes in technologies etc
Market risk	The risk which **arise due to market related conditions** like entry of substitute, changes in demand conditions, availability and access to resources etc.
Competition risk	These are risks **related with competition in the market** in which a company operates. These risks are risk of entry of rival, product dynamism and change in taste and preference of consumers etc
Risk due to economic conditions	These are the risks which are **related with macro-economic conditions** like changes in monetary policies by central banks, changes in fiscal policies like introduction of new taxes and cess, inflation etc.
International risk	These are risk which are related with conditions which are caused by **global economic conditions**

9. Mention the various tools available for incorporating risk in capital budgeting?

Statistical Techniques	Conventional Techniques	Other Techniques
• Probability • Variance or SD • Coefficient of variation	• Risk-adjusted Discount Rate • Certainty equivalent	• Sensitivity Analysis • Scenario Analysis • Simulation Analysis • Decision Tree

10. How are projects evaluated using risk-adjusted discount rate approach? [Nov 2020]

❖ The project with a higher risk will be discounted at a higher rate (RADR). Select the project with higher risk adjusted NPV

❖ RADR = Risk free rate + Risk Premium

Advantages:
- ❖ Easy to understand
- ❖ Incorporates risk premium in the discounting factor

Limitations:
- ❖ Difficulty in finding risk premium and risk-adjusted discount rate
- ❖ Though NPV can be calculated but it is not possible to calculate Standard Deviation of a given project

11. **Explain certainty equivalents, one of the techniques of risk analysis? [Nov 2020 MTP, Nov 2018, SM]**
- ❖ As per CIMA terminology, **"An approach to dealing with risk in a capital budgeting context**. It involves expressing risky future cash flows in terms of the certain cashflow which would be considered, by the decision maker, as their equivalent, **that is the decision maker would be indifferent between the risky amount and the (lower) riskless amount considered to be its equivalent."**
- ❖ The certainty equivalent is a **guaranteed return that the management would accept rather than accepting a higher but uncertain return**. This approach allows the decision maker to incorporate his or her utility function into the analysis. In this approach a set of risk less cash flow is generated in place of the original cash flows.

Advantages:
- The certainty equivalent method is simple and easy to understand and apply.
- It can easily be calculated for **different risk levels applicable to different cash flows**. For example, if in a particular year, a higher risk is associated with the cash flow, it can be easily adjusted and the NPV can be recalculated accordingly.

Disadvantages:
- There is no objective or mathematical method to estimate certainty equivalents. Certainty Equivalents are subjective and vary as per each individual's estimate
- Certainty equivalents are decided by the management based on their perception of risk. However, the risk perception of the shareholders who are the money lenders for the project is ignored. Hence, it is not used often in corporate decision making

12. **What are the key differences between the Certainty Equivalent approach and the RADR (Risk-Adjusted Discount Rate) method?"**
- Certainty Equivalent Method **is superior to Risk Adjusted Discount Rate Method as it does not assume that risk increases with time at constant rate**. Each year's Certainty Equivalent Coefficient is based on level of risk impacting its cash flow.
- Despite its soundness, it is not preferable like Risk Adjusted Discount Rate Method. **It is difficult to specify a series of Certainty Equivalent Coefficients but simple to adjust discount rates**

13. **Explain the concept of sensitivity analysis? [May 2019, May 2022 MTP, Nov 2021 MTP, SM]**
- Sensitivity analysis is a risk assessment procedure used in Capital Budgeting to study the impact of changes in variables on project outcomes. It considers the importance of variables identified as of special significance.
- Sensitivity analysis studies the impact of a single variable on the project's NPV (or IRR), determining the more sensitive the variable is to the project's outcome.

Advantages:
- Identifies critical issues that impact project success/failure
- Simple technique

Disadvantages:
- This analysis assumes that all variables are independent i.e. they are not related to each other, which is unlikely in real life.
- This analysis does not look to the probability of changes in the variables.

14. What is scenario analysis and how does it help in decision-making and risk assessment?

Scenario Analysis:

- Sensitivity analysis is probably the most widely used risk analysis technique, it does have limitations. Therefore, we need to extend sensitivity analysis to deal with the probability distributions of the inputs.
- In addition, it would be useful to vary more than one variable at a time so we could see the combined effects of changes in the variables. Scenario analysis provides answer to these situations of extensions.
- This analysis brings in the probabilities of changes in key variables and also allows us to change more than one variable at a time.
- This analysis begins with base case or most likely set of values for the input variables. Then, go for worst case scenario (low unit sales, low sale price, high variable cost and so on) and best case scenario. So, in a nutshell Scenario analysis examine the risk of investment, so as to analyse the impact of alternative combinations of variables, on the project's NPV (or IRR).

15. What are the main differences between Scenario Analysis and Sensitivity Analysis?

- Sensitivity analysis calculates the NPV or IRR of a single input variable, while scenario analysis considers a scenario where all input variables change simultaneously
- Scenario analysis is more complex than sensitivity analysis, as all inputs are changed simultaneously, while sensitivity analysis only changes one input.

16. Write short note on Monte Carlo Simulation? [SM]

- Simulation analysis is a technique that **involves infinite calculations** to obtain possible outcomes and probabilities for an action.
- Monte Carlo simulation, based on casino gambling mathematics, provides decision-makers with a probability distribution of expected net present values (NPVs) rather than single-point estimates.
- It involves **modeling investment projects, cash flows, and key factors affecting cash receipt** and payments, and specifies a range for probability distributions for each model's assumptions.

Advantages:

- Simulation analysis offers advantages in predicting market situations, handling complex inter-relationships, and requiring decision-makers to explicitly consider uncertainties in projects.

Limitations:

- Simulation has several limitations, including difficulty modeling projects and specifying exogenous variables' probability distributions.
- Simulation is imprecise, providing rough approximations of NPV probability distributions.
- Realistic simulation models are likely constructed by management experts, making them difficult for decision-makers with limited understanding.
- Determine NPV in simulation run, risk free discount rate is used. **It is done to avoid prejudging risk**, which is reflected in the dispersion of the distribution of N.P.V. This derived measure of NPV takes a different meaning from its original value, and, therefore, is difficult to interpret

17. Could you provide a brief overview of decision tree analysis and its applications in decision-making processes?

- The Decision Tree technique is a technique used to **handle sequential investment decisions** that may impact future decisions and events.
- It involves a graphic display of the relationship between a present decision and future events.
- **Finance managers face two types of situations: Decision, where they have control over the outcome, and Event, where they have no control**.
- The probability distribution is assigned to the outcomes, and the manager should act rationally in these situations.

Chapter 4 – Security Analysis

1. What is security Analysis?

- Security Analysis involves a **systematic analysis of the risk return profiles** of various securities which is to help a rational investor **to estimate a value for a company from all the price sensitive information/data** so that he can make purchases when the market under-prices some of them and thereby earn a reasonable rate of return.
- Two approaches viz. **fundamental analysis and technical analysis** are in vogue for carrying out Security Analysis.

2. What is fundamental Analysis?

- Fundamental analysis is based on **risk-return characteristics** of securities
- Fundamental analysis is based on the assumption that the **share prices depend upon the future dividends expected by the shareholders**
- The **present value** of the future dividends can be calculated by discounting the cash flows at an **appropriate discount rate** and is known as the **'intrinsic value of the share'**.
- A share that is priced **below the intrinsic value must be bought**, while a share quoting **above the intrinsic value must be sold**
- The key variables that an investor must monitor in order to carry out his fundamental analysis are **economy wide factors, industry wide factors and company specific factors**. In other words, fundamental analysis encompasses economic, industrial and company analyses **(EIC Analysis)**.

3. What is Economic Analysis and what are the factors affecting the same? [May 2020 RTP, Nov 2019 MTP, SM]

- Economic analysis is used to **forecast national income with its various components** that have a bearing on the concerned industry and the company in particular.
- **Macro- economic factors** e. g. historical performance of the economy in the past/ present and expectations in future, growth of different sectors of the economy in future with signs of stagnation/degradation at present to be assessed while analyzing the overall economy.
- Trends in **peoples' income and expenditure reflect** the growth of a particular industry/company in future. Consumption affects corporate profits, dividends and share prices in the market.

Factors affecting economic analysis:

Growth rates of national income and related measures	The estimated growth rate of the economy **would be a pointer to the prospects for the industrial sector**, and therefore to the returns investors can expect from investment in shares
Growth rates of industrial sector	**This can be further broken down into growth rates of various industries** or groups of industries if required. The growth rates in various industries are estimated based on the estimated demand for its products
Inflation	**Inflation is measured in terms of either wholesale prices** (the Wholesale Price Index or WPI) or **retail prices** (Consumer Price Index or CPI). The demand in some industries, **particularly the consumer products industries, is significantly influenced by the inflation rate**.
Monsoon	Because of the **strong forward and backward linkages**, monsoon is of great concern to investors in the stock market too.

4. What are the techniques used for economic analysis? [Nov 2019 MTP, May 2019 MTP]

Anticipatory surveys	❖ They help **investors to form an opinion** about the future state of the economy. It incorporates **expert opinion on construction activities, expenditure on plant and machinery**, levels of inventory – all having a definite bearing on economic activities. ❖ In spite of **valuable inputs available through this method, it has certain drawbacks:** (i) Survey results do not guarantee that intentions surveyed would materialize. (ii) They are not regarded as forecasts per se, as there can be a consensus approach by the investor for exercising his opinion. ❖ **Continuous monitoring** of this practice is called for to make this technique popular.

Barometer/ Indicator Approach	Various indicators are used to find out how the economy shall perform in the future. The indicators have been classified as under: ❖ **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. ❖ **Roughly Coincidental Indicators:** They reach their peaks and troughs at approximately the same in the economy. ❖ **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. Money supply in the economy also affects investment decisions.
Economic Model Building 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: ❖ Hypothesize **total economic demand by measuring total income** (GNP) based on political stability, rate of inflation, changes in economic levels. ❖ **Forecasting the GNP** by estimating levels of various components viz. consumption expenditure, gross private domestic investment, government purchases of goods/services, net exports. ❖ After forecasting individual components of GNP, add them up to obtain the forecasted GNP. ❖ **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.

5. **What is Industry Analysis and what are the factors affecting the same? [May 2019 RTP]**

- ❖ Industry analysis is **concerned with analysing the expected performance of the specific industry** to which the company belongs
- ❖ First of all, an assessment has to be made regarding all the conditions and factors relating to **demand of the particular product, cost structure of the industry and other economic and Government constraints on the same**. Since the basic profitability of any company depends upon the economic prospects of the industry to which it belongs, **an appraisal of the particular industry's prospects is essential**.

Factors affecting industry analysis:

Product Life-Cycle	An industry usually exhibits **high profitability in the initial and growth stages**, medium but steady profitability in the maturity stage and a sharp decline in profitability in the last stage of growth.
Demand Supply Gap	**Excess supply reduces the profitability** of the industry because of the decline in the unit price realization, **while insufficient supply tends to improve the profitability** because of higher unit price realization.
Barriers to Entry	Any industry with **high profitability would attract fresh investments**. The **potential entrants to the industry, however, face different types of barriers to entry**. Some of these barriers are innate to the product and the technology of production, **while other barriers are created by existing firms in the industry.**
Government Attitude	The attitude of the government determinant of its prospects.
State of Competition in the Industry	Factors to be noted are- **firms with leadership capability** and the **nature of competition amongst them** in foreign and domestic market, type of products manufactured viz. **homogeneous or highly differentiated**, demand prospects through classification viz customer-wise/area-wise, changes in demand patterns in the long/immediate/ short run, **type of industry the firm is placed** viz. growth, cyclical, defensive or decline.

Cost Conditions and Profitability	**Factors to be considered are:** ❖ **Cost allocation among various heads** e.g. raw material, labors and overheads and their controllability. Overhead cost for some may be higher while for others labour may be so. Labour cost which depends on wage level and productivity needs close scrutiny. ❖ Product price. ❖ **Production capacity** in terms of installation, idle and operating. ❖ Level of **capital expenditure** required for maintenance / increase in productive efficiency.
Technology and Research	**Things to be probed in this regard are:** ❖ **Nature and type** of technology used. ❖ Expected **changes in technology** for new products leading to increase in sales. ❖ **Relationship of capital expenditure** and sales over means increase in sales. ❖ Money spent in **research and development**. Whether this amount relates to redundancy or not? ❖ Assessment of industry in **terms of sales and profitability** in short, immediate and long run.

6. **What are the techniques used in industry analysis?**

Regression Analysis	❖ Investor diagnoses the factors determining the demand for output of the industry through **product demand analysis**. ❖ Factors to be considered are **GNP, disposable income**, per capita consumption /income, price elasticity of demand. ❖ For identifying factors **affecting demand**, statistical techniques like **regression analysis correlation are used**.
Input-output Analysis	❖ It reflects the **flow of goods and services** through the economy, intermediate steps in production process as goods proceed from raw material stage through final consumption. ❖ This is carried out to **detect changing patterns/trends** indicating growth/decline of industries

7. **What are the factors to be analysed for company analysis?**

Net worth and Book Value	❖ Net Worth is **sum of equity share capital, preference share capital and free reserves less intangible assets and any carry forward of losses**. ❖ The total net worth divided by the number of shares is the much talked about **book value of a share**. Though the book value is often seen as an indication of the intrinsic worth of the share, this may not be so for two major reasons. ❖ First, the **market price of the share reflects the future earnings potential** of the firm which may have no relationship with the value of its assets. Second, the book value is based upon the **historical costs** of the assets of the firm and these may be gross underestimates of the cost of the replacement or resale values of these assets
Sources and uses of funds	❖ The identification of sources and uses of funds is known as Funds Flow Analysis. ❖ One of the **major uses of funds flow analysis is to find out whether the firm has used short-term sources of funds to finance long-term investments**. ❖ Such methods of financing increase the **risk of liquidity crunch** for the firm, as long-term investments, because of the gestation period involved may not generate enough surpluses in time to meet the short-term liabilities incurred by the firm.
Cross-sectional and time series Analysis	❖ One of the main purposes of examining financial statements is to **compare two firms**, compare a firm against some benchmark figures for its industry and to **analyze the performance of a firm over time**. ❖ The techniques that are used to do such proper comparative analysis are: **common-sized statement, and financial ratio analysis**

Size and Ranking	❖ A rough idea regarding the **size and ranking of the company within the economy**, in general, and the industry, in particular, would help the investment manager in assessing the risk associated with the company. ❖ In this regard the **net capital employed, the net profits, the return on investment and the sales** figures of the company under consideration may be compared with similar data of other companies in the same industry group.
Growth Record	❖ The **growth in sales, net income, net capital employed and earnings per share** of the company in the past few years should be examined. ❖ The following three growth indicators may be particularly looked into: (a) Price earnings ratio, (b) Percentage growth rate of earnings per annum, and (c) Percentage growth rate of net block.
Financial Analysis	❖ An analysis of its financial statements for the past few years would help the **investment manager in understanding the financial solvency and liquidity**, the efficiency with which the funds are used, the profitability, the operating efficiency and the financial and operating leverages of the company. ❖ For this purpose, certain fundamental ratios have to be calculated such as earnings per share, price earnings ratio, book value, intrinsic value, return on owner's investment, capital turnover ratios and cost structure ratios
Competitive advantage	❖ A company's long-term success is driven largely by its ability to maintain its competitive advantage. ❖ **Powerful competitive advantages** such as Apple's brand name and Samsung's domination of the mobile market, create a shield around a business that allows it to keep competitors at a distance.
Quality of management	❖ This is an **intangible factor** and has a very important bearing on the value of the shares. ❖ Every investment manager knows that the shares of certain business houses command a higher premium than those of similar companies managed by other business houses. This is because of the **quality of management, the confidence that investors have in a particular business house, its policy vis-a-vis its relationship with the investors, dividend and financial performance record of other companies in the same group, etc**. ❖ Quality of management has to be seen with reference to the **experience, skills and integrity** of the persons at the helm of affairs of the company. ❖ The policy of the management regarding relationship with the shareholders is an important factor since certain business houses believe in **very generous dividend and bonus distributions while others are rather conservative**.
Corporate governance	❖ Whether company is complying with all aspects of **clause 49**. ❖ How well corporate governance policies serve stakeholders? ❖ Quality and timeliness of company financial disclosures. ❖ Whether quality **independent directors** are inducted.
Regulation	❖ Regulations plays an **important role in maintaining the sanctity of the corporate form of organization**. ❖ In Indian listed companies, **Companies Act, Securities Contract and Regulation Act and SEBI Act** basically look after regulatory aspects of a company. ❖ A listed company is also **continuously monitored by SEBI** which through its guidelines and regulations protect the interest of investors.
Location and Labour-management relations	❖ The locations of the company's manufacturing facilities determine its **economic viability** which depends on the availability of crucial inputs like power, skilled labour and raw-materials, etc. Nearness to markets is also a factor considered. ❖ In the past few years, the investment manager has begun looking into **the state of labour-management relations in the company under consideration and the area where it is located**.

Pattern of existing stock holding	❖ An analysis of the pattern of existing stock holdings of the company would also be relevant. This would show the stake of various parties in the company.
Marketability of the shares	❖ Mere listing of a share on the stock exchange does not automatically mean that the share can be sold or purchased at will. ❖ There are many shares which remain inactive for long periods with no transactions being effected. ❖ In this regard, dispersal of shareholding with special reference to the extent of public holding should be seen. The other relevant factors are the **speculative interest in the particular scrip, the particular stock exchange where it is traded and the volume of trading.**

8. What are the techniques used in company analysis?

Correlation and Regression Analysis	❖ Simple regression is **used when inter relationship covers two variables**. For more than two variables, multiple regression analysis is followed. ❖ Here the inter relationship between variables belonging to economy, industry and company are found out. ❖ The main advantage in such analysis is **the determination of the forecasted values along with testing the reliability of the estimates.**
Trend Analysis	❖ The **relationship of one variable is tested over time using regression analysis**. It gives an insight to the historical behavior of the variable
Decision Tree Analysis	❖ Information relating to the **probability of occurrence of the forecasted value is considered useful**. A range of values of the variable with probabilities of occurrence of each value is taken up. The limitations are reduced through decision tree analysis and use of simulation techniques. ❖ In decision tree analysis, **the decision is taken sequentially with probabilities attached to each sequence.** To obtain the probability of final outcome, various sequential decisions given along with probabilities, **the probabilities of each sequence is to be multiplied and them summed up**

9. What is technical analysis and what are its assumptions and principles? [Dec 2021]

Meaning	❖ Technical Analysis is a method of **share price movements** based on a study of price graphs or charts on the assumption **that share price trends are repetitive, that since investor psychology follows a certain pattern**, what is seen to have happened before is likely to be repeated. ❖ A technical analyst attempts precisely that. The two basic questions that he seeks to answer are: (i) Is there a discernible trend in the prices? (ii) If there is, then are there **indications that the trend would reverse**? ❖ The methods used to answer these questions are **visual and statistical**. The visual methods are based on examination of a variety of charts to make out patterns, while the statistical procedures analyse price and return data to make trading decisions.
Assumptions	❖ The market value of stock is actually depending on the **supply and demand** for a stock ❖ The supply and demand are actually governed by **several factors**. ❖ Stock prices generally move in trends which continue for a substantial period of time. ❖ Technical analysis **relies upon chart analysis** which shows the past trends in stock prices **rather than the information in the financial statements** like balance sheet or profit and loss account
Principles	❖ **The Market Discounts Everything:** Many experts criticize technical analysis **because it only considers price movements and ignores fundamental factors**. The argument against such criticism is based on the **Efficient Market Hypothesis**, which states that a company's share price already reflects everything that has or could affect a company. So, **technical analysts generally have the view that a company's share price includes everything including the fundamentals** of a company.

	❖ **Price moves in trends:** Technical analysts **believe that prices move in trends**. In other words, a stock price is more likely to continue a past trend than move in a different direction. ❖ **History tends to repeat itself:** Technical analysts believe that history tends to repeat itself. Technical analysis **uses chart patterns to analyze subsequent market movements to understand trends**.

10. Explain Dow Theory? [May 2018 MTP, Nov 2018 MTP, Nov 2022 MTP, SM]

Two indices	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).** These averages reflect the aggregate impact of all kinds of information on the market.
Three classifications	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**.
Primary movement	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**.
Secondary Movement	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**.
Daily fluctuations	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.**
Interpretation of bull/bear market	The theory, in practice, states that if the **cyclical swings of the stock market averages** are **successively higher** and the **successive lows are higher**, then the market **trend is up and a bullish market exists**. Contrarily, if the successive highs and successive lows are lower, then the direction of the market is down and a bearish market exists.
Three moves of bull/bear market	❖ Charles Dow proposed that the primary uptrend would have **three moves up**, the **first one being caused by accumulation of shares by the far-sighted, knowledgeable investors,** 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**. ❖ 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.

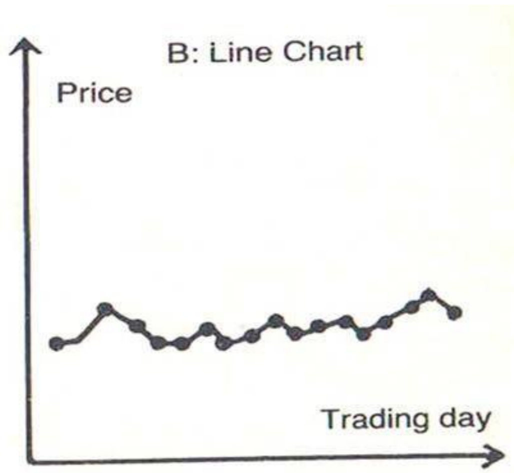
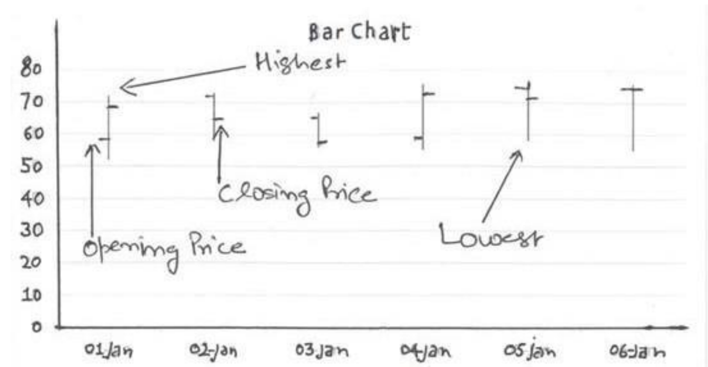
11. Explain Elliott Wave Theory? [SM]

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

12. Explain Random Walk Theory? [May 2018 MTP]

- Many investment managers and stock market analysts believe that **stock market prices can never be predicted** because they are not a result of any underlying factors but are mere statistical ups and downs. This hypothesis is known as **Random Walk hypothesis which states that the behaviour of stock market prices is unpredictable** and that there is no relationship between the present prices of the shares and their future prices.
- A British statistician, M. G. Kendell, found that **changes in security prices behave nearly as if they are generated by a suitably designed roulette wheel** for which each outcome is statistically independent of the past history. In other words, the fact that there are peaks and troughs in stock exchange prices is a mere statistical happening – successive peaks and troughs are unconnected.
- The supporters of this theory put out a simple argument. It follows that:
  - Prices of shares in stock market **can never be predicted**.
  - The reason is that the **price trends are not the result of any underlying factors**, but that they represent a statistical expression of past data.
  - There may be **periodical ups or downs in share prices**, but no connection can be established between two successive peaks (high price of stocks) and troughs (low price of stocks).

13. Explain the various charting techniques?

<table>
<tr>
<td>Line chart:
In a line chart, lines are used to connect successive day's prices. The closing price for each period is plotted as a point. These points are joined by a line to form the chart. The period may be a day, a week or a month</td>
<td>
</td>
</tr>
<tr>
<td>Bar Chart:
In a bar chart, a vertical line (Bar) represents the lowest to the highest price, with a short horizontal line protruding from the bar representing both the opening and closing prices for the period</td>
<td>
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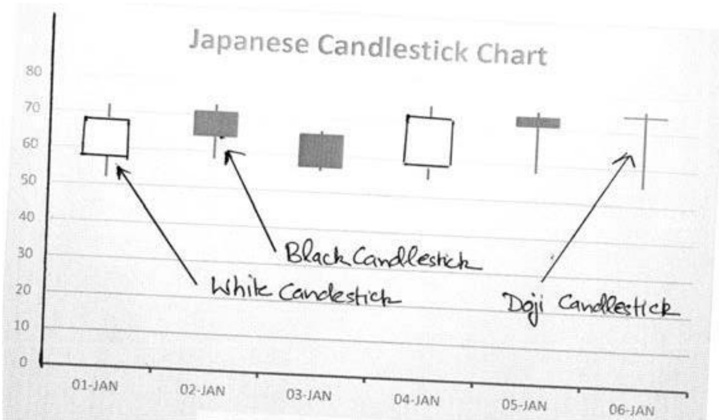
</table>

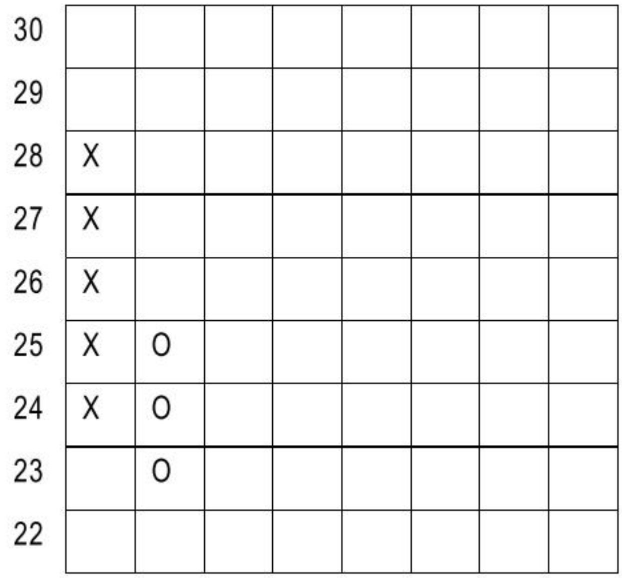
Japanese Candlestick Chart:

- The bar chart displays stock opening, closing, and highs and lows, with the color of the candlestick indicating the trend.
- A black candlestick indicates a lower closing price, while a white candlestick indicates a higher one. A Doji candlestick indicates no change or near-no change.
- **The lowest and highest prices are indicated by vertical bars, while opening and closing prices are shown in rectangular bars.**



Point and figure chart:

- Point and Figure charts are more complex than line or bar charts.
- **They are used to detect reversals in a trend**.
- For plotting a point and figure chart, we have to first decide the box size and the reversal criterion. The box size is the value of each box on the chart, for example each box could be 1, 2 or 0.50.
- **The smaller the box size, the more sensitive would the chart be to price change**. The reversal criterion is the number of boxes required to be retraced to record prices in the next column in the opposite direction



14. Write short note about various market indicators? [Nov 2020 RTP, Nov 2020 MTP]

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 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. ❖ The breadth index is an addition to the Dow Theory and the movement of the Dow Jones Averages.
Volume of Transactions	❖ A **rising index/price with increasing volume** would signal buy behaviour because the situation reflects an unsatisfied demand in the market. Similarly, **a falling market with increasing volume signals a bear market** and the prices would be expected to fall further.
Confidence Index	❖ It is supposed to reveal how **willing the investors are to take a chance in the market**. It is the ratio of **high-grade bond yields to low-grade bond yields**. ❖ It is used by market analysts as a method of trading or timing the purchase and sale of stock, and also, as a **forecasting device to determine the turning points of the market**. ❖ 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 price.
Relative strength Analysis	❖ The relative strength concept suggests that the prices of some securities **rise relatively faster in a bull market** or decline more slowly in a bear market than other securities i.e. some securities exhibit relative strength.

