

# CA FINAL

**PAPER-2**

## **ADVANCED FINANCIAL MANAGEMENT**



### 5 Chapters' Theory

1. FINANCIAL POLICY & CORPORATE STRATEGY

2. RISK MANAGEMENT

3. SECURITY ANALYSIS

4. SECURITIZATION

5. START-UP FINANCE

**ACE YOUR CA**

**MAY & NOV 2025**

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### About the Author

Avnish Vats is a Chartered Accountant, MBA (Finance), M.Com, L.L.B and B.Com (Honours) with over 10 years of experience in diverse facets of finance and accounting. His professional journey encompasses a rich blend of experience in both the private and public sectors, giving him a unique perspective on the intricacies of financial management.

He began his career with a two-year stint in internal audit at a listed company, where he honed his analytical skills and gained valuable insights into corporate governance and risk management. This was followed by two years with a state government, where he specialized in accounting practices and procedures within the public sector. For the past six years, Avnish Vats has been with the Ministry of Health and Family Welfare, where he has been responsible for handling the central budget. This experience has provided him with an in-depth understanding of financial planning, resource allocation, and budget execution at the national level.

This book, *Advanced Financial Management: 5 Chapter's Theory*, is a culmination of his extensive practical experience and academic background. Designed specifically for CA Final students, it bridges the gap between theoretical concepts and real-world applications. Avnish Vats 's goal is to empower aspiring chartered accountants with the knowledge and skills necessary to excel in the challenging and dynamic field of financial management. He brings a practical, hands-on approach to the subject, drawing on his experience to illustrate key concepts and provide relevant case studies. He is passionate about simplifying complex financial theories and making them accessible to students, ensuring they are well-prepared for the rigors of the CA Final examination and their future careers.

**Updated up to Nov. 2024**  
**Exams**

### Preface

*This book, **Advanced Financial Management: 5 Chapter's Theory**, is the culmination of years of learning, teaching, and grappling. It is designed specifically for aspiring Chartered Accountants preparing for the challenging CA-Final examinations, aiming to provide a clear, concise, and comprehensive understanding of the advanced concepts included in the 5 theory chapters of Advanced Financial Management.*

*This book reflects that dynamism, covering not only the core principles but also the latest developments and emerging trends that are shaping the future of finance. Recognizing the challenge of memorizing numerous formulas and concepts, I have also incorporated mnemonics and memory aids throughout the book to facilitate learning and recall. These memory tools are designed to make complex information more digestible and easier to retain, particularly under the pressure of the CA-Final exams. Each chapter includes a structured approach, beginning with fundamental concepts, questions asked in study material, MTPs, RTPs, and questions asked in the previous exams.*

*This book is more than just a collection of theories, formulas, and mnemonics; it is a guide to critical thinking and problem-solving in the realm of finance. It encourages students to question assumptions, analyze situations from multiple perspectives, and develop well-reasoned solutions. My goal is not simply to help students pass the CA-Final exam, but to empower them with the knowledge and skills they need to excel in their professional careers as financial leaders and decision-makers.*

*This journey, from the initial conceptualization to the final publication of this book, has been a long and demanding one. And it would not have been possible without the unwavering support and encouragement of several individuals.*

*First and foremost, I dedicate this book to my parents, whose sacrifices, love, and belief in me laid the foundation for everything I have achieved. They instilled in me the values of hard work, perseverance, and the pursuit of excellence, which have guided me throughout my life. Their constant encouragement and unwavering support have been my source of strength and inspiration.*

*To my sweet wife, my deepest gratitude for your unwavering love, patience, and understanding. You have been my rock through thick and thin, providing me with the emotional support and encouragement I needed to complete this project. Your sacrifices and compromises have allowed me to dedicate the necessary time and effort to writing this book. This book is as much yours as it is mine.*

*I sincerely hope that this book will be a valuable resource for CA-Final aspirants and contribute to their success. I welcome any feedback or suggestions from readers, as they will help me improve future editions.*

*Avnish Vats  
21.02.2025*

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## Chapter 1 - Financial Policy & Corporate Strategy

### 1.1 Functions of SFM

- Explain the functions of Strategic Financial Management. or
- What are the functions covered under investment & Financial decisions?