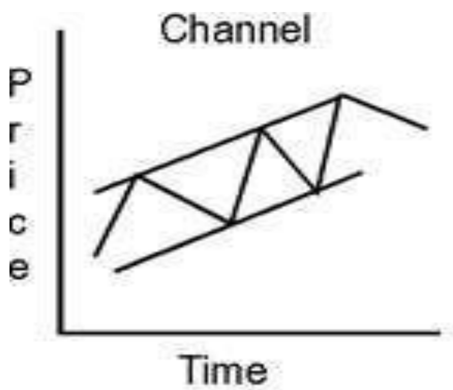
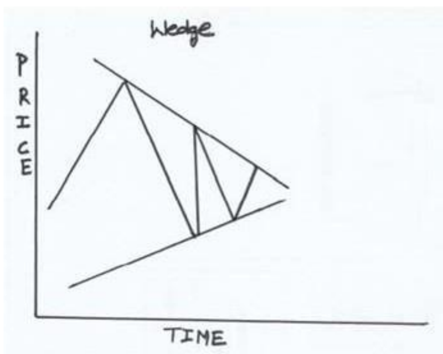
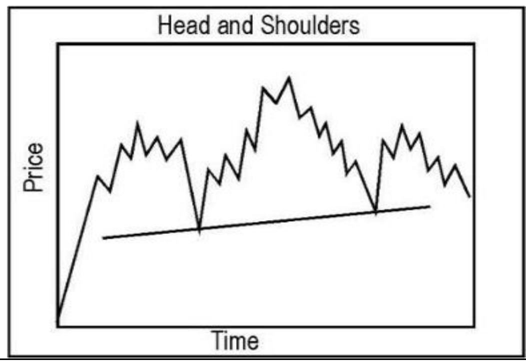
	❖ Investors will earn higher returns by investing in securities which **have demonstrated relative strength in the past** because the relative strength of a security tends to remain undiminished over time. ❖ Relative strength can be measured by calculating rates of return and classifying those securities with historically high average returns as securities with high relative strength is one of them.
Odd-Lot Theory	❖ This theory is a **contrary - opinion theory**. It assumes that the average person is usually wrong and that a wise course of action is **to pursue strategies contrary to popular opinion**. The odd-lot theory is used primarily to **predict tops in bull markets**, but also to **predict reversals in individual securities**.

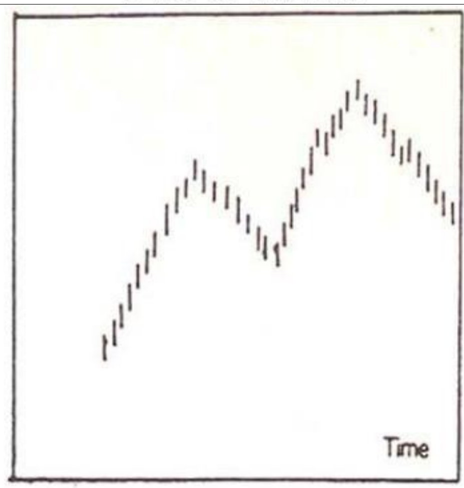
15. What is support and resistance level?

❖ When the index/price **goes down from a peak**, the peak becomes the **resistance level**. When the index/price **rebounds after reaching a trough** subsequently, the lowest value reached becomes the **support level**.

❖ The price is then expected to move between these two levels. Whenever the price approaches the **resistance level**, there is a **selling pressure** because all investors who failed to sell at the high would be keen to liquidate, while whenever the price approaches the **support level**, there is a **buying pressure** as all those investors who failed to buy at the lowest price would like to purchase the share

16. What are the tools to interpret price patterns?

Channel: A series of **uniformly changing tops and bottoms** gives rise to a channel formation. A **downward sloping channel** would indicate **declining prices** and an **upward sloping channel** would imply **rising prices**	
Wedge: A wedge is formed when the tops (resistance levels) and bottoms (support levels) **change in opposite direction** (that is, if the tops, are decreasing then the bottoms are increasing and vice versa), or when they are changing in the same direction at different rates over time.	
Head and shoulders: • It is a distorted drawing of a human form, **with a large lump (for head) in the middle of two smaller humps (for shoulders).** This is perhaps the single most important pattern to indicate a reversal of price trend. • The neckline of the pattern is **formed by joining points where the head and the shoulders meet**. The price movement after the formation of the second shoulder is crucial. If the price goes below the neckline, then a drop in price is indicated, with	

the drop expected to be equal to the distance between the top of the head and the neckline.	
<u>Triangular or coil formation:</u> This formation represents a pattern of uncertainty and is difficult to predict which way the price will break out	 **TRIANGLE OR COIL**
<u>Flags and Pennants form:</u> This form signifies a phase after which the previous price trend is likely to continue	 **FLAG & PENNANT**
<u>Double top form:</u> This form represents a bearish development, signals that price is expected to fall.	 **DOUBLE TOP**

Double bottom form: This form represents bullish development signalling price is expected to rise.	 DOUBLE BOTTOM
Gap: A gap is the **difference between the opening price on a trading day and the closing price of the previous trading day**. The wider the gap the stronger the signal for a continuation of the observed trend. **On a rising market, if the opening price is considerably higher than the previous closing price, it indicates that investors are willing to pay a much higher price to acquire the scrip**. Similarly, a gap in a falling market is an indicator of extreme selling pressure.	

17. How to identify buy and sell signals provided by moving average analysis?

Buy Signal	Sell Signal
❖ Stock price line rise through the moving average line when graph of the moving average line is flattering out. ❖ Stock price line falls below moving average line which is rising. ❖ Stock price line which is above moving average line falls but begins to rise again before reaching the moving average line	❖ Stock price line falls through moving average line when graph of the moving average line is flattering out. ❖ Stock price line rises above moving average line which is falling. ❖ Stock price line which is slow moving average line rises but begins to fall again before reaching the moving average line.

18. What are the arguments in favour and against technical analysis? (OR) Describe the concept of 'Evaluation of Technical Analysis'? [OR] In an efficient market, technical analysis may not work perfectly. However, with imperfections, inefficiencies and irrationalities, which characterises the real world, technical analysis may be helpful. Critically analyse the statement [OR] In a rational, well ordered and efficient market, technical analysis may not work very well". Is it true? List out the reasons for this statement regarding Technical Analysis. [May 2019 MTP, Nov 2020, Nov 2023, Nov 2024 MTP]

Supporters of technical analysis	❖ Under influence of **crowd psychology trend persist for some time**. Tools of technical analysis help in identifying these trends early and help in investment decision making. ❖ Shift in demand and supply **are gradual rather than instantaneous**. Technical analysis helps in detecting this shift rather early and hence provides clues to future price movements. ❖ Fundamental information about a company is observed and assimilated by the market over a period of time. **Hence price movement tends to continue more or less in same direction till the information is fully assimilated in the stock price**.

Detractors of technical analysis	❖ Most technical analysts **are not able to offer a convincing explanation** for the tools employed by them. ❖ Empirical evidence in **support of random walk hypothesis** cast its shadow over the useful ness of technical analysis. ❖ By the time an up-trend and down-trend may have been signalled by technical analysis it may already have taken place. ❖ Ultimately technical analysis must be **self-defeating proposition**. With more and more people employing it, the value of such analysis tends to decline.

19. Differentiate between Fundamental Analysis and Technical Analysis?

Basis	Fundamental Analysis	Technical Analysis
Method	Prospects are measured by analyzing economy's macro factors such as Country's GDP, Inflation Rate, Interest Rate, Growth Rate etc. and company's micro factors like its Sales, Profitability, Solvency, Asset & Liabilities and Cash position etc.	Predicts future prices and their direction using purely historical market data and information such as their Price Movements, Volume, Open Interest etc.
Rule	Prices of a share discounts everything.	Price captures everything
Usefulness	For Long-Term Investing	For short-term investing

20. Explain the efficient market theory and what are the major misconceptions about this theory? [SM]

Key conclusion	As per this theory, at any given time, **all available price sensitive information is fully reflected in securities' prices**. Thus, this theory implies that no investor can consistently outperform the market as every stock is appropriately priced based on available information
Reason why consistent outperformance cannot happen	❖ Information is **freely and instantaneously** available to all market participants. ❖ **Keen competition** among the market participants more or less ensures that market will reflect intrinsic values. This means that they will fully impound all available information. ❖ Price change **only response to new information** that is unrelated to previous information and therefore unpredictable.
Misconceptions	❖ Efficient Market Theory implies that **market prices factor in all available information** and as such it is not possible for any investor to earn consistent long term returns from market operations. ❖ Although price tends to fluctuate, they cannot reflect fair value. This is because the future is uncertain. **The market springs surprises continually** and as prices reflect the surprises they fluctuate. ❖ The random movement of stock prices suggests that stock market is irrational. Randomness and irrationality are two different things, if investors are rational and competitive, price changes are bound to be random.
Level of market efficiency	❖ **Weak form efficiency:** Price reflect all information found in the record of past prices and volumes ❖ **Semi-strong efficiency:** Price reflect not only all information found in the record of past prices and volumes but also all other publicly available information ❖ **Strong form efficiency:** Price reflect all available information public as well as private

21. What are the tests which can be done to test the market efficiency? [Nov 2024 RTP]

- **Serial Correlation Test:** Serial correlation tests for randomness in stock price changes by comparing **price changes in one period with price changes in another**. Studies using different stocks, time lags, and periods found no significant correlation, focusing on short-term trends rather than long-term trends
- **Run Test:** 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.

- **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 behaviour 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**

22. What are the challenges to the efficient market theory? [Nov 2018 RTP, May 2020 MTP]

❖ **Limited information processing capabilities:** Human information processing capabilities are sharply limited. David Dreman maintained that under conditions of **anxiety and uncertainty,** with a vast interacting information grid, the market can become a giant.

❖ **Irrational Behaviour:** It is generally believed that **investors' rationality will ensure a close correspondence between market prices and intrinsic values**. But in practice this is not true. J. M. Keynes **argued that all sorts of consideration enter into the market valuation which is in no way relevant to the prospective yield**. The market seems to function largely on **hit or miss tactics rather than on the basis of informed beliefs** about the long-term prospects of individual enterprises.

❖ **Monopolistic Influence:** A market is **regarded as highly competitive**. No single buyer or seller is supposed to have undue influence over prices. In practice, **powerful institutions and big operators wield grate influence over the market**. The monopolistic power enjoyed by them diminishes the competitiveness of the market.

23. What are the tools available for equity research?

- Equity Research is a finance or investment banking field that analyzes a company's financial performance to determine whether to **buy, sell, or hold equity shares.**
- Equity Research Analysts analyze financial performance using online tools and reports.
- Some of the available tools are:
  - Bloomberg Terminal
  - Benzinga Pro
  - Refinitiv EIKON
  - MarketXLS
  - Stockopedia
  - Koyfin
  - Finbox.io
  - GuruFocus
  - Business Quant
  - Ycharts

Chapter 5 – Security Valuation

1. **Differentiate between expected return and required rate of return?**

- Required rate of return is the **minimum rate of return** that the investor is expected to receive while making an investment in an asset over a specified period of time. This is also called **opportunity cost or cost of capital** because it is the highest level of expected return forgone which is available elsewhere from investment of similar risks.
- Expected return **reflects the perception of investors**. If the investors expect a return of a particular share **higher than the required return**, then the share is **undervalued**. The reason is that the share will sell for less than its intrinsic value. On the other hand, if the investors expect a return of a particular share **lower than its required rate of return**, then the share is **overvalued**. The reason is that it will sell for a higher price than its intrinsic value.
- The difference between expected return and required return is called **expected alpha**

2. **What is equity risk premium?**

- Equity risk premium is the **excess return that investment in equity shares** provides over a risk-free rate, such as return from tax free government bonds. This excess return compensates **investors for taking on the relatively higher risk of investing** in equity shares of a company.
- The size of the premium will change depending upon the level of risk in a particular portfolio and will also change over time as market risk fluctuates. Generally, **high-risk investments are compensated with a higher premium**.
- **Equity risk premium = Beta of security x (Market Return – Risk free rate)**

3. **Explain the concept of nominal cash flow and real cash flow?**

- Nominal cash flow is the **amount of future revenues** the company expects to receive and expenses it expects to pay out, **without any adjustments for inflation**.
- On the other hand, **Real cash flow** shows a company's cash flow **with adjustments for inflation**. Since inflation reduces the spending power of money over time, the real cash flow shows the effects of inflation on a company's cash flow.
- In the short term and under conditions of low inflation, the nominal and real cash flows are almost identical. However, in conditions of high inflation rates, the nominal cash flow will be higher than the real cash flow.

4. **What is enterprise value and what are the multiples used in relation to enterprise value?**

Enterprise value:

- Enterprise value is the true economic value of a company. It is calculated by adding market capitalization, long term debt, minority interests minus cash and cash equivalents
- Enterprise value is of the following three types:
  - Total Enterprise value = Equity + Debt + Minority Interest – Cash and cash equivalents
  - Operating Enterprise value = Total enterprise value – market value of non-operating assets such as investments in associates
  - Core Enterprise value = Operating enterprise value – Value of non-core assets

Multiples relating to enterprise value:

- **Enterprise value to sales:** This multiple is used for the corporates who maintain negative cash flows or negative earnings. Technological firms generally use this multiple
- **Enterprise value to EBITDA:** EBITDA is the amount available to both debt and equity holders of a company. This multiple is used for valuing capital intensive companies, which generally have substantial depreciation and amortization expenses. An analyst prefers this multiple because it is not affected by depreciation policy and changes in capital structure. The inverse of this multiple is the cash return on total investment

5. **Explain the concept of duration of bond? [SM]**

- Duration is nothing but the **average time taken** by an investor to collect his/her investment. If an investor receives a **part of his/her investment** over the time on specific intervals before maturity, **the investment will offer him the duration which would be lesser than the maturity of the instrument**. Higher the coupon rate, lesser would be the duration.

- It measures how quickly a bond will repay its true cost. The longer the time it takes the greater exposure the bond has to changes in the interest rate environment. Following are some of factors that affect bond's duration:
  - **Time to maturity:** The shorter-maturity bond would have a lower duration and less price risk and vice versa.
  - **Coupon rate:** Coupon payment is a key factor in calculation of duration of bonds. The higher the coupon, the lower is the duration and vice versa.

6. What is immunization?

- If 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: (a) Price Risk and (b) Reinvestment Rate Risk
- 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.
- **Immunization happens if the weighted duration of the portfolio is equal to the period for which investment is required to be made**

7. Explain different types of yield curve?

- The term structure of interest rates, also known as Yield Curve, shows how yield to maturity is related to term to maturity for bonds that are similar in all respects, except maturity
- Following at the different types of yield curve:
  - Upward sloping = Long-term interest rates are higher than short term
  - Downward sloping = Long-term interest rates are lower than short term
  - Flat = Long-term interest rates are equal to short term
  - Humped = Interest rates may increase with increase in duration and then may slope downwards

8. What is term structure theory?

- The term structure theories explain the relationship **between interest rates or bond yields and different terms or maturities.** The different term structures theories are as follows:
  - **Expectation Theory:** As per this theory the long-term interest rates can be used to forecast short-term interest rates in the future as long-term interest rates are assumed to be unbiased estimator of short-term interest rates in future
  - **Liquidity Preference Theory:** Investors are risk-averse and they need a premium for taking risk. Long-term instruments have higher risk need to have a premium for such risk. People prefer liquidity and if they are forced to sacrifice the same for a longer period, they need a higher compensation for the same. Positive slope may be a result of liquidity premium.
  - **Preferred Habitat Theory (Market segmentation theory):** Premiums are related to supply and demand for funds at various maturities – not the term to maturity and hence this theory can be used to explain almost any yield curve shape (can be sloping upward, falling or flat)

9. **What is convexity adjustment?**

- Duration is a good approximation of the percentage of price change for a small change in interest rate. However, the change cannot be estimated so accurately of convexity effect as duration base estimation assumes a linear relationship.
- This estimation can be improved by adjustment on account of 'convexity'. The formula for convexity is as follows:

$\Delta y = \text{Change in Yield}$

$$C = \frac{V_+ + V_- - 2V_0}{2V_0(\Delta^2)}$$

$V_+ = \text{Price of bond if yield increases by } \Delta y$

$V_- = \text{Price of bond if yield decreases by } \Delta y$

10. Modified Duration is a proxy not an accurate measure of change in price of a Bond due to change interest rate. Discuss. [May 2021 MTP]

- Although Modified Duration is a **measure of volatility or change in the price of a Bond** consequent upon change in the yield or interest rates as it **assumes a linear relationship** between the Modified Duration and the price of a Bond but is not accurate measure because of **Convexity**.
- Accordingly the relationship between change in the interest rate and bond value is non-linear i.e.
- Hence it is clear that the **actual effect of change in interest rate on Bond Price is different from the predicted linear relationship**

11. Risks are inherent and integral part of the market. Discuss [Jan 2021]

- Yes, **Risk is an integral part of market and this is a type of systematic risk** that affects prices of any particular share **move up or down consistently for some time periods in line with other shares in the market**.
- A general rise in share prices is referred to as a bullish trend, whereas a general fall in share prices is referred to as a bearish trend. In other words, the share market moves between the bullish phase and the bearish phase.
- **The market movements can be easily seen in the movement of share price indices such as the BSE Sensitive Index, BSE National Index, NSE Index etc.**

12. What is reverse stock split? Explain the reasons for reverse stock split? [Nov 2019 RTP, May 2019 MTP]

- **'Reverse Stock Split' is a process whereby a company decreases the number of shares outstanding by combining current shares into fewer or lesser number of shares**. For example, in a 5:1 reverse split, a company would take back 5 shares and will replace them with one share.
- Although, reverse stock split does not result in change in Market value or Market Capitalization of the company but it results in increase in price per share. Considering above mentioned ratio, if company has 100 million shares outstanding before split up, the number of shares would be equal to 20 million after the reverse split up.

Reasons

- **Avoiding delisting from stock exchange:** Sometimes as per the stock exchange regulation if the price of shares of a company goes below a limit it can be delisted. To avoid such delisting company may resort to reverse stock split up.
- **Avoiding removal from constituents of Index:** If company's share its one of the constituents of market index then to avoid their removal of scrip from this list, the company may take reverse split up route.
- **To avoid the tag of "Penny Stock":** If the price of shares of a company goes below a limit it may be called "Penny Stock". In order to improve the image of the company and avoiding this stage, the company may go for Reverse Stock Split.
- **To attract Institutional Investors and Mutual Funds:** It might be possible that institutional investors may be shying away from acquiring low value shares to attract these investors the company may adopt the route of "Reverse Stock Split" to increase the price per share.

13. Write short note on zero coupon bond? [SM]

- These bonds **do not pay interest** during the life of the bonds. Instead, zero coupon bonds are issued at discounted price to their face value, which is the amount a bond will be worth when it matures or comes due.
- When a zero-coupon bond matures, **the investor will receive one lump sum** (face value) equal to the initial investment plus interest that has been accrued on the investment made. The maturity dates on zero coupon bonds are usually long term. These maturity dates allow an investor for a long-range planning.
- Zero coupon bonds issued by banks, government and private sector companies. However, bonds issued by corporate sector carry a potentially higher degree of risk, depending on the financial strength of the issuer and longer maturity period, but they also provide an **opportunity to achieve a higher return**.

14. Explain Arbitrage Pricing Theory?

- Arbitrage pricing theory (APT) is used as an alternative to Capital Assets Pricing Model (CAPM). While the **CAPM formula helps to calculate the market's expected return, APT uses the risky asset's expected return and the risk premium of a number of macroeconomic factors**.

- In a simplistic way, if a **particular asset, say a stock**, has its major influencers as the 'interest rate fluctuations' and the 'sectoral growth rate', then the stocks' return would be calculated by using the Arbitrage Pricing Theory (APT) in the following manner:
  - Calculate the risk premium for both these two risk factors (beta for the risk factor 1 – interest rate, and beta of the risk factor 2 – sector growth rate; and,
  - Adding the risk-free rate of return.
- **Required return under APT = R(f) + B1(RP1) + B2(RP2) + …. Bj(RPn)**

15. What is money market instrument and are its characteristics? [May 2021 MTP]

- Money market instruments is used for meeting the short-term funding requirements of corporates and banks.
- Following are its characteristics:
  - Short duration
  - Large volume
  - De-regulated interest rates
  - Highly liquid
  - Safe investments owing to issuers inherent financial strength

16. Explain different money market instruments?

Call/Notice Money	❖ Call money market, or inter-bank call money market, is a segment of the money market **where scheduled commercial banks lend or borrow on call** (i.e., overnight) or at short notice (i.e., for periods upto 14 days) to manage the day-to-day surpluses and deficits in their cash-flows. ❖ However, under **notice money market**, funds are transacted for a period between **two days and fourteen days**.
Treasury bills	❖ Treasury bills provide a **temporary outlet for short-term surplus** as also provide financial instruments of varying short -term maturities to facilitate a **dynamic asset-liabilities management** ❖ Income on instrument = Difference between issue price and redemption value ❖ These are short-term promissory notes issued by **Government of India** at a discount
Commercial bills	❖ These arise out of a **trade transaction wherein the seller draws a bill on the buyer** for goods sold on credit ❖ The buyer accepts it immediately agreeing to pay amount mentioned therein after a certain specified date. Thus, **a bill of exchange contains a written order from the creditor to the debtor, to pay a certain sum, to a certain person**, after a creation period. ❖ A bill of exchange is a 'self-liquidating' paper and negotiable; **it is drawn always for a short period ranging between 3 months and 6 months**. ❖ Bill financing is the core component of meeting working capital needs of corporates
Certificate of Deposit (CD)	❖ The CDs are **negotiable term-deposits accepted by commercial bank** from bulk depositors at market related rates. ❖ CDs are usually issued in demat form or as a Usance Promissory Note. ❖ CD is a front–ended negotiable instrument, **issued at a discount and the face value is payable at maturity by the issuing bank**
Commercial Paper	❖ CPs are **unsecured and negotiable promissory notes issued by high rated corporate entities** to raise short-term funds for meeting working capital requirements **directly from the market** instead of borrowing from banks. ❖ Its period ranges from 7 days to 1 year. CP is issued at discount to face value ❖ The issue of CP seeks to by-pass the intermediary role of the banking system through the process of securitisation. It **partly replaces the working capital limits enjoyed by companies with the commercial banks and there will be no net increase in their borrowing by issue of CP**. Generally, CP has to be issued at a discount to face value. ❖ Yield on CP is freely determined by the market

Repurchase options (Repo) and Reverse Purchase Agreement (Reverse Repo)	❖ Repo and Reverse Repo refers to a type of transaction in which money **market participant raises funds by selling securities** and simultaneously agreeing to repurchase the same after a specified time generally at a specified price, which typically includes interest at an agreed upon rate. ❖ Sometimes it is also called **Ready Forward Contract as it involves funding by selling securities (held on Spot) and repurchasing them** on a forward basis.

17. What are the major differences between Repo and Reverse Repo?

❖ **Repo rate** is the rate at which **Reserve Bank of India (RBI) lends to Commercial Banks** for a short period of time against Government Securities. On the other hand, **Reverse Repo is the rate at which Commercial Banks lend to RBI.**

❖ A transaction is called a **Repo when viewed from the perspective of the seller of securities** (the party acquiring funds) and **Reverse Repo when described from the point of view of the supplier of funds**. Thus, whether a given agreement is termed a Repo or a Reverse Repo depends largely on which party initiated the transaction.

❖ The purpose of **Repo is to fulfill the deficiency of funds**. While the purpose of **Reverse repo is to reduce excess liquidity** in the economy.

❖ The Repo rate is comparatively high in comparison to Reverse Repo rate.

❖ The **Repo rate strives to contain inflation** in the economy. The **Reverse repo aims to control money supply** in the economy

18. What are the purposes for which valuers are now required?

- **Mergers/Acquisitions/ De-Mergers/Takeovers:** Valuation is mandated in cases of Mergers/ Acquisitions/ De-Mergers/ Takeovers by the Income Tax Act, 1961 for the purpose of determining the tax (if any) payable in such cases.
- **Slump Sale/ Asset Sale/ IPR Sale:** Valuation is required by Insolvency and Bankruptcy Code, 2016 in case of liquidation of company and sale of assets of corporate debtor for the purpose of ascertaining fair value or liquidation value
- **Conversion of Debt/ Security:** Valuation is a necessitated by RBI for Inbound Foreign Investment, Outbound Foreign Investment and other business transactions
- **Capital Reduction:** SEBI regulations such as ICDR/ LODR/ Preferential Allotment etc. also require valuations to be made for listed securities for various purposes on a period basis
- **Strategic Financial Restructuring:** Various statutes such as Companies Act, 2013, SARFAESI Act, 2002, Arbitration and Conciliation Act 1996 etc., warrant valuations to be made for meeting various statutory requirements. Valuation is also made for fulfilling IND AS purposes and may also be made on Court Orders.

19. Explain the responsibilities of valuers as per Rule 12(e) of the Companies (Registered Valuers and Valuation) Rules, 2017?

- **Integrity and Fairness:** A valuer must maintain integrity and fairness in business dealings with clients and other valuers. They should be honest, straightforward, and forthright, provide accurate information, and avoid actions that could discredit the profession
- **Professional competence and Due care:** A valuer must consistently provide high standards of service, exercise due diligence, and **exercise independent professional judgment**. They must adhere to technical and professional standards, maintain knowledge and skill, and not deny liability for their expertise in valuation reports. They must also follow client instructions with integrity, objectivity, and independence.
- **Independence and Disclosure of Interest:** A valuer must act with objectivity and avoid bias, conflict of interest, coercion, **or undue influence in their professional dealings**. They should maintain independence and conduct valuations without external influences. Valuers should disclose potential conflicts of duties and interests to clients, avoid dealing in securities of subject companies, and adhere to SEBI regulations. **They should not engage in "mandate snatching" or convenience valuations**, communicate with prior valuers, and not charge success fees. If a valuer has a prior engagement in an unconnected transaction, they must declare their past association with the company
- **Confidentiality:** Valuers must not disclose confidential information about a company without proper authority or legal duty, unless required by law.

- **Information Management:** A valuer must maintain records of decisions, reasons, and supporting evidence to ensure reasonable decision-making. They should cooperate with inspections and investigations by the Registration Authority, authorised persons, or statutory regulatory bodies. They must provide all necessary information and records. **Valuers must respect confidentiality and maintain working papers for three years for regulatory authority production or peer review**. In pending cases, the record should be maintained until the case's disposal.
- **Gifts and Hospitality:** Valuers should avoid accepting gifts or hospitality that undermine their independence or **offer financial or other advantages to public servants or others for personal gain or profession advantage.**
- **Remuneration and costs:** A valuer must provide transparent, reasonable remuneration services that reflect their work and comply with applicable rules. A valuer should not accept any fees or charges other than those which are disclosed to and approved by the persons fixing his/ its remuneration
- **Occupation, employability and restrictions:** A valuer should avoid accepting too many assignments, only engage in employment when temporarily surrendering their membership certificate, and conduct business that is inconsistent with the profession's reputation, according to the Registration Authority.

20. What precautions should a valuer take before accepting any valuation assignment?

- A good valuation does not provide a precise estimate of value. **A valuation by necessity involves many assumptions and is a professional estimate of value**. The quality and veracity of a good valuation model does not depend just on number crunching. **The quality of a valuation will be directly proportional to the time spent** in collecting the data and in understanding the firm being valued
- Valuing a company involves more **than just evaluating financial statements**; emerging businesses are valued based on narrative-driven factors like scalability, replication, growth potential, and cross-sell opportunities.
- More often than not, investors/users tend to focus on either numbers or the story without attempting to reach a middle ground. In both these cases, **investors will fail to capture opportunities that could have been unlocked had they been willing to reach some middle ground between the two concepts**.
- While it is true that a robust intrinsic value calculation using financial statements data **and an error-free model makes investing a more technical subject**, in reality, emotions play a massive role in moving stocks higher or lower. Not accounting for this fact, therefore, could become an obstacle in consistently getting the valuation right

Chapter 6 – Portfolio Management

1. **What are the activities carried out in portfolio management?**
- Selection of securities
- Construction of all Feasible Portfolios with the help of the selected securities
- Deciding the weights/proportions of the different constituent securities in the portfolio so that it is an Optimal Portfolio for the concerned investor

2. **What are the objectives of portfolio management? [SM]**
- **Security/Safety of Principal:** Security not only involves keeping the principal sum intact but also its purchasing power.
- **Stability of Income:** To facilitate planning more accurately and systematically reinvestment or consumption of income.
- **Capital Growth:** It can be attained by reinvesting in growth securities or through purchase of growth securities.
- **Marketability i.e. the case with which a security can be bought or sold:** This is essential for providing flexibility to investment portfolio.
- **Liquidity i.e. nearness to money:** It is desirable for the investor so as to take advantage of attractive opportunities upcoming in the market.
- **Diversification:** The basic objective of building a portfolio is to reduce the risk of loss of capital and/or income by investing in various types of securities and over a wide range of industries.
- **Favourable Tax Status:** The effective yield an investor gets from his investment depends on tax to which it is subjected to. By minimising the tax burden, yield can be effectively improved.

3. **What are the phases of portfolio management?**
- Portfolio management is a process and broadly it involves following five phases and each phase is an integral part of the whole process and the success of portfolio management depends upon the efficiency in carrying out each of these phases.
  - **Security Analysis:** Security analysis constitutes the initial phase of the portfolio formation process and consists in examining the risk-return characteristics of individual securities and also the correlation among them.
  - **Portfolio Analysis:** From any chosen set of securities, an indefinitely large number of portfolios can be constructed by varying the fractions of the total investable resources allocated to each one of them.
  - **Portfolio selection:** The goal of a rational investor is to identify the Efficient Portfolios out of the whole set of Feasible Portfolios mentioned above and then to zero in on the Optimal Portfolio suiting his risk appetite
  - **Portfolio revision:** Once an optimal portfolio has been constructed, it becomes necessary for the investor to constantly monitor the portfolio to ensure that it does not lose it optimality.
  - **Portfolio evaluation:** This process is concerned with assessing the performance of the portfolio over a selected period of time in terms of return and risk and it involves quantitative measurement of actual return realized and the risk borne by the portfolio over the period of investment

4. **Explain the traditional approach of portfolio management?**

Process of investment as per traditional approach is detailed below:
- **Investor's study includes an insight into his** – (a) age, health, responsibilities, other assets, portfolio needs; (b) need for income, capital maintenance, liquidity; (c) attitude towards risk; and (d) taxation status;
- **Portfolio objectives** are defined with reference to maximising the investors' wealth which is subject to risk. The higher the level of risk borne, the more the expected returns
- **Investment strategy** covers examining a number of aspects including:
  - Balancing fixed interest securities against equities;
  - Balancing high dividend pay-out companies against high earning growth companies as required by investor
  - Finding the income of the growth portfolio;
  - Balancing income tax payable against capital gains tax;
  - Balancing transaction cost against capital gains from rapid switching; and

  - Retaining some liquidity to seize upon bargains.
- **Diversification** reduces volatility of returns and risks and thus adequate equity diversification is sought. Balancing of equities against fixed interest-bearing securities is also sought.
- **Selection of individual investments** is made on the basis of the following principles:
  - Methods for selecting sound investments by calculating the true or intrinsic value of a share and comparing that value with the current market value (i.e. by following the fundamental analysis) or trying to predict future share prices from past price movements (i.e., following the technical analysis);
  - Expert advice is sought besides study of published accounts to predict intrinsic value;
  - Inside information is sought and relied upon to move to diversified growth companies, switch quickly to winners than loser companies;
  - Newspaper tipsters about good track record of companies are followed closely;
  - Companies with good asset backing, dividend growth, good earning record, high quality management with appropriate dividend paying policies and leverage policies are traced out constantly for making selection of portfolio holdings.

5. What are the elements of risk in investment? [Jan 2021, May 2023 MTP]

- Total risk of a security is the **sum of systematic risk and unsystematic risk**

Systematic Risk:

- Systematic risk comprises factors that are **external to a company** (macro in nature) and affect a large number of securities simultaneously. These are mostly uncontrollable in nature
- Systematic risk can be further subdivided into interest rate risk, market risk and purchasing power risk
  - **Interest rate risk:** This arises due to variability in the interest rates from time to time and particularly affects debts securities like bonds and debentures as they carry fixed coupon rate of interest.
  - **Purchasing power risk:** It is also known as **inflation risk**, as it also emanates from the very fact that inflation affects the purchasing power adversely. Nominal return contains both the real return component and an inflation premium in a transaction involving risk of the above type to compensate for inflation over an investment holding period. **Inflation rates vary over time and investors are caught unaware when rate of inflation changes unexpectedly causing erosion in the value of realised rate of return and expected return**.
  - **Market risk:** This is a type of systematic risk that affects **prices of any particular share move up or down consistently for some time periods in line** with other shares in the market. A general rise in share prices is referred to as a bullish trend, whereas a general fall in share prices is referred to as bearish trend

Unsystematic Risk:

- Unsystematic risk includes those factors which are **internal to companies** (micro in nature) and affect only those particular companies. These are **controllable** to a great extent
- Unsystematic risk can be further subdivided into business risk and financial risk.
  - **Business Risk:** Business risk emanates from sale and purchase of securities affected by business cycles, technological changes etc. **Business cycles affect all types of securities** viz. there is cheerful movement in boom due to bullish trend in stock prices whereas bearish trend in depression brings down fall in the prices of all types of securities
  - **Financial Risk:** It arises due to **changes in the capital structure** of the company. It is also known as leveraged risk and expressed in terms of debt-equity ratio. Excess of debt vis-à-vis equity in the capital structure indicates that the company is highly geared

6. **What are the assumptions of Markowitz Model?**

- The return on an investment **adequately summarises the outcome** of the investment.
- The investors can **visualise a probability distribution** of rates of return.
- The investors' risk estimates are **proportional to the variance of return** they perceive for a security or portfolio.
- Investors base their investment decisions on **two criteria** i.e. expected return and variance of return.
- 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.

- 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.
- **'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.

7. Interpret the Capital Asset Pricing Model and its relevant assumptions? [May 2018, SM]

Meaning:

- **The model explains the relationship between the expected return, non-diversifiable risk and the valuation of securities. It considers the required rate of return of a security on the basis of its contribution to the total risk.**
- It is based on the premises that the diversifiable risk of a security is eliminated when more and more securities are added to the portfolio. **However, the systematic risk cannot be diversified and is or related with that of the market portfolio.**
- All securities do not have same level of systematic risk. The systematic risk can be measured by beta, ß under CAPM, the expected return from a security can be expressed as:
- **Expected return on security = Rf + Beta (Rm – Rf)**
- The model shows that the expected return of a security consists of the risk -free rate of interest and the risk premium. **The CAPM, when plotted on the graph paper is known as the Security Market Line (SML). A major implication of CAPM is that not only every security but all portfolios too must plot on SML.**
- This implies that in an efficient market, all securities are having expected returns commensurate with their riskiness, measured by Beta

Assumptions:

1. **Efficient market:** It is the first assumption of CAPM. Efficient market refers to the **existence of competitive market** where financial securities and capital assets are bought and sold with full information of risk and return available to all participants
2. **Rational investment goals:** Investors desire **higher return for any acceptable level** of risk or the **lowest risk for any desired level of return**. Such a rational choice is made on logical and consistent ranking of proposals
3. **Risk aversion** in efficient market is adhered to although at times risk seeking behaviour is adopted for gains.
4. CAPM assumes that all assets are divisible and liquid assets
5. Investors are able to **borrow freely at a risk less rate of interest** i.e. borrowings can fetch equal return by investing in safe Government securities
6. Securities can be exchanged without payment of brokerage, commissions or taxes and **without any transaction cost**
7. Securities or capital assets face **no bankruptcy or insolvency**
8. CAPM assumes that the Capital Market is in equilibrium.

8. What are advantages and limitation of CAPM? [Nov 2023 MTP]

Advantages:

- **Risk Adjusted Return:** It provides a reasonable basis for estimating the required return on an investment which has risk in built into it. Hence it can be used as Risk Adjusted Discount Rate in Capital Budgeting.
- **No Dividend Company:** It is useful in computing the cost of equity of a company which does not declare dividend.

Limitations

- **Reliability of Beta:** Statistically reliable Beta might not exist for shares of many firms. It may not be possible to determine the cost of equity of all firms using CAPM. All shortcomings that apply to Beta value applies to CAPM too.
- **Other Risks:** By emphasing on systematic risk only, unsystematic risks are of importance to shareholders who do not possess a diversified portfolio.

- **Information Available:** It is extremely difficult to obtain important information on risk free interest rate and expected return on market portfolio as there is multiple risk- free rates for one while for another, markets being volatile it varies over time period.

9. **Write short note on Active portfolio strategy? [Nov 2024 MTP]**

An APS is followed by most investment professionals and aggressive investors who strive to **earn superior return after adjustment for risk**. The vast majority of funds (or schemes) available in India follow an "active" investment approach, **wherein fund managers of "active" funds spend a great deal of time on researching individual companies, gathering extensive data** about financial performance, business strategies and management characteristics. Following are the principles of APS:

- **Market Timing:** This involves departing from the normal i.e. **strategy for long run asset mix to reflect assessment of the prospect of various assets in the near future**. Market timing is based on an explicit or implicit forecast of general market movement. A **variety of tools are employed for market timing analysis** namely business cycle analysis, moving average analysis, advance-decline analysis, Econometric models
- **Sector Rotation:** Sector or group rotation **may apply to both stock and bond component of the portfolio**. It is used **more compulsorily with respect to strategy**. The components of the portfolio are used **when it involves shifting**. The weighting for various industry sectors is based on their asset outlook.
- **Security Selection:** Security selection involves a search for **under-price security**. If one has to resort to active stock selection, he may employ fundamental / technical analysis to identify stocks which seems to promise superior return and concentrate the stock components of portfolio on them.
- **Use of specialized investment concept:** To achieve superior return, one has to employ a **specialised concept/philosophy particularly** with respect to investment in stocks. The concept which have been exploited successfully are **growth stock, neglected or out of favour stocks, asset stocks, technology stocks and cyclical stocks**

10. **Explain Passive portfolio strategy?**

Passive strategy rests on the tenet that the **capital market is fairly efficient** with respect to the available information. Hence, they search for superior return. Basically, passive strategy involves adhering to two guidelines. They are:

- Create a well-diversified portfolio at a predetermined level of risk.
- Hold the portfolio relatively unchanged over time unless it became adequately diversified or inconsistent with the investor risk return preference.

Example: A fund which is passively managed are called index funds. An Index fund is a mutual fund scheme that invests in the securities of the target Index in the same proportion or weightage

11. **What are the criteria for bond selection? [SM]**

Bonds are fixed income avenues. The following factors have to be evaluated in selecting fixed income avenues:

- **Yield to maturity:** The yield to maturity for a fixed-income avenue represent the rate of return earned by the investor, if he invests in the fixed income avenues and holds it till its maturity.
- **Risk of Default:** To assess such risk on a bond, one has to look at the credit rating of the bond. If no credit rating is available relevant financial ratios of the firm have to be examined such as debt equity, interest coverage, earning power etc and the general prospect of the industry to which the firm belongs have to be assessed.
- **Tax Shield:** In the past, several fixed income avenues offer tax shields but at present only a few of them do so.
- **Liquidity:** If the fixed income avenues can be converted wholly or substantially into cash at a fairly short notice it possesses a liquidity of a high order.

12. **What are the three approaches for selection of stock?**

- **Technical analysis** looks at price behaviours and volume data to determine whether the share will move up or down or remain trend less.
- **Fundamental analysis** focuses on fundamental factors like earning level, growth prospects and risk exposure to establish intrinsic value of a share. The recommendation to buy hold or sell is based on comparison of intrinsic value and prevailing market price.

- ❖ **Random selection analysis** is based on the premise that the market is efficient and security is properly priced.
- ❖ Approach followed would depend on level of market efficiency and the same is summarized in the below table:

Level of Efficiency/Approach	Technical Analysis	Fundamental Analysis	Random selection
Inefficiency	Best	Poor	Poor
Weak form efficiency	Poor	Best	Poor
Semi-strong efficiency	Poor	Good	Fair
Strong from efficiency	Poor	Fair	Best

13. Explain various Portfolio revision and rebalancing strategies? (OR) Buy and hold is one of the policies of portfolio rebalancing. Briefly explain other policies of portfolio rebalancing (Dec 2021)

- **Buy and Hold Policy:** This is also called as **'do nothing policy'** as under this strategy no balancing is required. They set a floor value and invest equal to the floor value in non-fluctuating assets and the balance is invested in equity
- **Constant mix policy:** Constant Mix Policy is a **'Do Something Policy'** that maintains stock exposure at a constant percentage of the total portfolio. This strategy involves periodic rebalancing by purchasing and selling stocks when prices go down or up, holding the value of aggressive and conservative portfolios constant at a predetermined ratio.
- **Constant Proportion Portfolio Insurance:** The Constant Proportion Insurance Policy involves setting a floor value for an asset's value, **investing in non-fluctuating assets like Treasury Bills and Bonds.** This strategy is effective in bull markets, where shares purchased as cushion increases, and bearish markets, where losses are avoided by selling shares. **However, it performs poorly in markets affected by sharp reversals.**

Comparative evaluation:

Basis	Buy and Hold Policy	Constant Mix Policy	Constant Proportion Portfolio Insurance
Pay-off line	Straight	Concave (rate of additional payoff reduces with increase in prices – basically it exhibits diminishing marginal returns)	Convex (rate of additional payoff increases with increase in prices – basically it exhibits increasing marginal returns)
Protection in down/up markets	Poor in down market	Not much in Down market but relatively poor in Up market	Good in Down market and performs well in Up market
Performance in flat market	Performs between Constant and CPPI	Tends to do well in flat markets	Performs poorly

14. **What are the various types of asset allocation strategies? [Nov 2018 MTP, Nov 2020 MTP, Nov 2022 MTP]**

- ❖ **Integrated Asset Allocation:** Under this strategy, capital market conditions and investor objectives and constraints are examined and **the allocation that best serves the investor's needs while incorporating the capital market** forecast is determined.
- ❖ **Strategic Asset Allocation:** Under this strategy, **optimal portfolio mixes based on returns, risk, and co-variances is generated** using historical information and adjusted periodically to restore target allocation within the context of the investor's objectives and constraints.
- ❖ **Tactical Asset Allocation:** Under this strategy, **investor's risk tolerance is assumed constant** and the asset allocation is changed based on expectations about capital market conditions.
- ❖ **Insured Asset Allocation:** Under this strategy, risk exposure for changing portfolio values (wealth) is adjusted; more value means more ability to take risk.

15. Explain process, return computation and strategies relating to fixed income portfolio process?

Fixed Income Portfolio Process	• Setting up objective • Drafting guideline for investment policy • Selection of Portfolio Strategy - Active and Passive • Selection of securities and other assets

	• Evaluation of performance with benchmark
Return computation	• Arithmetic Average Rate of Return • Time Weighted Rate of Return • Rupee Weighted Rate of Return • Annualized Return
Passive Strategies	**Passive strategy:** Passive Strategy is based on the premise that securities are fairly priced commensurate with the level of risk. Following are the passive strategies: • Buy and Hold strategy • **Indexation strategy:** Replication of a benchmark such as bond index • **Immunization:** Avoiding interest rate risk through immunized portfolio. More popular among pension funds as they are required to pay fixed amount to retiring people • **Matching cash flows:** This approach involves buying of Zero-Coupon Bonds to meet the promised payment out of the proceeds realized. This approach would also immunize the portfolio
Active Strategies	**Active Strategy:** Adopted to outperform the market. Following are the active strategies: • **Forecasting Returns and Interest Rates:** Forecast interest rates and create strategy based on that. If interest rates are likely to fall, then portfolio manager will buy long-term bonds and if interest rates are likely to increase then he would sell longer term bonds. Following strategies can be implemented: ❖ **Bullet strategy:** Concentration of investment in a single bond ❖ **Barbell strategy:** Equal amount in short-term and long-term bonds ❖ **Ladder strategy:** Investment of equal amount in bonds with different maturity periods • **Bond Swaps:** Regular monitoring of bonds to identify mispricing. Some of the popular techniques are: ❖ **Pure Yield Pickup Swap:** Switching from a lower yield bond to higher yield bonds of identical quantity and maturity. However, this can also lead to capital loss due to higher interest rate risk ❖ **Substitution Swap:** Swapping with similar type of bonds and risk class but at different prices. This opportunity can raise due to temporary imbalance in the market ❖ **International spread swap:** Swapping a domestic bond for a foreign bond. This is done to exploit the yield differential between domestic and foreign markets. However, this is exposed to exchange risk, credit risk and geopolitical risk ❖ **Tax Swap:** Taking tax advantage by selling existing bond whose price decreased **at capital loss and set it off against capital gain** in other securities and buying another security which has features like that of disposed one • **Interest Rate Swaps:** Helps in swapping a fixed bond to a floating bond and vice versa

16. What are the features of alternative investments? [Nov 2023 MTP]

❖ **High Fees** – Being a specific nature product the transaction fees are quite on higher side.
❖ **Limited Historical Data** – The data for historic return and risk is very limited where data for equity market for more than 100 years in available.
❖ **Illiquidity** – The liquidity of Alternative Investment is not good as next buyer not be easily available due to limited market.
❖ **Less Transparency** – The level of transparency is not adequate due to limited public information available.
❖ **Extensive Research Required** – Due to limited availability of market information the extensive analysis is required by the Portfolio Managers.
❖ **Leveraged Buying** – Generally investment in alternative investments is highly leveraged.

17. What are the characteristics of real estate which makes valuation of them complex?

- **Inefficient market:** Information may not be freely available as in case of financial securities.
- **Illiquidity:** Real Estates are not as liquid as financial instruments.
- **Comparison:** Real estates are only approximately comparable to other properties
- **High Transaction cost:** In comparison to management cost of Real Estate is quite high.
- **No Organized market:** There is no such organized exchange or market as for equity shares and bond

18. What are the four approaches to value Real Estate?

- **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.
- **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.
- **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.
- **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

19. Explain Gold as an alternative investment?

- Gold is a popular investment option, particularly among Indians, with jewelry being the most common way to invest. However, this method faces limitations due to jeweller charges during selling and buying back

Other modes of Gold Investment:

- **Gold Bars:** Investors can buy Gold Coins/bars of different denominations. However, this has the limitation of physical storage.
- **Sovereign Gold Bonds (SGB):** SGBs are government securities **denominated in grams of gold**, offering a superior alternative to holding physical gold. Issued by the Reserve Bank, **investors pay the issue price in cash, and the bonds are redeemed in cash upon maturity**. They protect the quantity of gold paid, **eliminate storage risks, and offer assurance of market value and interest. SGBs are free from issues like charges and purity**, and are held in RBI books or demat form, reducing risk of loss.
- **Gold Exchange Traded Funds (ETFs):** Gold ETFs are a hybrid investment approach **combining flexibility of stock investments with simplicity of gold investments**. They can be bought and sold on Stock Exchanges, with prices based on gold prices. ETFs offer **transparency, lower expenses, and direct gold pricing**, making them a more accessible and transparent investment option.
- **E-Gold:** E-gold, introduced in 2010, is offered by the National Spot Exchange Ltd in India. It is equivalent to one gram of physical gold **and held in a Demat account, with lower storage costs compared to physical gold**. E-gold units can be traded on the exchange.

20. What are distressed securities?

- 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.
- We can see by taking long position in debt and short position in equity, how investor **can earn arbitrage profit**
- 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**. If company is condition further deteriorates the value of both share and debenture goes down. He will make good profit from his short position.
- **Risks Analysis of Investment in Distressed Securities:** On the face, investment in distressed securities appears to be a good proposition but following types of risks are need to be analyzed.
    - **Liquidity Risk**: These securities may be saleable in the market.
    - **Event Risk**: Any event that particularly effect the company not economy as a whole
    - **Market Risk**: This is another type of risk though it is not important.
    - **Human Risk**: The judge's decision on the company in distress also play a big role.

21. Explain the strategy of Portfolio rebalancing under which the value of a portfolio shall not below a specified value in normal market conditions. [May 2021 MTP]

- Under **Constant Proportion Portfolio Insurance (CPPI) strategy** investor sets a floor below which he does not wish his asset to fall called floor, which is invested in some non-fluctuating assets such as Treasury Bills, Bonds etc.
- The value of portfolio under this strategy **shall not fall below this specified floor** under normal market conditions.
- This strategy performs well especially in bull market as the value of shares purchased as cushion increases. **In contrast in bearish market losses are avoided by sale of shares**. It should however be noted that this strategy performs very poorly in the market hurt by sharp reversals.
- The following equation is used to determine equity allocation: Target Investment in Shares = multiplier (Portfolio Value – Floor Value) Multiplier is a fixed constant whose value shall be more than 1.

Chapter 7 – Securitization

1. Explain the concept and features of Securitization? [Nov 2018 MTP, Jan 2021, May 2021 RTP, Nov 2022, May 2023 RTP, May 2019 MTP, Nov 2023 MTP, May 2022 MTP, Nov 2022 MTP, May 2023 MTP]

- **Concept:** The process of securitization typically involves the **creation of pool of assets from the illiquid financial assets**, such as receivables or loans which are marketable. These assets can be **automobile loans, credit card receivables**, residential mortgages or any other form of future receivables.

Features of Securitization:

- **Creation of Financial Instruments:** The process of securities can be viewed as process of **creation of additional financial product of securities** in market backed by collaterals.
- **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**.
- **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.
- **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.
- **Trenching:** Portfolio of different receivable or loan or asset are split into several parts **based on risk and return they carry called 'Trenche'**. Each Trench carries a different level of risk and return.
- **Homogeneity:** Under each trenche the **securities are issued of homogenous nature** and even meant for small investors the **who can afford to invest** in small amounts.

2. Explain Securitization in India? [Nov 2018 MTP]

- **Citi Bank had pioneered the concept of securitization in India** by bundling of auto loans in securitized instruments. Thereafter many organizations securitized their receivables. Although **started with securitization of auto loans it moved to other types of receivables** such as sales tax deferrals, aircraft receivable etc.
- In order to encourage securitization, the Government has come out with **Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest (SARFAESI) Act, 2002, to tackle menace of Non-Performing Assets (NPAs) without approaching to Court**. With growing sophistication of financial products in Indian Capital Market, securitization has occupied an important place.
- As mentioned above, though, initially started with auto loan receivables, it has become an **important source of funding for micro finance companies and NBFCs and even now a days commercial mortgage backed securities are also emerging**. The important highlight of the scenario of securitization in Indian Market is that it is dominated by a few players **e.g. ICICI Bank, HDFC Bank, NHB etc.**
- As per a report of CRISIL, securitization transactions in India scored to the highest level of approximately Rs. 1.9 trillion, in Financial Year 2019 and 2020.
- **In order to further enhance the investor base in securitized debts, SEBI allowed FPIs to invest in securitized debt of unlisted companies upto a certain limit.**

3. What are the benefits of Securitization? (OR) Explain the benefits of Securitization from the point of view of originator [Nov 2019 RTP, May 2018, Nov 2019, May 2023 MTP, May 2022]

The benefits of securitization can be viewed from the angle of various parties involved as follows:

From the angle of originator	❖ **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. ❖ **More specialization in main business:** By transferring the assets the entity could concentrate more on core business as servicing of loan is transferred to SPV. Further, in case of non- recourse arrangement even the burden of default is shifted. ❖ **Helps to improve financial ratios:** Especially in case of Financial Institutions and Banks, it helps to manage Capital –To-Weighted Asset Ratio effectively.

	❖ **<u>Reduced borrowing Cost:</u>** 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	❖ **<u>Diversification of Risk:</u>** Purchase of securities backed by different types of assets provides the diversification of portfolio resulting in reduction of risk. ❖ **<u>Regulatory requirement:</u>** 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. ❖ **<u>Protection against default:</u>** 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.

4. **Who are the participants in Securitization? (OR) Distinguish between Primary Participants and Secondary Participants in Securitization? [May 2018 RTP, Nov 2018, Nov 2018 MTP, Jan 2021, May 2021 MTP, May 2021 RTP, Nov 2023 MTP, May 2022 MTP, May 2023 MTP, Nov 2024 MTP]**

Types of Participants	Primary Participants and Secondary Participants
Primary Participants (Main Parties)	❖ **<u>Originator:</u>** It is the initiator of deal or can be termed as **<u>securitizer</u>**. It is an entity which sells the assets lying in its books and receives the funds generated through the sale of such assets. The originator transfers both legal as well as beneficial interest to the Special Purpose Vehicle ❖ **<u>Special Purpose Vehicle:</u>** SPV is created for the purpose of executing the deal. Since issuer originator transfers all rights in assets to SPV, it holds the legal title of these assets. It is created especially for the purpose of securitization only and normally could be in form of a company, a firm, a society or a trust. The main objective of creating SPV to remove the asset from the Balance Sheet of Originator. Since, **<u>SPV makes an upfront payment</u>** to the originator, it holds the key position in the overall process of securitization ❖ **<u>Investors:</u>** Investors are the buyers of securitized papers which may be an individual, an institutional investor such as mutual funds, provident funds, insurance companies, mutual funds, Financial Institutions etc
Secondary Participants	❖ **<u>Obligors:</u>** Actually, they are the main source of the whole securitization process. **<u>They are the parties who owe money to the firm and are assets in the Balance Sheet of Originator.</u>** The amount due from the obligor is transferred to SPV and they form the basis of securitization process and their credit standing is of paramount importance in the whole process ❖ **<u>Rating Agency:</u>** Since the securitization is based on the pools of assets rather than the originators, the assets have to be assessed in terms of its credit quality and credit support available ❖ **<u>Receiving and Paying agent (RPA):</u>** Also, called Servicer or Administrator, it collects the payment due from obligor(s) and passes it to SPV. It also follow-up with defaulting borrower and if required initiate appropriate legal action against them. Generally, an originator or its affiliates acts as servicer ❖ **<u>Agent or Trustee:</u>** Trustees are appointed to oversee that all parties to the deal perform in the true spirit of terms of agreement. Normally, it takes care of interest of investors who acquires the securities ❖ **<u>Credit Enhancer:</u>** Since investors in securitized instruments are directly exposed to performance of the underlying and sometime may have limited or no recourse to the originator, **<u>they seek additional comfort in the form of credit enhancement</u>**. Originator itself or a third party say a bank may provide this additional context called Credit Enhancer ❖ **<u>Structurer:</u>** It brings together the **<u>originator, investors, credit enhancers and other parties to the deal of securitization</u>**. Normally, these are **<u>investment bankers</u>** also called arranger of the deal. It ensures that deal meets all legal, regulatory, accounting and tax laws requirements

5. **Explain the mechanism of Securitization? (OR) Discuss briefly the steps in Securitization Mechanism [May 2020 RTP, May 2018 (exam), May 2019 (exam), May 2019 MTP]**

- **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.
- **Transfer to SPV:** Once assets have been pooled, they are transferred to Special Purpose Vehicle (SPV) especially created for this purpose.
- **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
- **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.
- **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.
- **Repayment of funds:** SPV will repay the funds in form of interest and principal that arises from the assets pooled.
- **Credit Rating to Instruments:** Sometime before the sale of securitized instruments credit rating can be done to assess the risk of the issuer.

6. **Explain the problems in Securitization? (OR) Though in recent period of time the concept of securitisation has become popular in India as a source of Off Balance Sheet source of financing but its level of growth is still far behind" Explain. [OR] "Lack of existence of a well-developed debt market in India, is an obstacle that hinders the growth of the Secondary Market of securitized or asset backed Securities". Is it true? What are the other problems in Securitization Process? [Nov 2020 RTP, Nov 2019, May 2018 MTP, May 2020 MTP, Nov 2019 MTP, Nov 2020 MTP, July 2021, Nov 2020 MTP, Nov 2023 MTP, Nov 2021 MTP, Nov 2023, SM]**

- **Stamp Duty:** Under Transfer of Property Act, 1882, **a mortgage debt stamp duty which even goes upto 12%** in some states of India and this impeded the growth of securitization in India. It should be noted that since pass through certificate **are exempted from stamp duty.** Moreover, in India, **recognizing the special nature of securitized instruments in some states has reduced the stamp duty** on them
- **Taxation:** Taxation is another area of concern in India. In the **absence of any specific provision relating to securitized instruments** in Income Tax Act experts' opinion differ a lot
- **Accounting:** Accounting and reporting of securitized assets in the books of originator is another area of concern. **Although securitization is slated to an off-balance sheet instrument but in true sense receivables are removed from originator's balance sheet**. Problem arises especially when assets are transferred without recourse
- **Lack of Standardization:** Every originator follows own format for documentation and administration have lack of standardization is another obstacle in growth of securitization
- **Inadequate debt market:** Lack of existence of a well-developed debt market in India is another obstacle that hinders the growth of secondary market of securitized or asset backed securities
- **Ineffective foreclosure laws:** For last many years there are efforts are going on for effective foreclosure **but still foreclosure laws are not supportive to lending institutions and this makes securitized instruments especially mortgaged backed securities less attractive** as lenders face difficulty in transfer of property in event of default by the borrower

7. **What are the various securitization instruments? (OR) Pay through securities' are in the nature of participation certificates that enable the investors to take a direct exposure on the performance of the securitized assets. 'Pass Through Certificates', on the other hand, gives investors only a charge against the securitized assets. Do you agree with the statement? Justify your stand [May 2018 MTP, May 2019 MTP, Nov 2018 MTP, Nov 2020, May 2023, May 2021 MTP, Nov 2022 MTP, SM]**

- **Pass Through Certificates (PTCs):** Originator 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**

- **Pay Through Security (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**. This structure **permits desynchronization 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 tranch with varying maturities
- **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: (i) Interest Only (IO) Securities and (ii) Principle Only (PO) Securities. 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**

8. How is the pricing of securitized instruments done? [May 2019 MTP, Dec 2021, Nov 2023 RTP, Nov 2021 MTP]

While pricing the instruments, it is important that it should be acceptable to both originators as well as to the investors. On the same basis pricing of securities can be divided into following two categories:

From Originator's Angle	From originator's point of view, the instruments can be priced at a rate at which originator has to incur an outflow and **if that outflow can be amortized over a period of time by investing the amount** raised through securitization
From Investor's Angle	From an investor's angle security price **can be determined by discounting best estimate of expected future cash flows using rate of yield to maturity of a security** of comparable security with respect to credit quality and average life of the securities. This yield can also be estimated by referring the yield curve available for marketable securities, though some adjustments is needed on account of spread points, because of credit quality of the securitized instruments

9. What are the various risks in Securitization process?

Credit risk or counterparty risk	It is the prime risk wherein investors are prone to **the risk of bankruptcy** and non-performance of the servicer.
Legal risks	Securitization is an evolving area in India and any dispute in legal ownership of assets will cause uncertainty regarding investor pay-outs
Markets risk	• **Macroeconomic risks:** Performance of the underlying loan contracts depend on macroeconomic factors and any industry downturns can lead to default of loan portfolio • **Prepayment risk:** Any prepayment made on the underlying assets will increase the re-investment risk and investors may not be able to reinvest the amount at the same yield • **Interest rate risks:** This is applicable where the loans in a pool are based on floating rate and investor pay-outs are based on a fixed rate or vice versa. Even with 100% pool collection, the pool may not be able to meet the investor payouts

10. What is blockchain technology, and how is it applied in various industries? [Nov 2024 MTP]

- Blockchain is a decentralized open ledger of transactions without trusted third parties, with **permanent entries and irreversible changes**. It operates on a decentralized network without banks, corporations, or governments. A blockchain uses a chain of blocks representing digital information stored in a public database.
- **Example:** A simple analogy for understanding blockchain technology is a **Google Doc**. When we create a document and share it with a group of people, the document is distributed instead of copied or transferred. This creates a decentralized distribution chain that gives everyone access to the document at the same time. No one is locked out awaiting changes from another party, while all modifications to the document are being recorded in real-time, making changes completely transparent.

Working of Blockchain transaction:

- A transaction like sending money to someone is initiated.
- Transaction is broadcasted via the network.
- The network validates the transaction using cryptography
- The transaction is represented online as a block
- Block is added to the existing block chain
- Transaction is complete

Applications of Blockchain:

- **Financial services:** Blockchain automates trade lifecycle for financial services, enabling automated transactions of physical and digital assets and properties
- **Healthcare:** Blockchain provides **secure sharing of data** in healthcare industry by increasing the privacy, security, and interoperability of the data by eliminating the interference of third party and avoiding the overhead costs.
- **Government:** At the government front, there are instances **where the technical decentralization is necessary** but politically should be governed by governments like land registration, vehicle registration and management, e-voting etc. **Blockchain improves the transparency and provides a better way to monitor and audit the transactions in these systems**
- **Travel Industry:** Blockchain revolutionizes travel industry by **enabling secure transactions**, document storage, reservation management, insurance, loyalty, and rewards
- **Economic Forecasts:** Blockchain makes possible the financial and economic forecasts based on decentralized prediction markets, decentralized voting, and stock trading, thus enabling the organizations to plan and shape their businesses

11. What are the risks in a blockchain technology? [May 2024 MTP]

- With the use of blockchain, organizations need to consider risks with a wider perspective as different **members of a particular blockchain may have different risk appetite/risk tolerances** that may further lead to conflict when monitoring controls are designed for a blockchain. There may be questions about **who is responsible for managing risks if no one party is in-charge**, and how proper accountability is to be achieved in a blockchain.
- The reliability of financial transactions is **dependent on the underlying** technology and if this underlying consensus mechanism has **been tampered with**, it could render the financial information stored in the ledger to be inaccurate and unreliable.
- In the absence of any central authority to administer and enforce protocol amendments, there could **be a challenge in the development and maintenance of process control activities** and in such case, users of public blockchains find difficult to obtain an understanding of the general IT controls implemented and the effectiveness of these controls.
- As blockchain involves humongous data getting updated frequently, **risk related to information overload could potentially challenge the level of monitoring required**. Furthermore, to find competent people to design and perform effective monitoring controls may again prove to be difficult

12. What is Tokenization and compare the same with securitization? [May 2024 MTP, May 2024]

- Tokenization is a process of **converting tangible and intangible assets into blockchain tokens**. It can be effective in conventional industries like real estate, artwork etc.

Similarities between Tokenization and Securitization:

- **Liquidity:** Both Securitization and Tokenization inject liquidity in the market for the assets **which are otherwise illiquid assets**.
- **Diversification:** Both help investors to diversify their portfolio thus managing risk and optimizing returns.
- **Trading:** Both are tradable hence helps to generate wealth.
- **New Opportunities:** Both provide opportunities for financial institutions and related agencies to earn income **through collection of fees**.

Chapter 8 – Mutual Funds

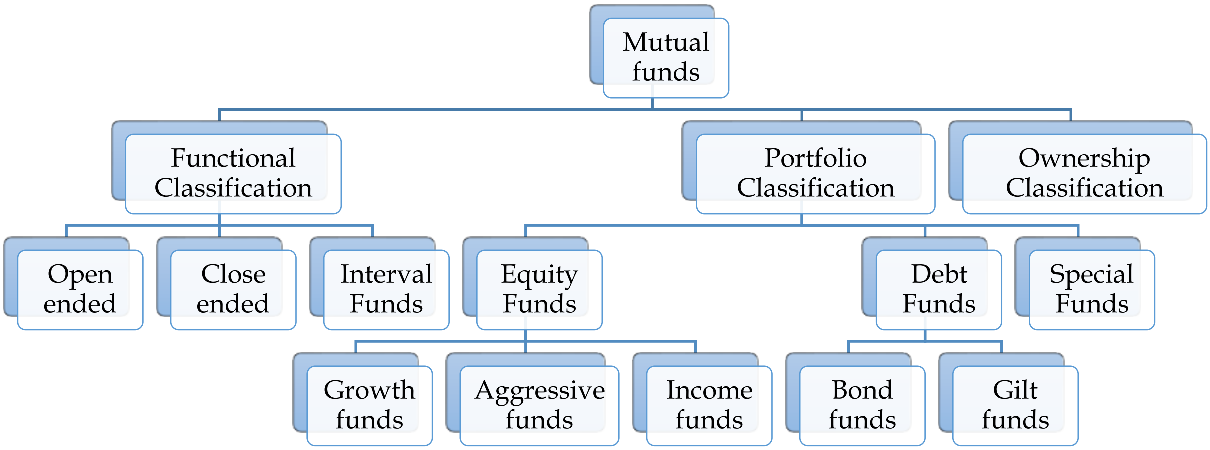
1. What is a mutual fund?

❖ Mutual fund is a trust that pools together the resources of investors to make a foray into investments in the capital market, thereby making the investor to be part owner of the assets of mutual fund. It is trust **<u>that pools the resources of investors who share a common financial goal.</u>**

❖ The fund is **<u>managed by a professional money manager</u>** who makes investment in various stocks, bonds or other securities according to the investment objectives established by the Fund.

❖ Anybody with investible surplus can invest in the funds. The income earned through these investments and the capital appreciation realized by the scheme is shared by the unit holders in proportion to their investment.

2. What are the various classification of mutual funds?



Functional Classification	
Open Ended Funds	In an open-ended scheme, the investor can make entry and exit at any time. Also, the capital of the fund is unlimited and the redemption period is indefinite
Close ended funds	In a close ended scheme, the investor can buy into the scheme during Initial Public offering or from the stock market after the units have been listed. The scheme has a limited life at the end of which the corpus is liquidated
Interval funds	Interval schemes **<u>are a combination of an Open-Ended and a Close-Ended structure</u>**. These schemes are open for both purchase and redemption during pre-specified intervals (viz. monthly, quarterly, annually etc.) at prevailing NAV based prices
Portfolio Classification	
Equity Funds	Equity funds invest primarily in stocks. Equity funds are of the following types: ❖ **<u>Growth Funds:</u>** They seek to provide long term capital appreciation to the investor and are best to long term investors. ❖ **<u>Aggressive Funds:</u>** They look for super normal returns for which investment is made in start-ups, IPOs and speculative shares. They are best to investors willing to take risks. ❖ **<u>Income Funds:</u>** They seek to maximize present income of investors by investing in safe stocks paying high cash dividends and in high yield money market instruments. They are best to investors seeking current income
Debt funds	Debt funds are of two types: ❖ **<u>Bond Funds:</u>** They invest in fixed income securities e.g. government bonds, corporate debentures, convertible debentures, money market. Investors seeking tax free income go in for government bonds while those looking for safe, steady income buy government bonds or high-grade corporate bonds. Although there have been past exceptions, bond funds tend to be less volatile than stock funds and often produce regular income. They are exposed to risks such as interest rate risk, credit risk, prepayment risk and re-investment risk ❖ **<u>Gilt Funds:</u>** They are mainly invested in Government securities.

<table>
<tr>
<td>Special funds (May 2021 MTP, May 2023)</td>
<td>
❖ <u>Index Funds:</u> Every stock market has a stock index which measures the upward and downward sentiment of the stock market. Index Funds are low cost funds and influence the stock market.
❖ <u>International Funds:</u> A mutual fund located in India to raise money in India for investing globally.
❖ <u>Offshore Funds:</u> A mutual fund located outside India to raise money globally for investing in India.
❖ <u>Sector Funds:</u> They invest their entire fund in a particular industry e.g. utility fund for utility industry like power, gas, public works.
❖ <u>Money Market Funds:</u> These are predominantly debt-oriented schemes, whose main objective is preservation of capital, easy liquidity and moderate income. To achieve this objective, liquid funds invest predominantly in safer short-term instruments like Commercial Papers, Certificate of Deposits, Treasury Bills, G-Secs etc.
❖ <u>Fund of Funds:</u> Fund of Funds (FoF) as the name suggests are schemes which invest in other mutual fund schemes.
❖ <u>Capital Protection Oriented Fund:</u> The term ‘capital protection-oriented scheme’ means a mutual fund scheme which is designated as such and which endeavours to protect the capital invested therein through suitable orientation of its portfolio structure. <u>A typical portfolio structure could be to set aside major portion of the assets for capital safety and could be invested in highly rated debt instruments.</u> The remaining portion would be invested in equity or equity related instruments to provide capital appreciation. Capital Protection Oriented schemes are a recent entrant in the Indian capital markets and should not be confused with ‘capital guaranteed’ schemes.
❖ <u>Gold Funds:</u> The objective of these funds is to track the performance of Gold. The units represent the value of gold or gold related instruments held in the scheme.
❖ <u>Quant Funds:</u> Quant Fund <u>works on a data-driven approach for stock selection and investment decisions</u> based on pre-determined rules or parameters using statistics or mathematics-based models. Quant Funds <u>rely on automated programs for investment decisions, timings, and actions</u>. However, human intervention is minimal, as fund managers focus on robust models and continuously monitor performance. Modifications may be made as needed. It <u>eliminates the human biasness and subjectivity and by using model-based approach also ensures consistency in strategy across the market conditions.</u>
</td>
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<tr>
<td colspan="2" align="center">Ownership classification</td>
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<tr>
<td colspan="2">Funds are classified into <u>Public Sector Mutual Funds, Private Sector Mutual Funds and Foreign Mutual Funds</u>. Public Sector Mutual Funds are sponsored by a company of the public sector. Private Sector Mutual Fund is sponsored by a company of the private sector. Foreign Mutual Funds are sponsored by companies for raising funds in India, operate from India and invest in India</td>
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3. Explain about Direct Plan in Mutual Fund? [May 2019 MTP]

❖ Asset management companies (AMC) have been permitted to **<u>make direct investments in mutual fund schemes even before 2011. But, there were no separate plans for these investments</u>**. These investments were made in distributor plan itself and were tracked with single NAV - one of the distributor plans. Therefore, an investor was forced to buy mutual funds based on the NAV of the distributor plans. However, things changed with introduction of direct plans by SEBI on January 1, 2013.

❖ **<u>Mutual fund direct plans are those plan where Asset Management Companies or mutual fund Houses do not charge distributor expenses, trail fees and transaction charges</u>**. NAV of the direct plan are generally higher in comparison to a regular plan. **<u>Studies have shown that the ‘Direct Plans’ have performed better than the ‘Regular Plans’ for almost all the mutual fund schemes.</u>**

4. What are the various types of schemes in mutual funds? [OR] Explain the concept of Exchange Traded Funds? [Nov 2019 RTP]

❖ **<u>Balanced Fund:</u>** It consists of both debt and equity. **<u>It works on the principle that debt portfolio provides stability and the equity provides growth.</u>** The returns of the fund will be moderate.

- **Equity Diversified Funds:** This type of fund ensures high level of diversification and ensures reduction of risk involved in the fund. The following are the types of diversified funds:
  - Flexi cap / Multicap fund
  - Contra fund
  - Index fund
  - Dividend yield fund (Dividend Payout option & Dividend Re investment option)
- **Equity tax linked savings scheme:** It is used as a tax saver under Sec 80C of the Income tax Act, 1961. It also has benefit to give potential returns.
- **Sector funds:** These funds are focussed on a particular industry to take the advantage of industry cycles. They are much riskier than the equity diversified funds. These funds are suitable only for those who already have a portfolio.
- **Thematic funds:** These funds could vary from multi sector, international exposure etc. They have a broader outlook than the sector funds.
- **Arbitrage funds:** The fund seeks to provide better return than debt instruments and lower volatility than equity funds. Arbitrage funds seek to capitalize on the price differentials between the spot and the futures market. This is suitable for conservative investor.
- **Hedge fund:** This is a sort of private investment vehicle which is free from most of the regulations. The fund does not reveal anything about its operations publicly. Hedge funds are aggressively managed portfolio of investments with a goal of generating high returns.
- **Cash fund:** Cash fund is an open-ended liquid scheme that aims to provide returns with low risk and ensure better liquidity. The fund has retail and super institutional plans. There is no entry or exit load.
- **Exchange Traded Fund (ETF):** These funds are listed on the stock exchanges and their prices are linked to the underlying securities. An ETF can be bought by placing an order with the Broker and traded during the market hours at prices closer to its NAV. Following are the types of ETF Products available in the market: (i) Index EFTs (ii) Commodity ETFs (iii) Bond ETFs (iv) Currency ETFs
- **Fixed Maturity Plans:** Fixed Maturity Plans (FMPs) are closely ended mutual funds that investors can invest in during New Fund Offers (NFOs). **These funds typically invest in CDs, Commercial Papers, Money Market Instruments, and Non-Convertible Debentures over a fixed investment period**. FMPs are not liquid instruments and have lower trading volume. They are free from interest rate risk but carry credit risk due to potential default by the debt issuing company. **Most FMPs have a three-year tenure, but they struggle to provide good interest returns if they invest in higher-rated instruments and hence some FMPs also invest in lower rated instruments.**

5. What are the advantages and limitations of mutual funds?

Advantages of mutual funds:

- **Professional Management:** The funds are managed by skilled and professionally experienced managers with a back-up of a Research team.
- **Diversification:** Mutual Funds offer diversification in portfolio which reduces the risk.
- **Convenient Administration:** There are no administrative risks of share transfer, as many of the Mutual Funds offer services in a demat form which save investor's time and delay.
- **Higher Returns:** Over a medium to long-term investment, investors always get higher returns in Mutual Funds as compared to other avenues of investment.
- **Low Cost of Management:** No Mutual Fund can increase the cost beyond prescribed limits of 2.5% maximum and any extra cost of management is to be borne by the AMC.
- **Liquidity:** In all the open-ended funds, liquidity is provided by direct sales / repurchase by the Mutual Fund and in case of close ended funds, the liquidity is provided by listing the units on the Stock Exchange.
- **Transparency:** The SEBI Regulations now compel all the Mutual Funds to disclose their portfolios on a half-yearly basis. However, many Mutual Funds disclose this on a quarterly or monthly basis to their investors.
- **Other Benefits:** Mutual Funds provide regular withdrawal and systematic investment plans according to the need of the investors. The investors can also switch from one scheme to another without any load.
- **Highly Regulated:** Mutual Funds all over the world are highly regulated and in India all Mutual Funds are registered with SEBI and are strictly regulated as per the Mutual Fund Regulations which provide excellent investor protection.

- **Economies of scale:** The "pooled" money from a number of investors ensures that mutual funds enjoy economies of scale; it is cheaper compared to investing directly in the capital markets which involves higher charges.
- **Flexibility**: There are a lot of features in a regular mutual fund scheme, which imparts flexibility to the scheme. An investor can opt for Systematic Investment Plan (SIP), Systematic Withdrawal Plan etc. to plan his cash flow requirements as per his convenience.
- **Convenience:** It is very convenient & easy to invest & disinvest from Mutual Fund Schemes specially through digital transaction portals

Drawbacks of mutual funds:

- **No guarantee of Return** – There are three issues involved:
  - All Mutual Funds cannot be winners.
  - A mutual fund may perform better than the stock market but this does not necessarily lead to a gain for the investor.
  - Investors may forgive if the return is not adequate. But they will not do so if the principal is eroded. Mutual Fund investment may depreciate in value.
- **Diversification**: A mutual fund helps to create a diversified portfolio. Though diversification minimizes risk, it does not ensure maximizing returns.
- **Selection of Proper Fund**: It may be easier to select the right share rather than the right fund. For stocks, one can base his selection on the parameters of economic, industry and company analysis.
- **Cost Factor:** Mutual Funds carry a price tag. Fund Managers are the highest paid executives.

6. What is trail commission in relation to a mutual fund?

- It is the amount **that a mutual fund investor pays to his advisor each year**. The purpose of charging this commission from the investor is to **provide incentive to the advisor to review their customer's holdings** and to give advice from time to time
- This is calculated as a **percentage of the daily average assets under management** of the distributor and is paid monthly

7. What is expense ratio?

- The expense ratio is the percentage of assets **spent on mutual fund operations**, including management, advisory, travel, audit, custodian, registrar, and consultancy fees.
- It is crucial to monitor as it can be as high as 2-3%, **potentially affecting a mutual fund scheme's performance.**

8. Explain the concept of Side pocketing in mutual funds? [May 2019 RTP]

- Side Pocketing leads to separation of risky assets from other investments and cash holdings.
- The purpose is to make sure that money invested in a mutual fund, which is linked to stressed assets, gets locked, until the fund recovers the money from the company or could avoid distress selling of illiquid securities.
- A debt mutual fund invests in securities which normally enjoy high credit rating. Whenever the rating of a mutual fund decreases, the fund shifts the illiquid assets into a side pocket so that current unitholders can be benefitted from liquid assets. Hence the NAV of the fund will reflect the actual value of liquid assets
- Side Pocketing is beneficial for those investors who wish to hold on to the units of the main funds for long term. Therefore, the process of Side Pocketing ensures that liquidity is not the problem even in the circumstances of frequent allotments and redemptions.
- Side Pocketing is quite common internationally. However, Side Pocketing has also been resorted to impact the genuine returns of investors.

9. EXPLAIN how to measure divergence or deviation of return of a Mutual Fund Scheme that replicates any benchmark Index [May 2022 MTP, July 2021]

- Tracking error can be used to measure the divergence or deviation of a fund's return from the benchmarks return it is following.
- The passive fund managers **closely follow or track the benchmark index**. Although they design their investment strategy on the same index but often it may not exactly replicate the index return. In such situation, there is possibility of deviation between the returns.

- The tracking error can be calculated on the basis of corresponding benchmark return vis a vis quarterly or monthly average NAVs. **<u>Higher the tracking error higher is the risk profile of the fund. Whether the funds outperform or underperform their benchmark indices; it clearly indicates that of fund managers are not following the benchmark indices properly</u>**.
- In addition to the same, other reason for tracking error are as follows:
  - Transaction cost
  - Fees charged by AMCs
  - Fund expenses
  - Cash holdings
  - Sampling biasness
- **Thus, from above it can be said that to replicate the return to any benchmark index the tracking error should be near to zero.**

10. How can we evaluate the performance of a mutual fund? [May 2024 MTP, Nov 2024 MTP]

Quantitative Parameters	
Risk-Adjusted Returns	• Return of a Mutual Fund relative to the risk it assumed as benchmarked against the market and industry risk
Benchmark Returns	• Benchmark can be defined as the **<u>quality or set of standards</u>** against which performance of Mutual Fund can be measured • A good Mutual Fund performs over and above its benchmark during all phases of market, **<u>this excess return is known as 'Alpha'</u>**
Comparison to peers	• Comparing mutual fund performance with peers is a quantitative method, as it is fair to compare apples with apples rather than oranges. • **<u>A good mutual fund should consistently outperform its peers for its worth.</u>**
Comparison of Returns across different economic and market cycles	• Mutual Fund performance involves considering not only time frames but also economic and market cycles, as special conditions may cause short-term outperformance or underperformance, potentially lasting for future periods
Financial Measures	• Expense Ratio • Sharpe Ratio • Treynor Ratio • Sortino Ratio - A variation of Sharpe Ratio that considers and uses downside deviation instead of total standard deviation in denominator.
Qualitative Parameters	
Quality of Portfolio	• Mutual Funds' portfolio quality is **<u>crucial for superior returns</u>** • . Equity Mutual Funds allocate funds to **<u>top blue-chip companies</u>** and are diversified, with styles like growth, value, or blend. • Debt Funds measure portfolio quality based on **<u>credit quality, average maturity, and modified duration</u>** of fixed asset securities. • Good quality stocks and securities are essential, and investments should align with the fund's objectives
Track Record and Competence of Fund Manager	• Fund Manager's competence and conviction are crucial in selecting securities and making investment decisions.
Credibility of Fund House Team	• Team of Fund House also plays a big role towards the investors' interest. In addition to investment decisions, there are some other administrative tasks also such as r**<u>edemption of units, crediting of dividend, providing adequate information etc. which play a crucial role</u>** in qualitative assessment of any mutual fund house

11. What is the role of a fund manager in the context of mutual funds?

- Main responsibility is to ensure **<u>good performance of the fund he/she is managing</u>**, but there are other roles as well
- Nature of Fund manager's role also depends on the fact that whether Fund is an Actively Managed Fund or a Passively Managed Fund
- **<u>Actively Managed funds:</u>** Fund manager plays a crucial role as right stock selection is critical to generate positive Alpha.

- **Passively Managed Funds:** Fund Manager's role is to match the return of the underlying index with the minimum Tracking Error

Other key roles of fund manager:

- **Compliances:** Fund Manager must ensure compliance of various Guidelines as laid down by SEBI, AMFI etc. They should also ensure proper reporting and furnish required documents on time
- **Constant Monitoring the Performance of the Fund:** Fund Managers must continuously monitor and evaluate securities and investments to maximize wealth for unit holders. **Their performance is evaluated not only on return but also on growth above inflation and interest rates.**
- **Creation of wealth and protection:** Fund Managers play a crucial role in wealth creation and protection, avoiding reckless risk assumptions and **conducting thorough research using Fundamental and Technical Analysis techniques.**
- **Control over works outsourced to third parties:** Fund Manager must exercise control over third party works to ensure error-free operations in outsourced works, ensuring proper functioning and oversight.

12. Write about role of Foreign Institutional Investors in Mutual Funds?

- Foreign Institutional Investors (FIIs) are large foreign groups with **substantial investible funds, registered abroad** to invest in equity markets, hedge funds, pension funds, and mutual funds.
- **They have a strong research team and can buy domestic mutual funds directly from issuers or through registered stock brokers on recognized stock exchanges in India.**
- **Role of FII in Indian Economy through MF investment:** FIIs play a crucial role in the Indian economy through their investment in mutual funds, as they **enhance corporate governance, improve market competition, and improve capital inflow**. This not only generates employment but also improves the position of foreign exchanges

Chapter 9 – Derivatives Analysis and Valuation

1. What is a derivative instrument and how does it derive its value?

- **Meaning:** Derivative is a product **whose value is to be derived from the value of one or more basic variables called bases** (underlying assets, index or reference rate). The underlying assets can be **Equity, Forex, and Commodity**
- The importance of underlying asset in derivative instrument is as follows:
    - All derivative instruments are **dependent on an underlying** to have value.
    - The change in value in **a forward contract is broadly equal to the change in value in the underlying**.
    - In the absence of a valuable underlying asset **the derivative instrument will have no value.**
    - On maturity, the position of **profit/loss is determined by the price of underlying instruments**. If the price of the underlying is higher than the contract price the buyer makes a profit. If the price is lower, the buyer suffers a loss.

2. Who are the main users of derivatives?

Users	Purpose
Corporation	To hedge currency risk and inventory risk
Individual investors	For speculation, hedging and yield enhancement
Institutional investor	For hedging asset allocation, yield enhancement and to avail arbitrage opportunities
Dealers	For hedging position taking, exploiting inefficiencies and earning dealer spreads.

3. Differentiate between Cash market and Derivatives market?

- In cash market **tangible assets are traded** whereas in derivative market contracts based on **tangible or intangibles assets like index or rates are traded**.
- In cash market, we can purchase **even one share** whereas in Futures and Options **minimum lots are fixed**.
- Cash market is more-risky than Futures and Options segment because in "Futures and Options" risk is limited upto 20%.
- Cash assets may be meant for consumption or investment. Derivative contracts are for hedging, arbitrage or speculation.
- The value of derivative contract is **always based on and linked to the underlying security**. However, this linkage may not be on point-to-point basis.
- In the cash market, a **customer must open securities trading account with a securities depository** whereas to trade futures a customer must open a future trading account with a derivative broker.
- Buying securities in cash market involves **putting up all the money upfront** whereas buying futures simply involves putting up the **margin money**.
- With the purchase of shares of the company in cash market, **the holder becomes part owner of the company. While in future it does not happen**.

4. Distinguish between forward and futures contract? [Nov 2020 RTP]

Features	Forward Contract	Futures Contract
Trading	Forward contracts are traded on personal basis or on telephone or otherwise	Futures Contracts are traded in a competitive arena.
Size of contract	Forward contracts are individually tailored and have no standardized size	Futures contracts are standardized in terms of quantity or amount as the case may be
Organized exchanges	Forward contracts are traded in an over the counter market.	Futures contracts are traded on organized exchanges with a designated physical location.
Settlement	Forward contracts settlement takes place on the date agreed upon between the parties.	Futures contracts settlements are made daily via. Exchange's clearing house.
Delivery date	Forward contracts may be delivered on the dates agreed upon and in terms of actual delivery.	Futures contracts delivery dates are fixed on cyclical basis and hardly takes place.

		However, it does not mean that there is no actual delivery.
Transaction costs	Cost of forward contracts is based on bid – ask spread.	Futures contracts entail brokerage fees for buy and sell order
Marking to Market	Forward contracts are not subject to marking to market	Futures contracts are subject to marking to market in which the loss on profit is debited or credited in the margin account on daily basis due to change in price.
Margins	Margins are not required in forward contract.	In futures contracts every participants is subject to maintain margin as decided by the exchange authorities
Credit risk	In forward contract, credit risk is born by each party and, therefore, every party has to bother for the creditworthiness.	In futures contracts the transaction is a two way transaction, hence the parties need not to bother for the risk.

5. What is Marking to market? [SM]

It implies the **process of recording the investments** in traded securities (shares, debt-instruments, etc.) at a **value, which reflects the market value of securities** on the reporting date. In the context of **derivatives trading**, the futures contracts are marked to market on **periodic (or daily) basis**. Marking to market essentially **means that at the end of a trading session, all outstanding contracts are repriced at the settlement price of that session**. Unlike the forward contracts, the future contracts are repriced every day. Any loss or profit resulting from repricing would be debited or credited to the margin account of the broker. It, therefore, provides an opportunity to calculate the extent of liability on the basis of repricing. Thus, the **futures contracts provide better risk management measure** as compared to forward contracts.

6. What are the advantages of stock index futures over stock futures? [SM]

- It adds **flexibility to one's investment portfolio**. Institutional investors and other large equity holders prefer the most this instrument in terms of portfolio hedging purpose. The stock systems do not provide this flexibility and hedging.
- It creates the **possibility of speculative gains using leverage**. Because a relatively small amount of margin money controls a large amount of capital represented in a stock index contract, a small change in the index level might produce a profitable return on one's investment if one is right about the direction of the market. Speculative gains in stock futures are limited but liabilities are greater.
- Stock index futures are the **most cost-efficient hedging** device whereas hedging through individual stock futures is costlier.
- **Stock index futures cannot be easily manipulated** whereas individual stock price can be exploited more easily.
- Since, **stock index futures consists of many securities, so being an average stock**, is much less volatile than individual stock price. Further, it implies **much lower capital adequacy and margin requirements in comparison of individual stock futures**. Risk diversification is possible under stock index future than in stock futures.
- One can sell contracts as readily as one buys them and the amount of margin required is the same.
- In case of individual stocks, the outstanding positions are settled normally against physical delivery of shares. In case of stock index futures, they are settled in cash all over the world on the premise that index value is safely accepted as the settlement price.
- It is also seen that **regulatory complexity is much less** in the case of stock index futures in comparison to stock futures.
- It provides **hedging or insurance protection** for a stock portfolio in a falling market.

7. What are the uses/advantages of stock index futures? [Nov 2023 MTP]

- Investors commonly use stock index futures to change the **weights or risk exposures** of their investment portfolios. Investors can buy index futures of a particular index to increase weights and sell index futures of another index to reduce weights
- Stock index futures also allow investors to **separate market timing from market selection decisions**. For instance, investors may want to take advantage of perceived immediate increases in an equity market but are not certain which securities to buy; they can do this by purchasing stock index futures

- Investors can also make money **from stock index futures through index arbitrage**, also referred to as program trading as it is carried out through use of computers. Investors taking part in stock index arbitrage seek to gain profits whenever a futures contract is trading out of line with the fair price of the securities underlying it.
- Investors often use **stock index futures to hedge the value of their portfolios**. Provide hedging or insurance protection for a stock portfolio in a falling market.
- Stock index futures add flexibility to his or her portfolio as a hedging and trading instrument
- Create the possibility of **speculative gains using leverage**. Because a relatively small amount of margin money controls a large amount of capital represented in a stock index contract, a small change in the index level might produce a profitable return on one's investment if he or she is right about the market's direction.
- Maintain one's stock portfolio **during stock market corrections**. One may not need "insurance" for all the time, but there are certain times **when one would like less exposure to stocks**
- One can sell contracts as readily as he or she can buy them and the amount of margin required is the same. Mutual funds do not specialize in bear market approaches by short selling stocks but, and also it is **not possible for individuals to short sell stocks in a falling market** to make money.
- Transfer risk quickly and efficiently. Whether one is speculating, looking for insurance protection (hedging), or temporarily substituting futures for a later cash transaction, **most stock index futures trades can be accomplished quickly and efficiently**

8. Distinguish between options and futures? (OR) "Investing in Stock Futures differs from investing in Equity Options in several ways". Explain [May 2023 MTP]

❖ **Nature:** In options, the buyer of the options has the right but not the obligation to purchase or sell the stock. However, while going in for a long futures position, the investor is obligated to square off his position at or before the expiry date of the futures contract.

❖ **Movement of the Market:** Options traders use a mathematical factor, the delta that measures the relationship between the options premium and the price of the underlying stock. At times, an options contract's value may fluctuate independently of the stock price. By contrast, the future contract will much more closely follow the movement of the underlying stock.

❖ **The Price of Investing:** When an options investor takes a long position, he or she pays a premium for the contract. The premium is often called a sunk cost. At expiration, unless the options contract is in the money, the contract is worthless and the investor has lost the entire premium. Stock future contracts require an initial margin deposit and a specific maintenance level of cash for mark to market margin

9. What are the factors affecting value of an option? [Nov 2023 MTP, May 2023 MTP]

❖ **Price Movement of the Underlying:** The value of calls and puts are affected by changes in the underlying stock price in a relatively straightforward manner. When the stock price goes up, calls should gain in value and puts should decrease. Put options should increase in value and calls should drop as the stock price falls.

❖ **Time till expiry:** The option's future expiry, at which time it may become worthless, is an important and key factor of every option strategy. Ultimately, time can determine whether your option trading decisions are profitable. To make money in options over the long term, you need to understand the impact of time on stock and option positions.

❖ **Volatility in Stock Prices:** Volatility can be understood via a measure called statistical (sometimes called historical) volatility, or SV for short. SV is a statistical measure of the past price movements of the stock; it tells you how volatile the stock has actually been over a given period of time

❖ **Interest Rate**: Another feature which affects the value of an Option is the time value of money. The greater the interest rates, the present value of the future exercise price are less

10. Write short note on various Greeks (Delta, Gamma, Theta, Rho and Vega)? [Nov 2023, SM]

Delta	It is the degree to which an option price will move given a small change in the underlying stock price. For example, an option with a delta of 0.5 will move half a rupee for every full rupee movement in the underlying stock.
Gamma	It measures how fast the delta changes for small changes in the underlying stock price. i.e. the delta of the delta. If you are hedging a portfolio using the delta-hedge technique described under "Delta", then you will want to keep gamma as small as possible, the smaller it is the less often you will have to adjust the hedge to maintain a delta neutral position

Theta	The change in option price given a one day decrease in time to expiration. Basically it is a measure of time decay
Rho	The change in option price given a one percentage point change in the risk-free interest rate. It is sensitivity of option value to change in interest rate. Rho indicates the absolute change in option value for a one percent change in the interest rate.
Vega	Sensitivity of option value to change in volatility. Vega indicates an absolute change in option value for a one percent change in volatility

11. What is an exotic option and what are the different types of exotic options?

- Exotic options are the classes of option contracts with **structure and features different from plain vanilla options** (American and European style options).
- Exotic options are different from these vanilla options in their expiration dates also. Exotic option is some type of hybrid of American and European options **and hence falls somewhere in between these options.**
- **Exotic vs traditional options:** An exotic option can vary in terms of pay off and time of exercise. These options are more complex than vanilla options and they are mostly traded in OTC market.

Types of Exotic Options:

- **Chooser Options:** This option provides a right to the buyer of option after a specified period of time to decide **whether purchased option is a call option or put option**. It is to be noted that the decision can be made within a specified period prior to the expiration of contracts
- **Compound Options:** Also called split fee option or **'option on option'.** As the name suggests this option provides a right or choice not an obligation **to buy another option at specific price on the expiry of first maturity date**. Thus, it can be said in this option the underlying is an option. Further the payoff depends on the strike price of second option.
- **Barrier options:** Though it is similar to plain vanilla call and put options, but unique feature of this option is **that contract will become activated only if the price of the underlying reaches a certain price** during a predetermined period
- **Binary Options:** Also known as 'Digital Option', this option contract guarantees the pay-off **based on the happening of a specific event**. If the event has occurred, the pay-off shall be pre-decided amount and if event it has not occurred then there will be no pay-off
- **Asian Options:** These are the option contracts whose pay off are determined by the **average of the prices of the underlying over a predetermined period** during the lifetime of the option.
- **Bermuda Option:** It is somewhat a compromise between a European and American options. Contrary to American option where it can be exercised at any point of time, **the exercise of this option is restricted to certain dates** or on expiration like European option.
- **Basket Options:** In this type of contracts the value of option instead of one underlying depends on **the value of a portfolio i.e., a basket**. Generally, this value is computed based on the weighted average of underlying constituting the basket.
- **Spread Options:** As the name suggests the payoff of these type of options depend on **difference between prices of two underlying**.
- **Look back options:** Unlike other type of options whose exercise prices are pre-decided, in this option on maturity date the **holder of the option is given a choice to choose a most favourable strike price depending on the minimum and maximum price of an underlying** achieved during the life time of option.

12. What are the two types of risks which are impacting financial products?

Financial products are subject to following two types of risks:

- **Market Risk**: Due to adverse movement of the stock market, interest rates and foreign exchange rates. Financial derivatives can be used to hedge the market risk.
- **Credit Risk:** Also called as counter party or default risk, this risk involves non-fulfilment of obligation by the counter party. Credit derivatives can be used to mitigate this risk.

13. Explain the working of Credit Default Swaps (CDS)?

- CDS can be defined as an **insurance (not in stricter sense) against the risk of default** on a debt which may be debentures, bonds etc

- Under this arrangement, one party (called buyer) needing protection against the default **pays a periodic premium to another party (called seller), who in turn assumes the default risk**. Hence, in case default takes place then there will be settlement and in case **no default takes place no cash flow will accrue to the buyer alike option contract and agreement is terminated**. Although it resembles the options but since element of choice is not there it more resembles the swap arrangements. **Amount of premium mainly depends on the price of underlying and especially when the credit risk is more.**

Features:
- CDS is a non-standardized private contract between the buyer and seller. Therefore, it is covered in the category of **Forward Contracts**
- They are normally not traded on any exchange and hence **remains free from the regulations** of Governing Body.
- The International Swap and Derivative Association (ISAD) publishes the guidelines and general rules used normally to carry out CDS contracts.
- CDS can be purchased **from third party to protect itself from default of borrowers**.
- Similarly, an individual investor who is buying bonds from a company can purchase CDS to protect his investment from insolvency of that company. Thus, this increases the level of confidence of investor in Bonds purchased.
- The cost or premium of CDS **has a positive relationship with risk attached with loans.** Therefore, higher the risk attached to Bonds or loans, higher will be premium or cost of CDS.
- If an investor buys a CDS without being exposed to credit risk of the underlying bond issuer, **it is called "naked CDS".**

14. What are the primary applications of Credit Default Swaps (CDS), and who are the participants involved in CDS transactions?"

Applications of CDS:
- **Hedging:** Main purpose of using CDS is to **neutralize or reduce a risk** to which CDS is exposed to. Thus, by buying CDS, risk can be passed on to CDS seller or writer.
- **Arbitrage:** It involves buying a CDS and entering into an asset swap. For example, a fixed coupon payment of a bond is swapped against a floating interest stream. Arbitrage will lead to profit if the cost of CDS is lower than the net benefit received from asset swap
- **Speculation:** CDS can also be used to make profit by exploiting price changes. For example, a CDS writer assumed risk of default, will gain from contract if credit risk does not materialize during the tenure of contract or if compensation received exceeds potential payout

Parties to CDS:
- **The initial borrowers:** It is also called a 'reference entity', which are owing a loan or bond obligation.
- **Buyer:** It is also called 'investor' i.e. the **buyer of protection**. The buyer will make regular payment to the seller for the protection from default or credit event of reference entity.
- **Seller:** It is also called 'writer' of the CDS and makes payment to buyer in the event of credit event of reference entity. It receives a regular pay off from the buyer of CDS.

15. Explain the settlement process of CDS?
- **CDS Transaction example:** Suppose BB Corp. buys CDS from SS Bank for the Bonds amounting $ 10 million of Danger Corp. In such case, the BB Corp. will become the buyer, SS Bank becomes seller and Danger Corp. becomes the reference entity. BB Corp. will make regular payment to SS Bank of the premium and if Danger Corp. defaults on its debts, the BB Corp. will receive one time payment and CDS contract is terminated.

Settlement types:
- **Physical Settlement:** This is the traditional method of settlement. It involves the delivery of Bonds or debts of the reference entity by the buyer to the seller and seller pays the buyer the par value. For example, as mentioned above suppose Danger Corp. defaults then SS Bank **will pay $ 10 Million to BB Corp. and BB Corp will deliver $10 Million face value of Bonds to SS Bank**
- **Cash Settlement:** Under this arrangement seller pays the buyer the **difference between par value and the market price of a debt (whatever may be the market value) of the reference entity**.

Continuing the above example suppose, the market value of Bonds is 30%, as market is of belief that bond holder will receive 30% of the money owed in case company goes into liquidation. Thus, the SS Bank shall pay BB Corp. $ 10 Million - $3 million (100% - 30%) = $ 7 Million.

16. What is Collateralized Debt Obligations (CDOs) and explain its types?

- CDOs typically **pool together various debt instruments**, such as bonds, loans, and other fixed-income assets, to create a diversified portfolio of assets. The cash flows generated from these assets are used to pay **interest and principal to the investors** of different tranches.

Types of CDOs:

- **Cash Flow Collateralized Debt Obligations (Cash CDOs):** Cash CDO is CDO which is backed by cash market debt or securities which normally **have low risk weight**. This structure mainly relies on the collateral's risk weight and collateral's ability to generate sufficient cash to pay off the securities issued by SPV
- **Synthetic Collateralized Debt Obligations:** Synthetic CDOs **do not typically hold actual debt instruments as collateral**. Instead, they use credit derivatives, **such as credit default swaps (CDS)**, to replicate the performance of a portfolio of reference assets. Accordingly, this structure is mainly **used to hedge the risk rather than balance sheet funding**. Further, for banks, this structure also allows **the customer's relations to be unaffected**. This was started mainly by banks who want to **hedge the credit risk but not interested in taking administrative burden of sale of** assets through securitization. Synthetic CDOs can also be categorized as follows:
  - **Unfunded:** It will be comprised only CDs.
  - **Fully Funded:** It will be through issue of Credit Linked Notes (CLN)
  - **Partially Funded:** It will be partially through issue of CLN and partially through CDs
- **Arbitrage CDOs:** Basically, in Arbitrage CDOs, the issuer **captures the spread between the return realized collateral underlying the CDO and cost of borrowing to purchase these collaterals**. In addition to this issuer also collects the fee for the management of CDOs. This arbitrage arises due to acquisition of relatively high yielding securities with large spread from open market.

17. **What are the various risks involved in CDOs? [May 2024 MTP]**

Default Risk	• Also called as 'credit risk', it emanates from the **default of underlying party to the instruments**. The prime sufferers of these types of risks are equity or junior tranche in the waterfall
Interest rate risk	• Also called as Basis risk and mainly arises due to different basis of interest rates. For example, asset may be based on floating interest rate but the liability may be based on fixed interest rates. • Though this type of risk is quite difficult to manage fully but commonly used techniques such as **swaps, caps, floors, collars etc**. can be used to mitigate the interest rate risk
Liquidity risk	• Another major type of risk by which CDOs are affected is liquidity risks as there may be mismatch in coupon receipts and payments
Prepayment risk	• This risk results from **unscheduled or unexpected repayment** of principal amount underlying the security.
Reinvestment risk	• This risk is generic in nature as the CDO manager may not find adequate opportunity to **reinvest the proceeds** when allowed for substitutions
Foreign Exchange Risk	• Sometimes CDOs are comprised of debts and loans from countries **other than the country of** issue. In such a case, in addition to above mentioned risks, CDOs are also subject to the foreign exchange rate risk

18. Distinguish between Financial Option and Real option?

Basis	Financial Option	Real Option
Underlying	Have underlying assets that are normally traded in the market i.e. shares, stocks, bonds, commodity etc.	Have underlying the projects that are not traded in the market.
Pay-off	In most of the cases it is specified in the contracts and hence is fixed.	It is estimated from the project cash flows and hence can be varied.

Exercise period	Mostly the period of these options is short and can go maximum upto 1 year.	The period of these options mostly starts from the end of 1st year and higher than the Financial Options.
Approach	Since these options are normally traded in the market they are "Priced".	Since these options are used to make decisions, they are "Valued"

19. What are the key criteria that a commodity must meet in order to be considered suitable for commodity derivatives trading? (May 2023)

- **Standardization:** The commodity should have a standardized quality and quantity. This means that there should be consistent specifications regarding the composition, grade, size, and other relevant characteristics of the commodity. Standardization ensures that the commodity can be easily exchanged and traded in the derivatives market
- **Deliverability:** The commodity must be deliverable, meaning it should be physically available for delivery upon the expiration of the derivative contract. The ability to deliver the underlying commodity is essential for settlement purposes, especially in futures contracts where physical delivery may occur.
- **Liquidity:** Sufficient liquidity is crucial for commodity derivatives. There should be active trading in the commodity and corresponding derivative contracts, with a reasonable number of buyers and sellers in the market. Adequate liquidity ensures smooth trading, efficient price discovery, and the ability to enter and exit positions without significant price impact
- **Price volatility**: Commodities considered for derivatives should exhibit a certain level of price volatility
- **Market demand:** There should be a significant market demand for the commodity, either for consumption or as an investment.

20. **What are the needs of the users of commodity derivatives?**

- Instrumental needs are the **hedgers' needs for price risk reduction**. Hedgers wish to reduce, or, if possible, eliminate portfolio risks at low cost. The instrumental needs are related to the core service of the commodity derivatives market, which consists of reducing price variability to the customer.
- Not only do hedgers wish to reduce price risk, **they also desire flexibility in doing business, easy access to the market, and an efficient clearing system. These needs are called convenience needs.** They deal with the customer's need to be able to use the core service provided by the exchange with relative ease. The extent to which the commodity derivatives exchange is able to satisfy convenience needs determines the process quality.
- The service offering is not restricted to the core service, but has to be complemented by so-called peripheral services.

21. What are the advantages of Commodity Market? Also explain the benefits of commodity futures?

Advantages of Commodity Market:

- Most money managers prefer derivatives to tangible commodities
- Less hassle (delivery, etc);
- Allows indirect investment in real assets that could provide an **additional hedge against inflation risk.**

Advantages of Commodity Futures:

- Easiest and cheapest way to invest in commodities
- 3 Major Categories like **Agricultural products** (soft commodities) –fibers, grains, food, livestock; **Energy** – crude oil, heating oil, natural gas; and **Metals** – copper, aluminium, gold, silver, platinum

22. Discuss the types of Commodity Swaps? [Nov 2018 MTP]

There are two types of commodity swaps: fixed-floating or commodity-for-interest.

- ❖ **Fixed-Floating Swaps:** They are just like the fixed-floating swaps in the interest rate swap market with the exception that both indices are commodity-based indices. **General market indices in the international commodities market with which many people would be familiar include the S&P Goldman Sachs Commodities Index (S&PGSCI) and the Commodities Research Board Index (CRB)**. These two indices place different weights on the various commodities so they will be used according to the swap agent's requirements.

- **Commodity-for-Interest Swaps:** They are similar to the equity swap in which a total return on the commodity in question is exchanged for some money market rate (plus or minus a spread)

23. What are the peculiar characteristics of commodity swaps which have a bearing on their valuation? [May 2022 MTP]

- The cost of hedging;
- The institutional structure of the particular commodity market in question;
- The liquidity of the underlying commodity market;
- Seasonality and its effects on the underlying commodity market;
- The variability of the futures bid/offer spread;
- Brokerage fees; and
- Credit risk, capital costs and administrative costs.

Unique nature of the commodity markets refers to the limited number of participants in these markets (naturally begging questions of liquidity and market information), the unique factors driving these markets, the inter-relations with cognate markets *(agricultural commodities can be influenced by other markets such as energy markets)* and the individual participants in these markets.

24. Write short note on Embedded derivatives? [Nov 2018 (exam)]

- An embedded derivative is a **derivative instrument that is embedded in another contract - the host contract**. The host contract might be a debt or equity instrument, a lease, an insurance contract or a sale or purchase contract.
- Derivatives require to be **marked-to-market through the income statement**, other than qualifying hedging instruments. This requirement on embedded derivatives are designed to ensure that mark-to-market through the income statement cannot be avoided by including - embedding - a derivative in another contract or financial instrument that is not marked to market through the income statement.
- **Example:** A coal purchase contract may **include a clause that links the price of the coal to a pricing formula** based on the prevailing electricity price or a related index at the date of delivery. The coal purchase contract, which qualifies for the executory contract exemption, is described as the host contract, and the pricing formula is the embedded derivative. **The pricing formula is an embedded derivative because it changes the price risk from the coal price to the electricity price**
- An embedded derivative that modifies an instrument's inherent risk (such as a fixed to floating interest rate swap) would be considered closely related. Conversely, an embedded derivative that changes the nature of the risks of a contract is not closely related

25. What are weather derivatives and how is it different from traditional insurance contract?

- Weather Derivatives have **emerged as a new class of financial instruments to manage volumetric risk resulting from unfavorable weather patterns**. These derivatives have an underlying weather measure, which influences the trading volume of goods. **The primary objective of weather derivatives is to hedge volume risk, rather than price risk, due to changes in demand for goods due to weather-related changes**. This class of instruments is essential for companies like airline and juice manufacturing companies, particularly farmers.
- **Underlying asset:** Underlying asset is weather which has several dimensions such as rainfall, temperature, humidity, wind speed, etc.
- **Weather derivatives vs Insurance:** Weather derivatives offer an alternative to insurance contracts, providing protection against unforeseen weather events. The main difference is due to the type of coverage provided by the two instruments. **Insurance provides protection to extreme, low probability weather events, such as earthquakes, hurricanes and floods, etc. Instead, derivatives can also be used to protect the holder from all types of risks, including uncertainty in normal conditions that are much more likely to occur.**
- **Weather derivative pricing is challenging** due to **data reliability, forecasting difficulties, and temperature modelling challenges**. Data availability varies across countries and agencies, making it difficult to predict future weather behaviour. Forecasts typically focus on seasonal levels, but daily temperature levels are not universally accurate.

26. Explain the need for Electricity Derivatives and what are the various types?

- India's power purchase and sale involve state-owned distribution companies entering Power Purchase Agreements (PPAs) with power generators. **These long-term contracts, typically 20-25 years, are necessary due to high capital and operational expenditure requirements**.
- **Volatile electricity spot prices in India require hedging instruments to reduce price** risk exposures for generators, buyers, and load-serving entities.
- **Derivative instruments can help market participants hedge from price risk variations**, ensuring buyers pay a fixed price despite fluctuations.
- Following are the forms of Electricity Derivatives:
    - Forwards
    - Futures and
    - Swaps

27. What is Electricity Locational Basis Swap?

- Electricity Locational Basis Swaps wherein a holder of an electricity swap **agrees to either pay or receive the difference between a specified futures contract price and another locational spot price of interest for a fixed constant cash flow at the time of the transaction**.
- These swaps are used to lock-in a fixed price at a geographic location that is different from the delivery point of a futures contract and hence are effective financial instruments **for hedging the risk-based on the price difference between power prices at two different physical locations**

28. What are the key lessons from derivatives mishaps?

- **Don't buy any derivative product that you don't understand:** The best way to avoid this is to analyse the instrument being purchased in house because outside persons can misguide the corporation about the potential dangers.
- **Due diligence before making Treasury Department as a Profit Centre:** Though the main objective of establishing a Treasury Department is to reduce financing costs and manage risk optimally. But it has been seen that though initially Treasury Department made limited profits from treasury activities later started taking more risks in anticipation of higher profit. The best way to avoid this situation is to avoid **linking the treasurer's salary with the profit he made for the organization**
- **Specify the Risk Limits:** Proper monitoring is prerequisite for the trader to ensure that he/she should switch from arbitrageur to speculator. The best way to avoid the situation of overtrading is to **limit the sizes positions that can be taken by a** trader, and it should be accurately reported from risk perspective
- **Separation of Front, Middle and Back Offices:** The three offices though are interlinked but they discharge separate functions. Accordingly, there should be a firewall in the functioning of these offices i.e. person of one office should not have the access to the functioning of other office.
- **Ensure that a hedger should not become a speculator:** To avoid this situation, it is essential that clear cut **risk limits should be defined**. Further before entering into any trading strategy proper risk analysis should be carried out and if proposed strategy is crossing the limits of Risk Appetite of the company it should be avoided.
- **Carry out Stress Test, Scenario Analysis etc**: To counter this type of unpredictable situation it is necessary that **VAR analysis should always be followed by Scenario Analysis because as tendency a human being normally can anticipate two to three scenarios.** It will be better to refer the data of at least 10 to 20 years to anticipate a Black Swan event. Further even Simulation Test can be applied to analyze the results in various possible situations

Chapter 10 – Foreign Exchange Exposure and Risk Management

1. Explain the Role of SWIFT in Foreign Exchange? [Nov 2024 MTP]

- Foreign Exchange Dealers use SWIFT (Society for Worldwide Interbank Financial Communication), a messaging system founded in 1973**, for business transactions**.
- With offices worldwide, it uses a dedicated computer network system for fund transfers.
- To avoid miscommunication, SWIFT **assigns 3 lettered codes to each country's currency**, ensuring international cross-border communication. Example: USD for US Dollar and INR for Indian Rupee
- SWIFT is a **standardized communication system for financial transaction**s, and is not a transaction settlement system.
- SWIFT plays an important role in Foreign Exchange dealings because of the following reasons
  - In addition to validation statements and documentation it is a form of quick settlement as **messaging takes place within seconds**.
  - Security and reliability helps to **reduce Operational Risk**.
  - Operational efficiencies and reduced costs due to **standardised transaction**
  - It also ensures **full backup and recovery system**.
  - Acts as a catalyst that brings financial agencies to **work together in a collaborative manner** for mutual interest

2. What is a payment gateway?

- A Payment Gateway is a secure virtual mode for transferring cash, authenticating and routing payment details. It collects and sends payments to **banks or e-commerce sites, ensuring authorization and approval.**
- The gateway uses encrypted data from the buyer's PC/Mobile Phone/Tablet to the Point of Sale (POS) and **completes the transaction with a reference number**.
- **Benefits of Payment Gateway:** A Payment Gateway offers 24/7 convenience, real-time card authorization, efficient transaction processing, multiple payment options, risk mitigation, real-time reports, customer refund facility, and secure servers. It eliminates complex software and data maintenance, collects bulk data cost-efficiently, and provides multiple host interfaces. It offers comprehensive administrative control and customer support.
- **Challenges faced by Payment Gateway:** Payment gateways face challenges like insufficient customer accounts (customer account not available with the bank supporting payment gateway), limited bank networks, reliability issues, and customer trust issues, hindering growth.
- **International Payment Gateways:** International Payment Gateways offer global/multi-currency payments and multiple-language interfaces, **increasing customer conversion rates**. These gateways enable merchants to accept international payments in their native currency, making transactions easier and enabling customers to easily benchmark prices.

3. Write short note on Nostro, Vostro and Loro Account? [Nov 2020, SM]

- ❖ Banks maintain three types of current accounts in order to facilitate quick transfer of funds in different currencies. These accounts are **Nostro, Vostro and Loro accounts meaning "our", "your" and "their"**
- ❖ A bank's foreign currency account maintained by the bank in a foreign country and in the home currency of that country is known as **Nostro Account or "our account with you"**. For example, An Indian bank's Swiss franc account with a bank in Switzerland.
- ❖ **Vostro account** is the local currency account maintained by a foreign bank/branch. It is also called **"your account with us"**. For example, Indian rupee account maintained by a bank in Switzerland with a bank in India.
- ❖ The **Loro account** is an account **wherein a bank remits funds in foreign currency to another bank for credit** to an account of a third bank.

4. Explain Merchant Rate and Interbank Rate?

- ❖ In foreign exchange market, **banks consider customers as 'merchants'** for historical reasons. **Exchange rates applied to all types of customers** including that for converting inward remittance in USD to INR are called **merchant rates** as against the rates quoted to **each other by banks** in the interbank market, which are called **interbank rates**.
- ❖ Exchange margin will be added/subtracted to/from the interbank rate to arrive at the merchant rate for the customer

5. What are the techniques for exchange rate forecasting?

- **Technical Forecasting:** It involves the use of historical data to predict future values. For example, time series models. Speculators may **find the models useful for predicting day-to-day movements**. However, since the models typically focus on the near future and rarely provide point or range estimates, they are of limited use to MNCs.
- **Fundamental Forecasting:** It is based on the fundamental relationships between economic variables and exchange rates. For example, subjective assessments, quantitative measurements based on regression models and sensitivity analyses. In general, fundamental forecasting is limited by
  - the **uncertain timing** of the impact of the factors,
  - the need to **forecast factors** that have an immediate impact on exchange rates,
  - the omission of factors that are not easily quantifiable, and
  - changes in the sensitivity of currency movements to each factor over time
- **Market-Based Forecasting:** It uses market indicators to develop forecasts. The current spot/forward rates are often used, since speculators will ensure that the current rates reflect the market expectation of the future exchange rate
- **Mixed Forecasting:** It refers to the use of a combination of forecasting techniques. The actual forecast is a weighted average of the various forecasts developed

6. What are the factors that affect foreign exchange rate?

- Inflation rate
- Interest rate
- **Deficit/Surplus on Capital/Current Account:** Deficit in Current Account leads to depreciation of currency, the surplus results in appreciation of home currency. In case of Capital Account if net inflow is positive then home currency is appreciated and if it is negative then home currency depreciates because of oversupply
- **Trade Barriers:** Generally, with the increase in trade barriers or quota restrictions for **import of goods from any country the value of own currency appreciates in the long run**. For example, if India puts some restriction on import from China for any goods, then demand for Indian goods will be increased and will be sold for higher price
- **Intervention by Central Bank:** Sometimes to regulate the prices of foreign exchange the Central Bank of or Monetary Authorities of country intervenes by **selling or buying foreign exchange in/from the Market**
- **Government Controls:** Government Controls such as restrictions on FDI, FPI or repatriation of Foreign Exchange also affects the foreign exchange rates.
- **Expectations (Band Wagon Effect):** Sometimes speculations by the speculators on any currency can have a substantial impact on exchange rate. **When a dominant speculator in Foreign Exchange market expects a fall in value of any currency and he starts taking short position in the same currency, other speculators may also follow the same path**. This will ultimately result in fall in the value of same currency.

7. What are the various participants in foreign exchange market?

- **Non-bank Entities:** Many multinational companies exchange currencies to meet their import or export commitments or hedge their transactions against fluctuations in exchange rate. Even at the individual level, there is an exchange of currency as per the needs of the individual.
- **Banks:** Banks also exchange currencies as per the requirements of their clients.
- **Speculators:** This category includes commercial and investment banks, multinational companies and hedge funds that buy and sell currencies with a **view to earn profit due to fluctuations** in the exchange rates.
- **Arbitrageurs:** This category includes those investors who make profit from price differential existing **in two markets by simultaneously operating** in two different markets.
- **Governments:** The governments participate in the foreign exchange market through the **central banks**. They constantly monitor the market and help in stabilizing the exchange rates

8. What are the types of exposure in foreign exchange market? [SM]

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**

Translation exposure	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
Economic Exposure	It refers to the extent to which the **economic value of a company declines due** to changes in exchange rate. It is the overall impact of exchange rate changes on the value of the firm

9. What is foreign exchange risk management and state its importance?

- Foreign exchange risk management is crucial for **businesses handling international transactions**, identifying, assessing, and mitigating risks.
- It helps to protect against volatility, reduce costs, gain a competitive advantage, improve cash flow, and ensure compliance with regulations

Importance of foreign exchange risk management:

- **Protection against volatility:** Foreign exchange risk management protects businesses from volatility by **locking in exchange rates** in advance, ensuring stability and certainty in financial planning.
- **Cost reduction:** Effective foreign exchange risk management can help businesses reduce costs **associated with foreign transactions**. By minimizing currency exchange rate losses and reducing the need for hedging, businesses can save significant amounts of money in the long run.
- **Competitive advantage:** Companies managing foreign exchange risks gain competitive advantage by offering competitive prices and attractive payment terms.
- **Improved cash flow:** Foreign exchange risk management improves cash flow by increasing visibility and predictability in international transactions, ensuring sufficient funds for obligations.
- **Compliance with regulations:** Many countries have regulations in place that require businesses to **manage their foreign exchange risks**. Failure to comply with these regulations can result in significant fines and penalties. **Effective foreign exchange risk management can help businesses to stay in compliance with these regulations and avoid potential legal issues.**

10. Explain Natural Hedging strategy to mitigate exchange rate risk?

- Though there are a range of hedging instruments that can be used to reduce risk but often Exporters use Natural Hedging Strategy to mitigate **transaction exposure risk by availing different Short Term Foreign currency loans i.e. Pre-Shipment Credit in Foreign Currency (PCFC)/ Foreign Currency Non-Resident Account (FCNR B) Loans** because of following two major benefits:
  - PCFC is available to exporters for exporting their goods in Foreign Currencies. This product is available at **cheaper rate** compared to other Domestic Currency rates.
  - Secondly by availing PCFC, one can hedge foreign currency transaction risk against exports receivables by **settling exports collection against PCFC loans outstanding**.

11. What is a non-deliverable forward contract?

❖ A cash-settled, short-term forward contract on a **thinly traded or non-convertible foreign currency,** where the profit or loss at the time at the settlement date is calculated by taking the **difference between the agreed upon exchange rate and the spot rate at the time of settlement,** for an agreed upon notional amount of funds.

❖ All NDFs have a fixing date and a settlement date. The fixing date is the date at which the difference between the prevailing market exchange rate and the agreed upon exchange rate is calculated. The **settlement date is the date by which the payment of the difference is due to the party receiving payment**.

❖ NDFs are commonly quoted for time periods of **one month up to one year**, and are normally quoted and settled in U.S. dollars. They have become a popular instrument for corporations seeking to hedge exposure to foreign currencies that are not internationally traded

12. Distinguish between options and futures?

Options	Futures
Only the seller (writer) is obliged to perform	Both the parties are obligated to perform
Premium is paid by the buyer to the seller at the inception of the contract	No premium is paid by any party.

Loss is restricted while there is unlimited gain potential for the option buyer	There is potential/risk for unlimited gain/loss for the futures buyer.
An American option contract can be exercised any time during its period by the buyer.	A futures contract has to be honoured by both the parties only on the date specified

13. What is currency swap?

Currency swaps involve an **exchange of liabilities between currencies**. A currency swap can consist of three stages:

- **A spot exchange of principal:** this forms part of the swap agreement as a similar effect can be obtained by using the spot foreign exchange market.
- **Continuing exchange of interest payments during the term of the swap:** this represents a series of forward foreign exchange contracts during the term of the swap contract. The contract is typically fixed at the same exchange rate as the spot rate used at the outset of the swap.
- **Re-exchange of principal on maturity**

A currency swap has the following benefits:

- Treasurers can **hedge currency risk**.
- It can provide **considerable cost savings**. A strong borrower in the Japanese Yen market may be interested in borrowing in the American USD markets where his credit rating may not be as good as it is in Tokyo. Such a borrower could get a better US dollar rate by raising funds first in the Tokyo market and then swapping Yen for US dollars.
- The swap market **permits funds to be accessed in currencies**, which may otherwise command a high premium.
- It offers **diversification of borrowings**

14. What are the strategies for exposure management?

Low Risk: Low Reward – All exposures hedged	This option involves **automatic hedging of exposures** in the forward market as soon as they arise, irrespective of the attractiveness or otherwise of the forward rate
Low Risk: Reasonable Reward – Selective hedging	This strategy requires **selective hedging of exposures** whenever forward rates are attractive but keeping exposures open whenever they are not.
High Risk: Low Reward -All exposures left unhedged	Perhaps the worst strategy is to leave all exposures unhedged. The risk of destabilization of cash flows is very high. The merit is zero investment of managerial time or effort
High Risk: High Reward – Active Trading	This strategy involves **active trading in the currency market through continuous cancellations** and re-bookings of forward contracts. With exchange controls relaxed in India in recent times, a few of the larger companies are adopting this strategy

15. "Netting helps in minimizing the total value of intercompany fund flows". EXPLAIN. [May 2022 MTP]

Yes to some extent the given statement is correct as it is a technique of optimising cash flow movements with the combined efforts of the subsidiaries thereby reducing administrative and transaction costs resulting from currency conversion. There is a co-ordinated international interchange of materials, finished products and parts among the different units of MNC with many subsidiaries buying /selling from/to each other.
Advantages derived from netting system includes:

- Reduces the number of cross-border transactions between subsidiaries thereby decreasing the overall administrative costs of such cash transfers
- Reduces the need for foreign exchange conversion and hence decreases transaction costs associated with foreign exchange conversion.
- Improves cash flow forecasting since net cash transfers are made at the end of each period
- Gives an accurate report and settles accounts through co-ordinated efforts among all subsidiaries.

16. Write short note on money market hedging? (Nov 2022)

- Money market hedge is an agreement to exchange a certain amount of one currency for a fixed amount of another currency, at a particular date.

- For example, suppose a business owner in India expects to receive 1 Million USD in six months. This Owner could create an agreement now (today) to exchange 1Million USD for INR at roughly the current exchange rate. Thus, if the USD dropped in value by the time the business owner got the payment, he would still be able to exchange the payment for the original quantity of U.S. dollars specified.

Advantages of Money Market Hedging

- Fixes the future rate, thus eliminating downside risk exposure.
- Flexibility with regard to the amount to be covered.
- Money market hedges may be feasible as a way of hedging for currencies where forward contracts are not available.

Disadvantages of Money Market Hedging

- More complicated to organize than a forward contract.
- Fixes the future rate - no opportunity to benefit from favorable movements in exchange rates

17. All dealings in Foreign Exchange effect the Exchange Position whether delivery has taken place or not, but Cash Position is effected only when actual delivery has taken place. Explain [Nov 2021 MTP]

- Yes, this statement is correct because while **Exchange Position is referred to total of purchases or sale of commitment of a bank to purchase or sale foreign exchange** whether actual delivery has taken place or not.
- In other words, all transactions for which bank has agreed with counter party are entered into exchange position on the date of the contract.
- **While Cash Position is outstanding balance (debit or credit) in bank's Nostro account**. Since all foreign exchange dealings of bank are routed through Nostro account it is credited for all purchases and debited for sale by bank. Therefore, all transactions effecting Cash position will affect Exchange Position not vice versa.

Chapter 11 – International Financial Management

1. What are the complexities in multinational capital budgeting? [May 2020 MTP]

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

- Cash flows from **foreign projects have to be converted** into the currency of the parent organization.
- **Parent cash flows** are quite different from **project cash flows**
- Profits remitted to the **parent firm are subject to tax in the home country** as well as the **host country**
- Effect of foreign exchange risk on the parent firm's cash flow
- Changes in **rates of inflation causing a shift in the competitive environment** and thereby affecting cash flows over a specific time period
- Restrictions imposed on **cash flow distribution generated from foreign projects** by the host country
- Initial investment in the **host country to benefit from the release of blocked funds**
- **Political risk** in the form of changed political events reduce the possibility of expected cash flows
- **Concessions/benefits** provided by the host country ensures the upsurge in the profitability position of the foreign project
- 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

2. Explain the problems that are faced in International Capital Budgeting Decision and how these can be overcome? [Nov 2020 MTP]

- **Multinational companies investing elsewhere are subjected to foreign exchange risk** in the sense that currency appreciates/ depreciates over a span of time. To include foreign exchange risk in the cash flow estimates of any project, it is necessary to forecast the inflation rate in the host country during the lifetime of the project. Adjustments for inflation are made in the cash flows depicted in local currency. The cash flows are converted in parent country's currency at the spot exchange rate multiplied by the expected depreciation rate obtained from purchasing power parity.
- **Due to restrictions imposed on transfer of profits, depreciation charges and technical differences exist between project cash flows and cash flows obtained by the parent organization**. Such restriction can be diluted by the application of techniques viz internal transfer prices, overhead payments. Adjustment for blocked funds depends on its opportunity cost, a vital issue in capital budgeting process.
- In multinational capital budgeting, **after tax cash flows need to be considered for project evaluation**. The **presence of two tax regimes along with other factors such as remittances** to the parent firm in the form of royalties, dividends, management fees etc., tax provisions with held in the host country, presence of tax treaties, tax discrimination pursued by the host country between transfer of realized profits vis-à-vis local re-investment of such profits cause serious impediments to multinational capital budgeting process. MNCs are in a position to reduce overall tax burden through the system of transfer pricing. **For computation of actual after tax cash flows accruing to the parent firm, higher of home/ host country tax rate is used**. If the project becomes feasible then it is acceptable under a more favourable tax regime. If not feasible, then, other tax saving aspects need to be incorporated in order to find out whether the project crosses the hurdle rate.

3. Explain project cash flows and parent cash flows in the context of international capital budgeting? (May 2022 RTP, Nov 2022 MTP)

- Evaluation of a project on the **basis of own cash flows** entails that the project should compete favourably with domestic firms and **earn a return higher than the local competitors**. If not, the shareholders and management of the parent company shall invest in the equity/government bonds of domestic firms. A **comparison cannot be made since foreign projects replace imports and are not competitors with existing local firms**. Project evaluation based on local cash flows avoid currency conversion and eliminates problems associated with fluctuating exchange rate changes.
- **For evaluation of foreign project from the parent firm's angle**, both operating and financial **cash flows actually remitted to it form the yardstick for the firm's performance** and the basis for distribution of dividends to the shareholders and repayment of debt/interest to lenders. An investment has to be evaluated on basis of **net after tax operating cash flows generated by the project.** As both types of cash flows (operating and financial) are clubbed together, it is essential to see that financial cash flows are not mixed up with operating cash flows.

4. Write short note on Foreign Currency Convertible Bonds (FCCBs)? [May 2021 RTP, Nov 2020]

- **Meaning:** A type of convertible bond issued in a **currency different than the issuer's domestic currency**. A convertible bond is a **mix between a debt and equity instrument**. It acts like a **bond by making regular coupon and principal payments**, but these bonds also give the bondholder the option to convert the bond into stock
- These types of bonds are **attractive to both investors and issuers**. The investors receive the **safety of guaranteed payments on the bond** and are also able to take advantage of any **large price appreciation in the company's stock**. Due to the equity side of the bond, which adds value, the **coupon payments on the bond are lower for the company**, thereby reducing its debt-financing costs

Advantages	Disadvantages
❖ The convertible bond gives the investor the **flexibility to convert the bond into equity at a price or redeem the bond** at the end of a specified period, normally three years if the price of the share has not met his expectations. ❖ Companies prefer bonds as it leads to **delayed dilution of equity** and allows company to avoid any current dilution in earnings per share that a further issuance of equity would cause. ❖ FCCBs are **easily marketable as investors enjoys option of conversion into equity if resulting to capital appreciation**. Further investor is assured of a minimum fixed interest earnings.	❖ **Exchange risk is more** in FCCBs as interest on bonds would be payable in foreign currency. Thus companies with low debt equity ratios, large forex earnings potential only opt for FCCBs. ❖ FCCBs mean **creation of more debt** and a forex outgo in terms of interest which is in foreign exchange. ❖ In the case of convertible bonds, the interest rate is low, say around 3–4% but there is exchange risk on the interest payment as well as re-payment if the bonds are not converted into equity shares.

5. Write short note on American Depository Receipts (ADR)?

- Depository receipts issued by a company in the **United States of America (USA)** is known as American Depository Receipts (ADRs). Such receipts must be issued in accordance with the provisions stipulated by the **Securities and Exchange Commission of USA** (SEC) which are very stringent.
- An ADR is generally created by the **deposit of the securities of a non-United States company with a custodian bank** in the country of incorporation of the issuing company. The custodian bank informs the depository in the United States that the ADRs can be issued
- ADRs are **United States dollar denominated and are traded in the same way as are the securities of United States companies**. The ADR holder is entitled to the same rights and advantages as owners of the underlying securities in the home country
- One variation of ADR is the GDR which are identical in structure to an ADR, the only difference being that they can be traded in more than one currency and within as well as outside the United States

6. Write short note on Global Depository Receipts (GDR)?

- A depository receipt is basically a **negotiable certificate**, denominated in a currency not native to the issuer, that represents the **company's publicly - traded local currency equity shares**.
- Most GDRs are denominated in USD, while a few are denominated in Euro and Pound Sterling. The Depository Receipts issued in the US are called American Depository Receipts (ADRs), which anyway are denominated in USD and outside of USA, these are called GDRs
- Through the issue of depository receipts, companies in India have been able to tap global equity market to raise foreign currency funds by way of equity. In addition, it has been perceived that a **GDR issue has been able to fetch higher prices from international investors than those that a domestic public issue** would have been able to extract from Indian investors

7. Explain the impact of GDRs on Indian Capital Market?

- Indian stock market to some extent is **shifting from Bombay to Luxemburg**.
- There is **arbitrage possibility** in GDR issues.
- Indian stock market is **no longer independent from the rest of the world**. This puts additional strain on the investors as they now need to keep updated with world-wide economic events.

- **Indian retail investors are completely side-lined**. GDRs/Foreign Institutional Investors' placements + free pricing implies that retail investors can no longer expect to make easy money on heavily discounted rights/public issues

8. What are the characteristics of GDR issues? [Nov 2024 MTP]

- Holders of GDRs **participate in the economic benefits** of being ordinary shareholders, though **they do not have voting rights**.
- GDRs are settled through **CEDEL & Euro-clear international book entry systems**.
- GDRs are **listed** on the Luxemburg stock exchange.
- Trading takes place between **professional market makers** on an OTC (over the counter) basis.
- The instruments are freely traded.
- They are **marketed globally** without being confined to borders of any market or country as it can be traded in more than one currency.
- Investors earn **fixed income by way of dividends which are paid in issuer currency** converted into dollars by depository and paid to investors and hence exchange risk is with investor.
- As far as the case of liquidation of GDRs is concerned, an investor may get the GDR **cancelled any time after a cooling off period of 45 days**. A non-resident holder of GDRs may ask the overseas bank (depository) to redeem (cancel) the GDRs.

9. What are Euro Convertible bonds? [Jan 2021]

A convertible bond is a **debt instrument which gives the holders of the bond an option to convert the bond into a predetermined number of equity shares** of the company. Usually, the price of the equity shares at the time of conversion will have a premium element. The bonds carry a fixed rate of interest. If the issuer company desires, the issue of such bonds may carry call and put option.

10. What are the other sources of international finance?

- **Euro-Convertible Zero-Coupon Bonds:** These bonds are structured as a convertible bond. No interest is payable on the bonds. But conversion of bonds takes place on maturity at a pre-determined price. **Usually there is a 5 years maturity period and they are treated as a deferred equity issue.**
- **Euro-bonds with Equity Warrants:** These bonds **carry a coupon rate** determined by the market rates. The warrants are detachable. Pure bonds are traded at a discount. Fixed income funds may like to invest in these bonds for the purposes of regular income.
- **Syndicated bank loans:** It is one of the earlier ways of raising funds in the form of **large loans from banks with good credit rating**, can be arranged in reasonably short time and with few formalities. The maturity of the loan can be for a duration of 5 to 10 years. The interest rate is generally set with reference to an index, say, LIBOR plus a spread which depends upon the credit rating of the borrower.
- **Euro-bonds:** These are basically debt instruments denominated in a currency issued outside the country of that currency for examples **Yen bond floated in France**. Primary attraction of these bonds is the refuge from tax and regulations and provide scope for arbitraging yields. These are usually bearer bonds and can take the form of
    - Traditional Fixed Rate Bonds
    - Floating Rate Notes (FRNs)
    - Convertible Bond
- **Foreign Bonds:** Foreign bonds are denominated in a currency **which is foreign to the borrower and sold at the country of that currency**. Such bonds are always **subject to the restrictions** and are placed by that country on the foreigners funds.
- **Euro Commercial Papers:** These are short term money market securities usually issued at a discount, for maturities less than one year.
- **Credit Instruments:** There are many types of credit instruments used in effecting foreign remittances. They differ in the speed, with which money can be received by the creditor at the other end after it has been paid in by the debtor at his end. The price or the rate of each instrument, therefore, varies with extent of the loss of interest and risk of loss involved. There are, therefore, different rates of exchange applicable to different types of credit instruments.

11. Explain International Financial Centre?

- IFC is a hub that deals with **flow of funds, financial products and financial services in their own land but with different set of regulation and laws.**

- It caters the needs of **the customer outside their own jurisdiction**.
- It Provides flexibility in currency trading, Banking and other financial services.

12. What are the benefits of establishing IFC? [May 2024]

- **Opportunity for qualified professionals** working **outside India** come here and practice their profession.
- A platform for qualified and talented professionals to **pursue global opportunities without leaving their homeland**.
- Stops Brain Drain from India.
- Bringing back **those financial services transactions** presently carried out abroad by overseas financial institutions/entities or branches or subsidiaries of Indian Financial Market.
- **Trading of complicated financial derivative** can be started from India.

13. What are the constituents of IFC?

Highly Developed Infrastructure	• It is a prerequisite for **creating a platform** to offer internationally completive financial services
Stable Political Environment	• It is also a perquisite to **accelerate foreign participation in growth of Financial centre**, Destabilised Political Environment brings country risk Investment by foreign nationals.
Strategic Location	• The location of the centre should be strategic. E.g Near to airport, Seaport and Friendly weather.
Quality Life	• The quality of life at the center showed be good as **center retains highly paid professional** from own country as well from outside.
Rationale Regulatory framework	• IFC should **be fair and transparent**
Sustainable Economy	• The economy should be sustainable and should possess **capacity to absorb all the shocks** as it will boost investors confidence.

14. Write a note on GIFT City?

- Government of India operationalized International Financial Services Centre (IFSC) at GIFT Multi Services SEZ in April 2015
- GIFT IFSC provides very **competitive cost of operations with very competitive tax regime**, single window clearance; relax company law provisions, international arbitration centre with overall facilitation of doing business. **GIFT IFSC is now moving toward unified regulatory mechanism**.
- GIFT City is a new Financial & Technology Gateway of India for the World. To be internationalized, exchange controls cannot apply. **So, FEMA is not applicable at GIFT city.**
- Hence, with all these development more and more financial institutions are setting business units in GIFT as they will pay reduced taxes as valid for special economic zones and can easily offer foreign currency loans to Indian Companies abroad and foreign firm.

15. What are sovereign funds and explain the role played by them?

- A sovereign wealth fund (SWF) is **a state-owned investment fund** generating money from a country's surplus reserves. It benefits the **economy and citizens.**
- Funding sources include surplus reserves from **natural resource revenues**, bank reserves, foreign currency operations, privatizations, and government transfer payments. The legal basis varies between governments.
- SWFs are created for **targeted purposes**, aiming to protect revenues, stabilize exports, diversify, earn better returns, assist monetary authorities, increase savings, fund social and economic development, and **ensure sustainable long-term capital growth** for target countries.
- SWFs have various objectives, risk tolerances, terms, and liquidity concerns. They can range from conservative to high-risk management depending on assets and objectives.
- **Classification of SWF:** Traditional classifications include stabilization funds, savings or future generation funds, public benefit pension funds, reserve investment funds, and strategic development SWFs.
- **Investment vehicles:** Sovereign Wealth Funds (SWFs), Public Pension Funds, State-Owned Enterprises and Sovereign Wealth Enterprises (SWEs)

16. What are the complexities in International Working Capital Management?

- **Wider financing option:** A multinational firm has a wider option for financing its current assets. Therefore, it may choose to avail financing **either locally or from global** financial markets.
- **Multiple interest and tax rates:** Interest and tax rates may vary from one country to another. A Treasurer associated with a multinational firm has to consider the interest/ tax rate differentials while financing current assets.
- **Forex risk:** A multinational firm is confronted with **foreign exchange risk** as the value of inflow/outflow of funds as well as the value of import/export are influenced by exchange rate variations.
- **Restrictions:** Restrictions imposed by the **home or host country government towards** movement of cash and inventory on account of political considerations affect the growth of MNCs.
- **Multiple countries:** Multinational firm managers struggle with managing working capital in host countries due to limited knowledge of politico-economic conditions; communication system development alleviates this issue.
- **Full capital convertibility:** MNCs can efficiently mobilize funds in countries with full capital convertibility, unlike those without, like India, where such freedom may not be available.

17. What are the main objectives of international cash management? [Nov 2019 (exam)]

- ❖ To minimise currency exposure risk.
- ❖ To minimise overall cash requirements of the company as a whole without disturbing smooth operations of the subsidiary or its affiliate.
- ❖ To minimise transaction costs.
- ❖ To minimise country's political risk.
- ❖ To take advantage of economies of scale as well as reap benefits of superior knowledge.

18. What are the benefits of Centralized Cash Management? [Nov 2022 RTP]

- To maintain **minimum cash balance** during the year.
- To manage judiciously **liquidity requirements** of the centre.
- To optimally use various **hedging strategies** so that MNC's foreign exchange exposure is minimised.
- To aid the centre to **generate maximum returns** by investing all cash resources optimally.
- To aid the centre to take advantage of **multinational netting** so that transaction costs and currency exposure are minimised.
- To make maximum utilization of **transfer pricing mechanism** so that the firm enhances its profitability and growth.
- To exploit currency movement correlations:
    - o Payables & receivables in different currencies having positive correlations.
    - o Payables of different currencies having negative correlations.
    - o 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**

19. International cash management has an objective of optimizing cash flow movements. What are the numerous ways of achieving the same?

- **Accelerating cash inflows:** Faster cash inflow recovery enables firms to invest or use them for better returns.
- **Managing Blocked Funds:** The parent company has to assess the **potential of future funds blockage in a foreign country**. MNCs have to be aware of political risks cropping up due to unexpected blockage of funds and devise ways to benefit their shareholders by using different methods for moving blocked funds **through transfer pricing strategies, direct negotiations, leading and lagging and so on.**
- Leading and Lagging
- Minimising Tax on Cash Flows through Transfer Pricing Mechanism
- **Netting:** This includes both bilateral netting system and multilateral netting system
- Investing excess cash

Chapter 12 – Interest rate risk Management

1. **How interest rates are determined?**

- **Supply and Demand of money:** When economic growth is high, demand for money increases, pushing the interest rates up and vice versa.
- **Inflation:** The higher the inflation rate, the more interest rates are likely to rise.
- **Government:** Government is the biggest borrower. The level of borrowing also determines the interest rates. Central bank i.e. RBI by either printing more notes or through its Open Market Operations (OMO) changes the key rates (CRR, SLR and bank rates) depending on the state of the economy or to combat inflation.

2. **Explain the concept of Benchmark Rates?**

- Benchmark interest is an interest rate that forms the basis for **determination of other interest rates**. These rates are also known as **'Reference Rates'**
- It is crucial in economic and banking systems, particularly in financial transactions. These rates are used in **derivative transactions, floating rate loans, and are determined by an independent body**. Benchmark rates are used in both domestic and international financial transactions.
- **Popular Benchmark Rates:** LIBOR was the popular benchmark rate. LIBOR (London Interbank Offered Rate), a popular benchmark rate in the international financial market, was discontinued in 2017 due to bank manipulations. Starting January 1, 2022, companies must use Alternative Reference Rates (ARRs) for contracts. **ARRs are based on secured or unsecured overnight transactions, while LIBOR is unsecured and relies on panel bank judgment. ARRs are considered risk-free with no term premium.**
- Different ARR's are Secured Overnight Financing Rate (SOFR in USA), Sterling Overnight Index Average (SONIA in USA), Euro-Short-Term Rate (€STER in Europe), Tokyo Overnight Average Rate (TONAR in Japan) and Swiss Average Rate Overnight (SARON in Switzerland)
- **India Benchmark Rates:** India has various benchmark interest rates, including Repo Rate, Prime Lending Rate, and MCLR. **MIBOR (Mumbai Inter Bank Offered Rate and MIBID (Mumbai Interbank Bid Rate)** are the most common, used in derivative deals like Interest Rate Swaps, Forward Rate Agreements, and Floating Rate Debentures. These rates also form the basis for valuation of financial instruments like bonds and debentures.

3. **What are the different types of interest rate risk? [May 2022, Nov 2024 MTP]**

Gap Exposure	❖ 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 ❖ Positive Gap indicates that banks **have more interest Rate Sensitive Assets (RSAs)** than interest Rate Sensitive Liabilities (RSLs) ❖ Negative gap indicates that banks have more RSLs than RSAs
Basis Risk	❖ The risk that the **interest rate of different assets, liabilities and off-balance sheet items may change in different magnitude** is termed as basis risk. For example, while assets **may be benchmarked to Fixed Rate of Interest**, liabilities may be benchmarked to floating rate of interest. The degree of basis risk is **fairly high in respect of banks** that create composite assets out of composite liabilities. ❖ When the variation in market interest rate **causes the Net Interest Income (NII) to expand**, the banks have experienced **favourable basis shifts** and if the interest rate movement causes the **NII to contract**, the **basis has moved against** the banks
Embedded Option Risk	❖ **Significant changes in market interest rates** create another source of risk to banks' profitability by **encouraging prepayment of cash credit/demand loans/term loans and exercise of call/put options on bonds/debentures** and/or premature withdrawal of term deposits before their stated maturities. ❖ The **faster and higher the magnitude of changes in interest rate**, the greater will be the embedded option risk to the banks' NII.

Yield Curve Risk	❖ In a floating interest rate scenario**, banks may price their assets and liabilities based on different benchmarks**, i.e. TBs yields, fixed deposit rates, call money rates, MIBOR, etc. ❖ In case the banks use **two different instruments maturing at different time horizon** for pricing their assets and liabilities, any **non-parallel movements in yield curves would affect the NII**
Price Risk	❖ Price risk occurs when **assets are sold before their stated maturities**. In the financial market, bond prices and yields are inversely related. The price risk is closely associated with the trading book, which is created for making profit out of short-term movements in interest rates
Reinvestment Risk	❖ Uncertainty with regard to interest rate at **which the future cash flows could be reinvested is called reinvestment risk.** Any mismatches in cash flows would expose the banks to variations in NII as the market interest rates move in different directions
Net Interest Position Risk	❖ The size of **non-paying liabilities is one of the significant factors contributing towards profitability of banks**. Where banks have more earning assets than paying liabilities, interest rate risk arises when the market interest rates adjust downwards

4. What are the various methods to hedge interest rate risk? (Dec 2021)

Traditional Methods	**Asset and Liability Management (ALM):** ❖ ALM is one of the important tools of risk management in commercial banks of India ❖ ALM is a **comprehensive and dynamic framework for measuring, monitoring and managing the market risk of a bank**. It is the management of structure of balance sheet (liabilities and assets) in such a way that the **net earnings from interest are maximized** within the overall risk preference (present and future) of the institutions. ❖ The ALM functions extend to liquidly risk management, management of market risk, trading risk management, funding and capital planning and profit planning and growth projection **Forward Rate Agreements (FRA):** ❖ Forward Rate Agreement (FRA) is an **agreement between two parties through which a borrower/ lender protects itself** from the unfavourable changes to the interest rate ❖ It is used by banks to fix interest costs on anticipated future deposits or interest revenues on variable-rate loans indexed to LIBOR ❖ It is an off-Balance Sheet instrument ❖ It does **not involve any transfer of principal**. The principal amount of the agreement is termed "notional" because, while it determines the amount of the payment, actual exchange of the principal never takes place ❖ It is settled at maturity in cash representing the profit or loss ❖ The differential amount is discounted at **post change (actual) interest rate as it is settled in the beginning of the period** not at the end
Modern Methods	**Interest Rate Futures (IRF):** ❖ An interest rate future is a contract between the buyer and seller **agreeing to the future delivery of any interest-bearing asset**. The interest rate future **allows the buyer and seller to lock** in the price of the interest-bearing asset for a future date ❖ A borrower will enter to sell a future today. Then if interest rates rise in the future, the value of the future will fall (as it is linked to the underlying asset, bond prices), and hence a profit can be made when closing out of the future (i.e. buying the future **Interest Rate Options (IRO):** ❖ Interest rate options (Interest Rate Guarantee (IRG)) is a right not an obligation and **acts as insurance by allowing businesses to protect themselves against**

	adverse interest rate movements while allowing them to benefit from favourable movements. ❖ It should be noted that the **IRO is basically a series of FRAs which are exercisable at predetermined bench marked interest rates on each period** say 3 months, 6 months etc. ❖ Some of the important types of Interest Rate Options are cap option, floor option and collar option **Interest Rate Swaps (IRS):** ❖ In an interest rate swap, the parties to the agreement, termed the swap counterparties, **agree to exchange payments indexed to two different interest rates**. Total payments are determined by the specified notional principal amount of the swap, which is never actually exchanged

5. **What are the types of interest rate swaps? [Nov 2024 MTP]**

Plain Vanilla Swap	❖ This is also called as Generic Swap and it involves the exchange of a fixed rate loan to a floating rate loan. ❖ Floating rate basis can be LIBOR, MIBOR, Prime Lending Rate etc
Basis Rate Swap	❖ This is also called as Non-Generic Swap. Similar to plain vanilla swap with the difference payments based on the **difference between two different variable rates**. For example, one rate may be 1-month LIBOR and other may be 3-month LIBOR. ❖ Two legs of swap are floating but measured against different benchmarks
Asset Swap	❖ Like plain vanilla swaps with the difference **that it is the exchange fixed rate investments such as bonds which pay a guaranteed coupon rate with floating rate investments** such as an index
Amortising Swap	❖ An interest rate swap in which the notional principal for the interest payments declines during the life of the swap. ❖ They are particularly useful for borrowers **who have issued redeemable bonds** or debentures

6. **What are swaptions and explain its types? (July 2021, May 2023)**

❖ 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. **Example: 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.**

❖ Following are the two types of swaption contracts:
- o 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
- o 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

❖ Following are the uses of swaptions:
- o Swaptions can be applied in a variety of ways for both **active traders as well as for corporate treasurers**
- o Swap traders can use them for **speculation purposes** or to hedge a portion of their swap books.
- o Swaptions have become useful tools for **hedging embedded optionality** which is common to the natural course of many businesses.
- o Swaptions are useful to **borrowers targeting an acceptable borrowing rate**.
- o Swaptions are also useful to those **businesses tendering for contracts**.
- o Swaptions also provide **protection on callable/puttable bond issues**

7. **What do you mean by the term 'Cheapest to Deliver' in context of Interest Rate Futures? (May 2020 MTP, Nov 2023)**

❖ All the deliverable bonds have **different maturities and coupon** rates. To make them comparable to each other, and also with the notional bond, RBI introduced Conversion Factor. Conversion factor for each deliverable bond and for each expiry at the time of introduction of the contract is being published by NSE. (Conversion Factor) x (futures price) = actual delivery price for a given deliverable bond

- The CTD is the bond **that minimizes difference between the quoted Spot Price of bond and the Futures Settlement Price (adjusted by the conversion factor)**. It is called CTD bond because it is the least expensive bond in the basket of deliverable bonds.
- CTD bond is determined **by the difference between cost of acquiring the bonds for delivery and the price received by delivering the acquired bond**. This difference gives the profit / loss of the seller of the futures.
- Profit/Loss of seller of futures = (Futures Settlement Price x Conversion factor) – Quoted Spot Price of Deliverable Bond
- **That bond is chosen as CTD bond which either maximizes the profit or minimizes the loss.**

8. Explain default risk and re-investment risk? [May 2021 MTP]

Re-investment risk:

- This risk is again akin to all those securities, which **generate intermittent cash flows in the form of periodic coupons**. The most prevalent tool deployed to measure returns over a period of time is the Yield-to-Maturity (YTM) method. **The YTM calculation assumes that the cash flows generated during the life of a security is reinvested at the rate of YTM**. The risk here is that the rate at which the interim cash flows are reinvested may fall thereby affecting the returns.
- Thus, reinvestment risk is the risk that future coupons from a bond will not be reinvested at the prevailing interest rate when the bond was initially purchased.

Default Risk:

- The event in which companies or individuals **will be unable to make the required payments on their debt obligations**. Lenders and investors are exposed to default risk in virtually all forms of credit extensions.
- **To mitigate the impact of default risk, lenders often charge rates of return that correspond the debtor's level of default risk**. The higher the risk, the higher the required return, and vice versa. This type of risk in the context of a Government security is always zero.

Chapter 13 – Business Valuation

1. Explain the various approaches for valuation?

Approaches:

- **Asset base valuation Models:** The value of shares of target company is computed in terms of net assets acquired. This method of valuation is not based on income generation rather than on income generating assets. Following are the variants of asset-based valuation models
    - Net asset value - Valuing asset based on historical cost
    - Net realizable value - Valued based on liquidation value
    - Replaceable value – Valued based on replacement cost of assets

- **Earning based Models:** This method is more suitable when acquiring company is intending to continue business of target company for foreseen future **without selling or liquidating assets of the same**. Accordingly, if any additional earning is there due to acquisition the same should also be considered in valuation. Variants of earning based models are:
    - PE Ratio or Earning Yield Multiplier
    - Capitalization of earning

- **Cash flow-based models:** Cash flow approach takes into account the quantum of free cash that is available in future periods, and discounting the same appropriately to match to the flow's risk.

2. Explain how Cash flow-based approach of valuation is different from Income based approach and also explain briefly the steps involved in this approach. [May 2021 RTP]

- As opposed to the asset based and income-based approaches, **the cash flow approach takes into account the quantum of free cash that is available in future periods**, and discounting the same appropriately to match to the flow's risk.
- Simply speaking, **if the present value arrived post application of the discount rate is more than the current cost of investment, the valuation of the enterprise is attractive to both stakeholders as well as externally interested parties (like stock analysts).** It attempts to overcome the problem of over-reliance on historical data. There are essentially five steps in performing DCF based valuation:
    - Arriving at the 'Free Cash Flows'
    - Forecasting of future cash flows (also called projected future cash flows)
    - Determining the discount rate based on the cost of capital
    - Finding out the Terminal Value (TV) of the enterprise
    - Finding out the present values of both the free cash flows and the TV, and interpretation of the results.

3. What are the steps in Valuation of unlisted companies?

Step 1	❖ **Take the industry beta:** The beta of similar listed companies would be good starting point. As stated above, the levered beta should be converted into unlevered to remove the impact of debt ❖ Unlevered beta = Beta/(1 + (1-tax rate) x (debt/equity))
Step 2	❖ You need to be acutely aware that unlike listed companies, the financial statements of privately held firms **may be having some gaps in accounting policies and accounting estimates**, that would be needed to be adjusted to determine the correct earnings estimate
Step 3	❖ Find out the Cost of equity using the CAPM technique
Step 4	❖ Compute the WACC for the company by assuming a target debt-equity mix and considering the after-tax cost of debt
Step 5	❖ Since this is a private company, **the owners will demand a return towards 'goodwill'**. However, in some cases, the acquisition price may include sweeteners for the erstwhile owners to continue in the merged firm, which will then dispense off the need to perform this step
Step 6	❖ Future cash flows of the private company will be treated (discounted) using the WACC rate obtained above as the discount factor
Step 7	❖ The sum of the PV of the cashflows generated by the DCF will be the value of the firm

4. Explain the relative valuation method? [Nov 2021 MTP]

- Relative Valuation is the method to arrive at a **'relative' value using a 'comparative' analysis to its peers or similar enterprises**. However, increasingly the contemporary financial analysts are using relative valuation in conjunction to the afore-stated approaches to validate the intrinsic value arrived earlier
- 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
- Following are the steps in relative valuation method:
  - Find out the 'drivers' that will be the best representative for deriving at the multiple
  - Determine the results based on the chosen driver(s) thru financial ratios
  - Find out the comparable firms, and perform the comparative analysis, and
  - Iterate the value of the firm obtained to smoothen out the deviations

5. Explain Chop-Shop Method of Valuation?

- This approach attempts to identify **multi-industry companies** that are undervalued and would have more value if separated from each other. In other words as per this approach an attempt is made to buy assets below their replacement value.
- This approach involves following three steps:
  - Identify the firm's various **business segments** and calculate the average capitalization ratios for firms in those industries.
  - Calculate a "theoretical" market value based upon each of the **average capitalization ratios**.
  - Average the "theoretical" market values **to determine the "chop-shop" value of the firm**

6. Differentiate between Economic Value Added and Market Value Added? (OR) "Market Value Added is an attempt to resolve some of the issues involved in Economic Value Added". Explain this statement [Nov 2020]

Economic Value Added (EVA) – EVA is a holistic method of evaluating a company's financial performance in terms of its contribution to the society at large. The core concept behind EVA is that a company generates 'value' only if there is a creation of wealth in terms of returns in excess of its cost of capital

EVA = {EBIT * (1-Tax rate)} – {Invested capital * WACC}

Market Value added (MVA): MVA means Current Market Value of the firm minus Invested Capital. It is an alternative way to gauge performance efficiencies of an enterprise, albeit from a market capitalization point of view, the logic being that the market will discount the efforts taken by the management fairly. **Hence, MVA is the true value added that is perceived by the market while EVA is a derived value added that is for the more discerning investor**

7. How to value a company which is not a going-concern?

- Non-Going Concern Valuation is also known as **Liquidation Valuation** because it is the net value realised after disposing off all the assets and discharging all the liabilities. Since an on-going firm could continue to earn the profit, which contributes to its value in addition to its liquation value the Going Concern Value is known as Total Value.
- **Generally, the going-concern value of a firm will be greater than its liquidation** value because when it is acquired as on basis the value of its assets and considers the value of its future profitability, intangible assets, and goodwill and hence the acquired firm can charge premium for the same.
- Another reason for lower valuation on non-going concern is **that liquation not only implies the laying off its employees and, but it creates a feeling of bad reputation among potential investors**.

8. Why Conventional Methods cannot be used for valuation of distress Companies?

- A company is in distress when it struggles to **meet financial obligations**, often due to high fixed costs, illiquid assets, or economic downturns. This can lead to operational distress.
- Distressed companies may default on debts, but their assets still hold value, and not being unable to make payments **doesn't make them worthless**.

Conventional methods of valuation: Conventional methods of valuation cannot be used due to following reasons:

- Discounted cashflow valuation method required terminal value calculation which is based upon an **infinite life and ever-growing cashflows**. However, the assumption of perpetuity of cash flows may not be relevant in case of distressed firm because of negative cash flows.
- distressed firm generally **has negative and declining revenues** hence expects to lose money for some more time in the future. For such firms, estimating cash flows is difficult, since there is a high risk of bankruptcy. For firms expected to fail, DCF does not work very well, since DCF values a firm as a going concern – even if the firm is expected to survive, projections have to be made until the cash flows turn positive, else the DCF would yield a negative value for equity or firm.
- **Discount rates** used in conventional methods reflect companies which are operationally as well as financially sound. They **have to be adjusted for the probabilities of failures of the companies to be used in case of distressed companies.**

9. **Why Traditional methods cannot be used for valuation of Start-ups?**

- Each of the commonly used methods **pre-suppose an established business** – which is profitable, has established competitors and generates cash using its assets. However the same is missing in case of start-ups.
- Following are the reasons for failure of traditional methods:
    - o **Income Approach:** Majority of startups operate under the assumption of **not generating positive cash flows in the foreseeable future**. Off late, this business model has been accepted and normalised by the investor community as well. Since there are no or minimal positive cash flows, it isn't easy to value the business correctly
    - o **Asset Approach:** Startups have negligible assets because a large chunk of their assets are in the form of intellectual property and other intangible assets. **Start-ups are new, but usually operate under the going concern assumption; hence their value should not be limited to the realisable value of assets today.**
    - o **Market Approach:** New-age startups are **disruptors**. They generally function in a market without **established competitors**. Their competition is from other startups working in the same genre. **The lack of established competitors indicates that their numbers may be skewed and not be comparable enough to form a base**.

10. **What are the value drivers for Start-ups?**

- **Product**: The uniqueness and readiness of the product or service offered by significantly impact the company's valuation
- **Management:** More than half of Indian unicorn startups have founders from IIT or IIM. While it may seem unfair prima facie, it is a fact that if the founders are educated from elite schools and colleges, the startup is looked upon more favourably by the investors and stakeholders alike
- **Traction:** Traction is quantifiable evidence that the product or service works and there is a demand for it.
- **Revenue:** The more revenue streams, the more valuable the company
- **Industry Attractiveness:** The industry's attractiveness plays a vital role in the value of a company. As good as the idea may be, to sustainably scale, various factors like logistics, distribution channels and customer base significantly impacts the startup value.
- **Demand-Supply:** If the industry is attractive, there will be more demand from investors, making the industry's individual company more valuable.
- **Competitiveness:** The lesser the competitors, the more valuable the startup will be. There is no escaping the first-mover advantage in any industry.

11. **Explain the approach for valuation of digital platforms?**

- A digital platform is a **software based online** infrastructure that facilitates interactions and transactions between users. Marketplace, Search Engine, Repository, Digital communication, Digital Community and Payments platform are some of the services provided by Digital Platforms

Income Approach:

- Valuation methods in digital platforms involve analyzing the **Total Addressable Market (TAM) and Serviceable Addressable Market (SAM) to estimate future revenues and costs**.
- The Top-Down Approach involves analyzing the total potential market, estimating the company's future share, and estimating the business plan to achieve objectives. **The financial forecast should**

consider the platform's business model, such as streaming content or payments solution platforms, and its direct operating costs. Penetrative strategies are often employed to gain market share and popularize the platform among end users.

- The Bottom-Up Approach allows platforms to estimate **earnings based on limited resources, allowing promoters to target high margin sales and cost-cutting methodologies to generate more cash.** The value of a digital platform depends on the quality of financial forecasts, as growth and survival depend on the ability of promoters, investors, and stakeholders to create products or services that meet market needs and adapt to unexpected circumstances.
- Based on either of the approaches we would be able to estimate the future earnings of the company.
- **WACC/Cost of equity can be used as discount rated based on the cash flows being discounted**
- However, computation of Beta can be a challenge due to the **unique nature of each digital platform** and scarcity of listed traded comparable

Market Approach:

- The Market Approach values a company by drawing a comparison from similar valued companies based on **multiples like profit to earnings ('P/E') ratio, Enterprise Value to Earnings before Interest, Tax, Depreciation and Amortization ('EV/EBITDA') ratio, Price to Book Value ratio, Price to Revenue/Sales Ratio.**
- Digital platforms face challenges in comparison approach due to scarce comparables, negative underlying values, and low Book Value due to capital-lite nature.
- **Valuation can also be done on parameters such as No of bookings made, no of registered users, volume of transactions, no of active subscribers, no of registered merchants, time taken per search, no of searches etc.**

Cost Approach:

- The Cost Approach **estimates the value of a digital platform by calculating the total cost of building it, focusing on the code written by developers**.
- However, this approach may not be most appropriate as it fails to take into account the revenue generating capacity of the digital platform which may create significantly higher value for the shareholders of the company versus the cost spent on developing the platform

12. Explain the special considerations in valuation of Professional/Consultancy Firms?

- Professional services firms provide customized, knowledge-based services to clients, including Chartered Accountants, Advocates, and Management Consultancy firms.
- Understanding **industry trends and historical data** is crucial for determining an accurate valuation amount. Valuation experts compare firms **against competitors using sources like Audited Annual Statements and Income Tax Returns**.
- While historical data is important, projected growth (Terminal Value) also impacts the overall value. Although Valuation experts plan for future growth and compare it to the projected trends after conversations with management **but there is an inherent risk associated with using future earnings potential, as results may or may not materialize**. Hence, this risk should be factored into the overall calculation.
- In addition to analysis of financial statements and their comparison to industry standards, normalisation of net income and cash flows is another important aspect. This step allows comparison of firms on equal footing. **This step involves adding back of non-cash items and specific items, which might not apply to a new firm**. Then these normalized cash flows are applied to the chosen valuation method and used in calculating overall value.
- One commonly used method to **analyse the extent that a firm meets expectations in comparison to current industry benchmarks and KPIs**. Since professional services includes several different types of firms, KPIs can vary greatly and hence it is equally important to look **at specific indicators which align with acquirer firm's goals.**

13. What is the impact of ESG on valuation?

- Environmental, Social, Governance (ESG) is a framework designed to be embedded into an organization's strategy **that considers the needs and ways in which to generate value for all organizational stakeholder**

- ESG is a growing **concern for investors**, focusing on environmental, social, and governance aspects to create sustainable value. Key environmental concerns include climate change, natural resource scarcity, diversity, and cyber security.
- ESG performance and ratings are **influencing companies' financing options for future growth**. High ESG focus from investors, lenders, and financial institutions leads to **preferential debt costs and access to specialized financial products like Green, Social, and Sustainability linked bonds**.
- ESG is now considered a **must-have** in business ethics, sustainability, diversity, and community. Directors recognize the importance of operational efficiency, risk reduction, and long-term organizational resiliency.
- **ESG factors can be incorporated into valuation by discounting future cash flows and adjusting discount rates or expected cash flows**. However, the impact of ESG factors may not be as explicit, so adjusting them in cash flows would be more explicit. **Factors like environmental, social, and governance risks can be considered in the computation of expected cash flows.**

Chapter 14 – Mergers, Acquisitions & Corporate Restructuring

1. What is the rationale for Mergers and Acquisitions?

- **Synergistic operating economics:** Synergy May be defined as V (AB) >V(A) + V (B). In other words, the **combined value of two firms or companies** shall be more than their individual value. Synergy is the **increase in performance of the combined firm** over what the two firms are already expected or required to accomplish as independent firms. Economics of scale is one of the reasons for synergy benefits
- **Diversification:** In case of merger between two unrelated companies would lead to reduction in business risk, which in turn will increase the market value consequent upon the reduction in discount rate/ required rate of return
- **Taxation:** The provisions of set off and carry forward of losses as per Income Tax Act may be another strong season for the merger and acquisition. Thus, there will be **Tax saving or reduction in tax liability** of the merged firm
- **Growth:** Merger and acquisition mode enables the firm to grow at a rate faster than the other mode viz., organic growth. The reason being the shortening of 'Time to Market'
- **Consolidation of Production Capacities and increasing market power:** Due to reduced competition, marketing power increases. Further, production capacity is increased by combined of two or more plants

2. What are the various forms(types) of mergers?

Horizontal Merger	The two companies which have merged are in the **same industry**, normally the market share of the new consolidated company would be larger and it is possible that it **may move closer to being a monopoly or a near monopoly** to avoid competition
Vertical Merger	This merger happens when two companies that have 'buyer-seller' relationship (or potential buyer-seller relationship) come together
Conglomerate Mergers	Such mergers **involve firms engaged in unrelated type of business operations**. In other words, the business activities of acquirer and the target are **neither related to each other horizontally** (i.e., producing the same or competing products) **nor vertically** (having relationship of buyer and supplier)
Congeneric Mergers	In these mergers, **the acquirer and the target 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
Reverse Merger [Jan 2021]	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**
Acquisition	This refers to the **purchase of controlling interest** by one company in the share capital of an existing company

3. Despite the fact there may be some degree of overlapping in one or more common factors of unrelated Companies come together to form an entity. EXPLAIN. [Nov 2022 MTP, May 2022 RTP]

- Such mergers involve firms engaged in unrelated type of business operations. **In other words, the business activities of acquirer and the target are neither related to each other horizontally** (i.e., producing the same or competiting products) **nor vertically** (having relationship of buyer and supplier).
- In a pure conglomerate merger, there are no important common factors between the companies in production, marketing, research and development and technology.
- **There may however be some degree of overlapping in one or more of these common factors. Such mergers are in fact, unification of different kinds of businesses under one flagship company. The purpose of merger remains utilization of financial resources, enlarged debt capacity and also synergy of managerial functions.**

4. What are the various Take over strategies?

When the process of acquisition is unfriendly it is called as takeover. Following are the various takeover strategies:

- **Street Sweep:** This refers to the technique where the acquiring company **accumulates larger number of shares in a target before making an open offer**. The advantage is that the target company is left with no choice but to agree to the proposal of acquirer for takeover.
- **Bear Hug:** When the acquirer threatens the target company to make an open offer, the **board of target company agrees to a settlement with the acquirer** for change of control.

- **Strategic Alliance:** This involves **disarming the acquirer by offering a partnership rather than a buyout**. The acquirer should assert control from within and takeover the target company.
- **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.

5. What are the various techniques to protect from hostile takeover?

- **Divestiture:** In a divestiture the **target company divests or spins off** some of its businesses in the form of an independent, subsidiary company. Thus, reducing the attractiveness of the existing business to the acquirer.
- **Crown jewels:** When a target company uses the tactic of divestiture **it is said to sell the crown jewels**. In some countries such as the UK, such tactic is not allowed once the deal becomes known and is unavoidable.
- **Poison pill:** The tactics used by the acquiring company to make itself unattractive to a potential bidder is called poison pills.
- **Poison Put:** In this case the **target company issue bonds that encourage holder to cash in at higher prices**. The resultant cash drainage would make the target unattractive.
- **Greenmail:** Greenmail refers to an **incentive offered by management of the target company to the potential bidder for not pursuing the takeover**. The management of the target company may offer the acquirer for its shares a price higher than the market price.
- **White knight:** In this a target company offers **to be acquired by a friendly company to escape from a hostile takeover**. The possible motive for the management of the target company to do so is not to lose the management of the company.
- **White squire:** This strategy is essentially the same as white knight and involves sell out of shares to a company **that is not interested in the takeover**. As a consequence, the management of the target company retains its control over the company.
- **Golden parachutes:** When a company offers **hefty compensations to its managers** if they get ousted due to takeover, the company is said to offer golden parachutes. This reduces acquirer's interest for takeover.
- **Pac-man defence:** This strategy aims at the target company **making a counter bid for the acquirer company.** This would force the acquirer to defend itself and consequently may call off its proposal for takeover.

6. Write short note on reverse merger?

In a 'reverse takeover', a **smaller company gains control of a larger one**. This type of merger is also known as **'back door listing.** The concept of takeover by reverse bid, or of reverse merger, is thus not the usual case of amalgamation of a sick unit which is non-viable with a healthy or prosperous unit but is a case whereby the entire undertaking of the healthy and prosperous company is to be merged and vested in the sick company which is non-viable. Following are the three tests for reverse merger:

- the assets of the **transferor company are greater than the transferee company**,
- equity capital to be issued by the transferee company pursuant to the acquisition **exceeds its original issued capital**, and
- **the change of control** in the transferee company through the introduction of a minority holder or group of holders.

7. What is divestiture and the various reasons for the same?

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.,

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

8. What are the various forms of divestiture or demerger? [May 2021 MTP, Nov 2022 RTP]

Sell off/Partial Sell off	A sell off is the **sale of an asset, factory, division, product line** or subsidiary by one entity to another for a purchase consideration payable either in cash or in the form of securities. Partial Sell off, is a form of divestiture, wherein the firm **sells its business unit or a subsidiary to another because it deemed to be unfit with the company's core** business strategy

Spin-off [May 2021 MTP]	Part of the business is **separated and created as a separate firm**. The existing shareholders of the firm get **proportionate ownership**. So, there is no change in ownership and the **same shareholders continue to own the newly created entity** in the same proportion as previously in the original firm. The **management of spun-off division is however, parted with**. Spin-off does not bring fresh cash
Split-up	This involves **breaking up of the entire firm into a series of spin off** (by creating separate legal entities). The parent firm **no longer legally exists** and only the newly created entities survive. For instance, a corporate firm has **4 divisions namely A, B, C, D. All these 4 division shall be split-up to create 4 new corporate firms** with full autonomy and legal status.
Equity Carve Outs [May 2021 MTP]	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.
Sale of a division	The **seller company is demerging its business whereas the buyer company is acquiring a business**.
Demerger or Division of family-managed business	The family-owned companies are, **under extraordinary pressure to yield control to professional managements**, as, in the emerging scenario of a liberalised economy the capital markets are broadening, with attendant incentives for growth. So, **many of these companies are arranging to hive off their unprofitable businesses or divisions** with a view to meeting a variety of succession problems

9. What are the various ways of doing ownership restructuring?

Going Private	This refers to the situation wherein a **listed company is converted into a private company** by buying back all the outstanding shares from the markets.
Management Buyout (MBO)	Buyouts initiated by the **management team of a company are known as a management buyout**. In this type of acquisition, the company is bought by its own management team. **MBOs are considered as a useful strategy for exiting those divisions** that does not form part of the core business of the entity
Leveraged Buyout (LBO)	An acquisition of a company or a division of another company which is **financed entirely or partially (50% or more) using borrowed funds is termed as a leveraged buyout**. The target company no longer remains public after the leveraged buyout; hence the transaction is also known as going private. The deal is usually secured by the acquired firm's physical assets
Equity Buyback	This refers to the situation wherein a company **buys back its own shares back from the market**. This results in reduction in the equity capital of the company. This strengthen the promoter's position by increasing his stake in the equity of the company

10. What is the difference between Management Buy Out and Leveraged Buyout? State the purpose of a leveraged buyout with the help of an example? [May 2020 RTP]

- **Management Buyout (MBO):** Buyouts initiated by the **management team of a company are known as a management buyout**. In this type of acquisition, the company is bought by its own management team. **MBOs are considered as a useful strategy for exiting those divisions** that does not form part of the core business of the entity
- **Leveraged Buyout (LBO):** An acquisition of a company or a division of another company which is **financed entirely or partially (50% or more) using borrowed funds is termed as a leveraged buyout**. The target company no longer remains public after the leveraged buyout; hence the transaction is also known as going private. The deal is usually secured by the acquired firm's physical assets
- **Purpose of LBO:** The intention behind an LBO transaction is to **improve the operational efficiency of a firm and increase the volume of its sales, thereby increasing the cash flow of the firm**. This extra cash flow generated will be used to pay back the debt in LBO transaction. **After an, LBO the target entity is managed by private investors, which makes it easier to have a close control of its operational activities**. The LBOs do not stay permanent. Once the LBO is successful in increasing its profit margin and improving its operational efficiency and the debt is paid back, it will go public again. **Companies that are in a leading market position with proven demand for product, have a strong management team, strong relationships with key customers and suppliers and steady growth are likely to become the target for LBOs**.

- **Example of LBO:** In India **the first LBO took place in the year 2000 when Tata Tea acquired Tetley in the United Kingdom.** The deal value was Rs. 2135 crores out of which almost 77% was financed by the company using debt. The intention behind this deal was to get direct access to Tetley's international market. **The largest LBO deal in terms of deal value (7.6 Billion) by an Indian company is the buyout of Corus by Tata Steel**

11. How can mergers and acquisitions and business restructuring unlock value?

- Horizontal growth helps to achieve **optimum size, enlarge the market share**, curb competition and use of unutilised capacity;
- Vertical combination helps to **economise costs and eliminate avoidable taxes /duties**;
- Diversification of business;
- Mobilising financial resources by utilising the idle funds lying with another company for the expansion of business.
- Merger of an export, investment or trading company with an industrial company or vice versa with a view to increase cash flow;
- Merging **subsidiary company with the holding company** with a view to improving cash flow;
- Taking over **a 'shell' company which may have the necessary industrial licences etc**., but whose promoters do not wish to proceed with the project.
- An amalgamation **may also be resorted to for the purpose of nourishing a sick unit in the group** and this is normally a merger for keeping up the image of the group.
- Business restructuring enhances competitiveness, survival, and provides new direction for a company.

12. What are the various steps in successful M&A Programme and what are the reasons for failure of M&A?

There are five principal steps in a successful M & A programme namely

- Manage the pre-acquisition phase.
- Screen candidates.
- Eliminate those who do not meet the criteria and value the rest.
- Negotiate.
- Post-merger integration

Following are some of the reasons for failure of M&A:

- Acquirers generally overpay;
- The value of synergy is over-estimated;
- Poor post-merger integration; and
- Psychological barriers.

13. What are Cross border Mergers & Acquisitions and what are the reasons for the same?

- Cross-border M&A is a popular route for global growth and overseas expansion. This refers to a scenario where the target company and acquiring company are based out of different countries
- Factors contributing to cross border M&A are:
  - **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
  - **Privatisation of state-owned enterprises** and consolidation of the banking industry

14. Can a company with no commercial operations raise capital via an IPO? Discuss. [Nov 2021 RTP]

Although the statement **"a company with no commercial operation can launch an IPO" appears to be absurd but this is a fact that even if company does not have any business, it can float an IPO**. In recent time the concept of **Special Purpose Acquisition Companies (SPACs)** has come into existence wherein an entity is set up with the objective to raise funds through an IPO to finance a merger or acquisition of an unidentified target within a specific time period. **It is commonly known as a blank cheque company.**

The main objective of SPAC is to raise money, despite not having any operations or revenues. **The money raised from the public is kept in an escrow account, which can be accessed while making the acquisition. However, in case the acquisition is not made within stipulated period of time of the IPO, the SPAC is**

delisted and the money is returned to the investors. Shareholders have the option to redeem their shares if they are not interested in participating in the proposed merger. Finally, if the merger is approved by shareholders, it is executed, and the target private company or companies become public entities. Once a formal merger agreement has been executed the SPAC target is usually publicly announced.

New investment opportunities in Indian companies have resurfaced and have set up new platform for SPAC transactions. The implementation of SPACs might face certain challenges since India does not have a specific regulatory framework guarding these transactions.

The current regulatory framework in India does not support the SPAC transactions. Further as per the Companies Act, 2013, the Registrar of Companies is authorized to strike-off the name of companies that do not commence operation within one year of incorporation. SPACs generally take 2 to 3 years to identify a target and performing due diligence and before it could get operationalized its name can be stricken off and hence enabling provisions relating to SPAC need to be inserted in the Companies Act in order to make it functional in India.

Though, SPACs do not find acceptance under the Securities and Exchange Board of India (SEBI) Act as it does not meet the eligibility criteria for public listing however SEBI is planning to come out with a framework for SPACs.

The International Financial Services Centres Authority (IFSCA), being the regulatory authority for development and regulation of financial services, financial products and financial institutions in the Gujarat International Finance Tec-City, has recently released a consultation paper defining critical parameters such as offer size to public, compulsory sponsor holding, minimum application size, minimum subscription of the offer size, etc. **SPAC approach offers several advantages over traditional IPO, such as providing companies access to capital, even when market volatility and other conditions limit liquidity. SPACs help to lower the transaction fees as well as expedite the timeline in becoming a public company. Raising money through a SPAC is easier as compared to traditional IPO since the SPAC has already raised money through an IPO**. This implies the company in question only has to negotiate with a single entity, as opposed to thousands of individual investors. This makes the process of fundraising a lot easier and quicker than through an IPO. The involvement of skilled professionals in identifying the target makes the investment a well thought and a well governed process.

However, the merger of a SPAC with a target company presents several challenges, such as complex accounting and financial reporting/registration requirements , to meet a public company readiness timeline and being ready to operate as a public company within a period of three to five months of signing a letter of intent.

It is typically more expensive for a company to raise money through a SPAC than an IPO. Investors' money invested in a SPAC trust to earn a suitable return for up to two years, could be put to better use elsewhere.

15. Explain some of the 'sell-side' imperatives in Mergers & Acquisitions. [May 2023 MTP]

The following are some of the 'sell-side' imperatives

- Competitor's pressure is increasing.
- Sale of company seems to be inevitable because company is facing serious problems like:
    - No access to new technologies and developments
    - Strong market entry barriers. Geographical presence could not be enhanced
    - Badly positioned on the supply and/or demand side
    - Critical mass could not be realised
    - No efficient utilisation of distribution capabilities
    - New strategic business units for future growth could not be developed
    - Not enough capital to complete the project
- **Window of opportunity:** Possibility to sell the business at an attractive price
- Focus on core competencies
- In the best interest of the shareholders – where a large well known firm brings-up the proposal, the target firm may be more than willing to give-up.

Chapter 15 – Startup Finance

1. **What is a Startup to avail Government Schemes? (OR) Explain Startup India Initiative? [OR] NIYA Healthcare is a proprietary concern engaged in the manufacture and development of Pharmaceutical products since last five years. To scale up the business operations and increase the present turnover which is hovering around 500 Million, the proprietor decides to convert his existing business into a Private Limited Company. He also wants to get access to various tax benefits, easier compliances under the startup India initiative and get recognized as a startup company. Advise whether NIYA Healthcare can be recognized as a startup company in view of the criteria considered eligible for the startup recognition initiated by the Government of India? [Nov 2018 RTP, Nov 2019, May 2021 MTP, Nov 2023 RTP, May 2022 MTP, May 2023 MTP, Nov 2023]**

- Startup India scheme was initiated by the Government of India on 16 th of January, 2016.

Definition of Startup:

- Incorporated as either a Private Limited Company or a Registered Partnership Firm or a Limited Liability Partnership in India **not prior to 10 years**
- **Turnover** for any fiscal year has not exceeded INR **100 crores**
- Entity should not have been formed by splitting up or reconstruction a business already in Existence
- Working towards **innovation, development, deployment or commercialization of new product, processes or services driven by technology or intellectual property**

Additional conditions:

- Provided also that an entity shall cease to be a Startup if its turnover for the previous financial years has exceeded Rs. 100 crore or it has completed 10 years from the date of incorporation/ registration.
- Provided further that a Startup shall be eligible for tax benefits only after it has obtained certification from the Inter-Ministerial Board, setup for such purpose.

Advise: In the present scenario, NIYA healthcare is converted into a private limited company. In other words there is a reconstruction of an exiting propriety business into a private limited company. In view of the above the company cannot be recognised as a startup company.

2. **What are the major reasons for sustainable development of Startups in India? [May 2024]**

- **Government support:** Government has supported the development of Startups with the launch of Startup Scheme
- **Pool of Talent:** India's talent pool, with millions of graduates, contributes to startup growth by leveraging their knowledge and skills to start their own ventures. Previously, this talent was primarily attracted to big companies.
- **Cost-effective workforce:** India is a young country with over 10 million people joining the workforce every year. The workforce is also cost effective. **So, compared to some other countries, the cost of setting up and running a business is comparatively lower**
- **Increasing use of internet:** India's second-highest population, with affordable telecom services, has significantly increased internet usage, reaching rural areas and becoming the second-largest internet user base after China.
- **Technology:** Technology has revolutionized business processes, enabling quick, simple, and efficient data storage and recording. Indian startups are focusing on artificial intelligence and blockchain technologies, boosting growth.
- **Variety of Funding Options:** Traditional methods for acquiring funds for new business models include **bank and family borrowing**. However, **new opportunities include angel investors, venture capitalists, and seed funding stage investors**. The easing of Foreign Direct Investment norms and automatic sector openings have increased foreign funding in the Indian start-up ecosystem.

3. **Explain some of the Sources for funding a start-up? (OR) What are some of the innovative ways of financing a start-up? (OR) Non-bank financial Sources are becoming popular to finance start-ups. Discuss [May 2020 RTP, May 2019, May 2019 MTP, Nov 2020 MTP, Jan 2021, May 2023, Nov 2018 MTP, Nov 2022 MTP]**

Personal Financing	It is important because most of the investors will not put money into a deal if **they see that the entrepreneurs have not contributed from their personal Source**

Personal Credit Lines	It is based on **one's Personal credit efforts**, Bank will provide this facility only when the business has enough cash flows to repay the line of credit. **E.g. Credit Cards**
Family and Friends	These people will generally fund, without even thinking whether the idea works or not, However, the **loan obligations** to friends and relatives should always be in writing as a **promissory note or otherwise.**
Peer-to-Peer Lending	In this group of **people come together and lend money** to each other. Many small and ethnic business groups having similar faith or interest generally support each other in their start up endeavours.
Crowd Funding	It uses **small amounts of capital from a large number of Individuals**, It makes use of the easy accessibility of vast networks of people through social media and crowdfunding websites to bring investors and entrepreneurs together.
Micro loans	A **small Loan given by Single individual or aggregated** at a lower Interest.
Vendor Financing	In this a **company lends money to its customers** so that they can buy products from the manufacturers. E.g. Extending credit period from 30 days to 45 days
Purchase order financing	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
Factoring Account receivables	**A facility is given to the seller who has sold the good on credit to fund his receivables till the amount is fully received**

4. What do you Mean by Pitch Presentation in context of Start-up Business? And Explain the methods to approach a pitch presentation? [Nov 2018 MTP, Jul 2021, Nov 2023 MTP, May 2022 MTP, Nov 2022 MTP, Nov 2024 MTP]

❖ Pitch deck presentation is a **short and brief presentation** (<20Min) to investors explaining about the **prospects of the company** and why they should invest into the startup business.

❖ Pitch presentation can be made either during face to face meetings or online meetings with potential investors, customers, partners, and co-founders.

Introduction

- First step is to give a **short introduction**.It should be Short and Sweet
- One can use this opportunity to get the interest of investors

Team

- Next step is to introduce the team members
- Because the investors will want to know the people who are going to make the product or service Successfull

Problem

- The promoter should be able to **explain the problem he is going to solve and Solutions emerging from it**
- The investors should be convinced that the newly introduced product will solve the Problem.

Solution

- It is very important to **<u>describe as to how the company is planning to solve theproblem.</u>**
- E.g.: Flipkart Started its business in 2007, it brought e-commerce in India, they Introduced Cash on Delivery Basis .

Marketing

- The investors are deeply interested in marketing, so the Investor has to **<u>communicate the Market size of the product and the target Customers</u>**.

Projections

- Projected financial statements can be prepared which gives an organisation a breif idea about **<u>where is the business heading</u>** ? whether the business will be making Profit or Loss
- Financial Prjections includes Income Statement,CFS and Balance Sheet

Competition

- Every Business organisation has competition even if the product or service is new and unique.
- It is necessary to **<u>highlight, how the product or service are different from their competitors</u>**

Business Model

- The term business model is a wide term denoting core aspects of a business includingpurpose, business process, target customers, offerings, strategies, infrastructure, organizationalstructures, sourcing, trading practices, and operational processes and policies including culture.
- Is also beneficial to discuss the lifetime value of the customer and what should be the strategyto keep him glued to their product.

Financing

- If a startup business firm has raised money,it is preferable to talkabout how much money has already been raised, who invested money into the business and what they did about it
- .If no money has been raised till date, an explanation can be made regarding how much work has been accomplished with the help of minimum funding that the company is managed to raise.

5. Explain the basic documents that are required to make up Financial Presentations during Pitch Presentation? [May 2020 MTP, Nov 2024 MTP]

- **Income statement:** This projects how much money **the business will generate by projecting income and expenses, such as sales, cost of goods sold, expenses and capital**. For your first year in business, you'll want to create a monthly income statement. For the second year, quarterly statements will suffice. For the following years, you'll just need an annual income statement.
- **Cash flow statement**: A projected cash flow statement will depict how much cash will be coming into the business and out of that cash how much cash will be utilized into the business. At the end of each period (e.g. monthly, quarterly, annually), one can tally it all up to show either a profit or loss.
- **Balance sheet:** The balance sheet shows the business's overall finances including assets, liabilities and equity. Typically one will create an annual balance sheet for one's financial projections.

6. What are the modes of Financing for Startups? (OR) Explain Angel Investors? [Nov 2018, Nov 2019 MTP, Nov 2020 MTP, May 2021 MTP, Nov 2021 MTP, May 2022 MTP]

Bootstrapping	❖ 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 ❖ On the other hand, investment by startups from their own savings leads to cautious approach.
Angel Investor	❖ Angel investors invest in small startups or entrepreneurs, they are among an entrepreneur's family and friends. ❖ The capital angel investors provide may be a **one-time investment to help the business propel or an ongoing injection of money to support and carry the company** through its difficult early stages. ❖ Angel investors are also called informal investors, angel funders, private investors, seed investors or business angels. ❖ Some angel investors invest through crowdfunding platforms online or build angel investor networks to pool in capital.
Venture Capital Funds	❖ 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.

7. Define Angel Investors, are these only individuals? If not, list the entities [May 2022]

- Angel Investors invest in small startups or entrepreneurs. Often angle investors are among the entrepreneur's family and friends.
- **Though angel investors usually represent individuals, the entity that actually provides the fund may be a limited liability company, a business, a trust or an investment fund, among many other kinds of vehicles.**

8. Explain Venture capital Financing and their Characteristics? [Nov 2019, May 2021 RTP, Dec 2021]

- Venture capital means funds made available for startup 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.

Characteristics of Venture capital Financing :

Long time Horizon	❖ The fund will invest **minimum** period of investment of **3** years and the **maximum** period can be **10** years
Lack of Liquidity	❖ It assumes that there would be less liquidity on the equity it gets and accordingly it would be investing in that format.
High Risk	❖ It works on principle of **high risk and high return**. So, high risk would not eliminate the investment choice for a venture capital.
Equity participation	❖ VC would be investing in the form of equity of a company, it helps to **participate in the management and help the company grow.**

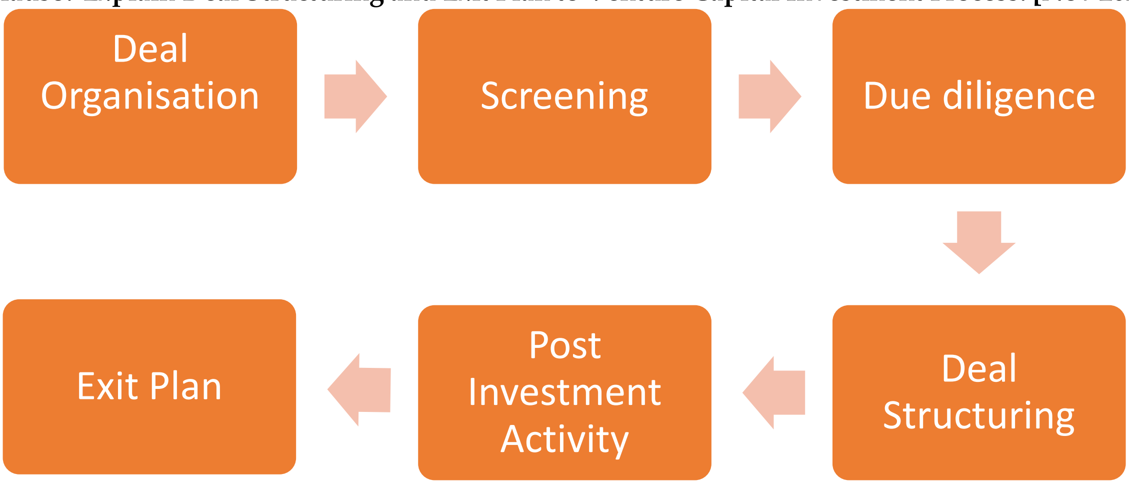
9. What are all the advantages of Bringing Venture Capital (VC) in the company? (May 2020 MTP, May 2018, May 2022 MTP)

- 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 (National Association of Securities Dealers Automated Quotations)
- They can also facilitate a **trade sale**.

10. What are the stages of funding VC? [Nov 2018 MTP, Jan 2021, May 2023 RTP, Nov 2021 MTP]

Financial stage	Periods (Lock-in Period)	Risk Perception	Activity to be financed
Seed Money	7-10	Extreme	For supporting a concept or idea or R&D for product Development
Start up	5-9	Very high	Initializing prototypes operations or developing
First stage	3-7	High	Start commercials marketing production
Second stage	3-5	Sufficiently high	Expand market and growing working capital need
Third stage	1-3	Medium	Expand market and growing working capital need
Fourth Stage	1-3	Low	Facilitating Public Issue

11. Explain Venture capital Investment Process? [OR] "In Deal Structuring, in many structures to facilitate the exit, the Venture Capital may put a tag-along clause". What do you mean by that clause? Explain Deal Structuring and Exit Plan to Venture Capital Investment Process. [Nov 2023]



Deal Organisation:

- VC operates Directly or through intermediaries,
- 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

Screening:

- ❖ 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**. The decision would take place based on the information provided by the company.

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.

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.

Post Investment Activity:

- ❖ 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.

Exit Plan:

- ❖ 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.
- ❖ Exit happens in two ways: one way is'**sell 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%)

12. **Explain the structure of Venture Capital Fund in India? (OR) A Limited Partnership Entity, in India, is not recognized for the purpose of Venture Capital Fund." Do you agree? Briefly explain the structure of Venture Capital Fund in India (May 2023, Nov 2021 MTP)**

Yes, agree with the statement. Three main types of fund structure exist: one for domestic funds and two for offshore ones:

Domestic funds	❖ It is usually structured as a o Domestic vehicle for the pooling of funds from the investor and o a separate Investment adviser that carries those duties for asset manager. ❖ The choice of entity for the pooling vehicle falls between a trust and a company, (India, unlike most developed countries does not recognize a limited partnership) with the trust form prevailing due to its operational flexibility
Offshore Funds	**Offshore Structure:** ❖ Under this structure, an **investment vehicle** (an **LLC** or an LP organized in a jurisdiction outside India) makes investments directly into **Indian portfolio companies.** ❖ Typically, the assets are managed by an offshore manager, while the investment advisor in India carries out the due diligence and identifies deals. **Unified Structure:** ❖ **Overseas investors pool their assets in an offshore vehicle that invests in a locally managed trust**, whereas domestic investors directly contribute to the trust.

13. **An individual attempts to found and build a company from personal finances or from the operating revenues of the new company. What this method is called? Discuss any two methods (OR) Explain the concept of Bootstrapping and Explain some of the methods in which a Startup Firm can bootstrap? [May 2018 RTP, Nov 2020 RTP, May 2019 MTP, May 2021 MTP, Nov 2020, Dec 2021, Nov 2022, Nov 2022 MTP]**

Meaning	❖ 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

	❖ On the other hand, investment by startups from their own savings leads to cautious approach.
Trade Credit	❖ When a person is starting his business, suppliers are reluctant to give trade credit. They will insist on payment of their goods supplied either by cash or by credit card. However, a way out in this situation is to prepare a well-crafted financial plan. ❖ The owner or the financial officer has to be explained about the business and the need to get the **first order on credit in order to launch the venture**.
Factoring	❖ This is a financing method where **accounts receivable** of a business organization is sold to a commercial finance company to raise capital. ❖ Factoring can be performed on a **non-notification** basis. It means customers may not be told that their accounts have been sold. ❖ It can actually **reduce costs** associated with maintaining accounts receivable such as bookkeeping, collections and credit verifications ❖ **Factoring can be a very useful tool for raising money and keeping cash flowing**.
Leasing	❖ Another popular method of bootstrapping is to **take the equipment on lease rather than purchasing it.** ❖ It will **reduce the capital cost** and also help lessee (person who take the asset on lease)to claim **tax exemption**. So, it is better to a take a photocopy machine, an automobile or a van on lease to avoid paying out lump sum money which is not at all feasible for a startup organization.

14. Compare and contrast start-ups and entrepreneurship. Describe the priorities and challenges which start-ups in India are facing? [Nov 2019 RTP, May 2018 MTP, Nov 2019 MTP]

Differences between a start-up and entrepreneurship

Startups are different from entrepreneurship. The major differences between them have been discussed in the following paragraphs:

- ❖ **Start up is a part of entrepreneurship.** Entrepreneurship is a broader concept and it includes a startup firm.
- ❖ The main aim of startup is to **build a concern, conceptualize the idea which it has developed into a reality and build a product or service.** On the other hand, the major objective of an already established entrepreneurship concern is to attain opportunities with regard to the resources they currently control.
- ❖ **A startup generally does not have a major financial motive** whereas an established entrepreneurship concern mainly operates on financial motive

Priorities and challenges which start-ups in India are facing:

- ❖ **The priority is on bringing more and more smaller firms into existence**. So, the focus is on need based, instead of opportunity-based entrepreneurship. Moreover, the trend is to encourage self-employment rather than large, scalable concerns.
- ❖ **The main challenge with the startup firms is getting the right talent.** And, paucity of skilled workforce can hinder the chances of a startup organization's growth and development. Further, startups **had to comply with numerous regulations which escalate its cost**. It leads to further delaying the chances of a breakeven or even earning some amount of profit.

15. Explain the term Business Model with help of an example. [May 2021 MTP, Nov 2021 MTP]

- The term business model is a wide term **denoting core aspects of a business** including purpose, business process, target customers, offerings, strategies, infrastructure, organizational structures, sourcing, trading practices, and operational processes and policies including culture.
- Further, as per Investopedia, a **business model is the way in which a company generates revenue and makes a profit from company operations**.
- Analysts use the term gross profit as a way to compare the efficiency and effectiveness of a firm's business model. Gross profit is calculated by subtracting the cost of goods sold from revenues. A business model can be illustrated with the help of an example.
- There are two companies – company A and company B. **Both the companies are engaged in the business of renting movies**. Prior to the advent of internet both the companies rent movies physically. Both the companies made Rs. 5 crore as revenues. Cost of goods sold was Rs. 4 crore. So, the companies made 1 crore as gross profit.

- After the introduction of internet, company A started to offer movies online instead of renting or selling it physically. **This change affected the business model of company A positively**. Revenue is still 5 crores. But the significant part is that cost of goods sold is now 2 crores. **This is because online sales lead to significant reduction of storage and distribution costs**. So, the gross profit increases from 20% to 60%. Therefore, Company A isn't making more in sales, but it figured out a way to revolutionize its business model, which greatly reduces costs.
- Managers at company A have an additional 40% more in margin to play with than managers at company A. Managers at company A have little room for error and they have to tread carefully. Hence, every investor wants to get his money back, so it's important to tell them in a pitch presentation as to how they should plan on generating revenue.
- **It is better to show the investors a list of the various revenue streams for a business model and the timeline for each of them**. Further, how to price the product and what does the competitor charge for the same or similar product shall also be highlighted. **It is also beneficial to discuss the lifetime value of the customer and what should be the strategy to keep him glued to their product.**

16. Peer – to – Peer Lending and Crowd funding are same and traditional methods of funding. Do you agree? Justify your stand [Nov 2020, Nov 2023 MTP, May 2023 MTP]

- No, **I do not agree with the given statement** because while peer-to-peer lending is in existence for many years the crowd funding is contemporary source of finance for Startup finance.
- Further in peer-to-peer lending **a group of people come together and lend money to each other.** Many small and ethnic business groups having similar faith or interest generally support each other in their start up endeavors.
- **On the other hand, Crowdfunding is the use of small amounts of capital from a large number of individuals to finance a new business initiative.** Crowdfunding makes use of the easy accessibility of vast networks of people through social media and crowdfunding websites to bring investors and entrepreneurs together.

17. **Explain the concept of Unicorn? Also mention the name of the startup became the India's first Unicorn. [May 2024 MTP, Nov 2024 RTP, Nov 2024 MTP]**

- A Unicorn is a privately held start-up company which has achieved a **valuation of US$ 1 billion**.
- A start-up is referred as a Unicorn if it has following features:
    - A privately held start-up
    - Valuation of start-up reaches US$ 1 Billion
    - Emphasis is on the rarity of success of such start-up.
    - Other common features are new ideas, disruptive innovation, consumer focus, high on technology etc.
- However, it is important to note that in case **the valuation of any start -up slips below US$ 1 billion** it can lose its status of 'Unicorn'
- The next milestone for a Unicorn to achieve **is to become a Decacorn**, i.e., a company which has attained a valuation of more than **US$ 10 billion**
- **In September 2011, InMobi, an ad-tech startup, became the first Unicorn of India. SoftBank invested US$ 200 million in InMobi valuing the mobile advertising company at over US$ 1 billion, making it India's first unicorn.**

18. Explain the meaning of Succession Planning?

- Succession planning involves **identifying critical positions** within an organization and developing action plans for individuals to assume them.
- It is crucial for family-owned businesses, **as non-family leaders manage them**.
- This holistic approach ensures the right people are available for jobs and provides a liquidity event for ownership transfer to rising employees.
- Succession planning helps **companies promote and advance all employees**, not just those at management or executive levels.

19. Why should an organization plan for succession planning? (OR) Succession planning is a good way for companies to ensure that businesses are fully prepared to promote and advance all employees— not just those who are at the management or executive levels. Explain the above statement. [May 2024 RTP]

- **<u>Risk mitigation:</u>** If existing leader quits, then searches can take six-nine months for suitable candidate to close. Keeping an organization without leader can invite disruption, uncertainty, conflict and endangers future competitiveness
- **<u>Cause removal:</u>** If the existing leader is culpable of gross negligence, fraud, willful misconduct, or material breach while discharging duties and has been barred from undertaking further activities by court, arbitral tribunal, management, stakeholders or any other agency.
- **<u>Talent pipeline:</u>** Succession planning keep employees motivated and determined as it can help them obtaining more visibility around career paths expected, which would help in retaining the knowledge bank created by company over a period of time and leverage upon the same.
- **<u>Conflict Resolution Mechanism:</u>** This planning is very helpful in promoting open and transparent communication and settlement of conflicts
- **<u>Aligning:</u>** In family-owned business succession planning helps to align with the culture, vision, direction and values of the business.

20. Explain the steps in Business Succession Strategy?

- **<u>Evaluate key leadership positions:</u>** To evaluate which roles are critical, **<u>risk or impact assessment can be performed</u>**. Generally, these are such positions which would bring transformation to the entire business or create strategic direction for the organization
- **<u>Map competencies required for above positions:</u>** In this step, one needs to identify qualifications, behavioral and technical competencies required to perform the role successfully
- **<u>Identify competencies of current workforce:</u>** Identifying what are possible internal options that can deliver results as expected in Step-2, and also if there is a need for training and development of certain skills required. The organization should also place weight on whether is there a need to search outside the organization.
- **<u>Bridge Leader:</u>** In family-owned business appointment of an outsider as 'bridge leaders' will help to develop the business and prepare young family members for leadership role

21. Explain the challenges in implementing succession planning?

- **<u>Founder mindset might be different than the corporate mindset:</u>** The way founder's brains are wired is different from the way that a traditional corporate manager thinks, and this puts off seasoned corporate leaders from joining even matured start-ups.
- **<u>Premature for startups to implement business succession:</u>** Certain startups are at early growth stage and too much of processes would lead to growth slow-down and hence they are not in a current stage for implementing business succession planning.
- **<u>Founders are the face of startups:</u>** One cannot imagine a startup without a founder who initiated the idea and executed it and in his/ her absence succession planning can become difficult.