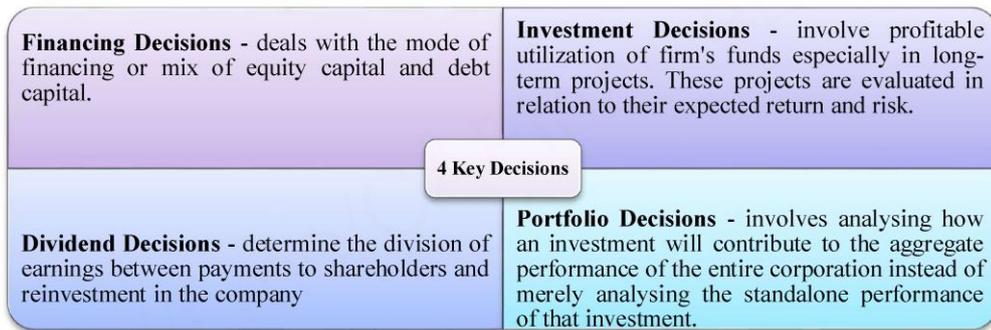
Ans.



- ✓ **SEARCH** for best investment opportunity.
- ✓ **SELECT** best opportunities.
- ✓ Select **OPTIMAL MIX** for the investment.
- ✓ **Establish** INTERNAL CONTROLS
- ✓ Analyse **RESULTS** for future decision making.

### 1.2 Key decisions falling within the scope of financial strategy

(Nov., 2024)



### 1.3 Explain the interface of financial policy and strategic management. (SM)

**Or** How is financial policy linked to strategic management?

**Or** Starting point and end point of an organisation is money. Explain.

(May, 2024)

Sol.

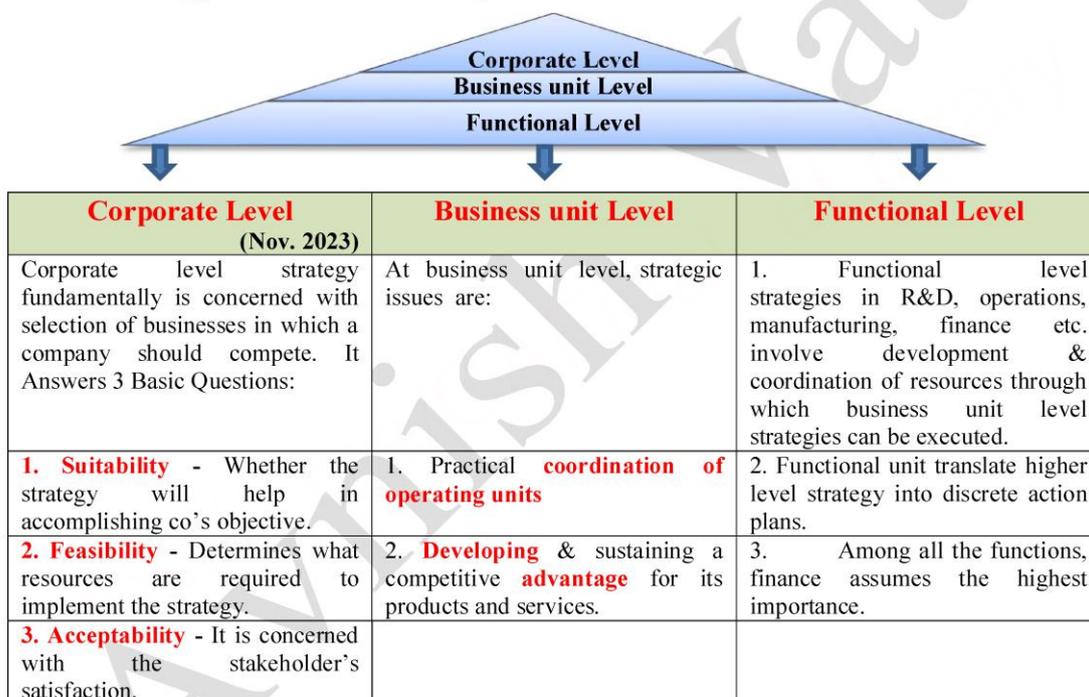
The ultimate aim of the management of any company is to maximize the shareholder's wealth. Therefore, the strategy as well as the financial policy of the company Should be in line with this aim.

| Sources Of Funds                     | Capital Structure  | Investment & Fund Management                       | Dividend Decisions   |
|--------------------------------------|--|--|--|
| Funds may be sourced from:           | This includes deciding the desired mix of equity capital and debt capital. | Investment proposals can be divided into 3 groups. | It deals with how much earnings should be distributed as dividends and how much should be retained. Various alternatives regarding dividend are; |
| 1. Owner's funds - Equity/preference | There are some norms for debt  | 1. Addition of new product.                        | 1. Stable dividend payment every year.   |

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| share capital  | equity ratio.  |  |  |
| 2. Borrowed funds - Debentures, Bank loan for Long term or Medium term. Overdraft, cash credit, trade credit for short term needs. | For eg: For PSU it is 1:1 and for pvt. Sector it may be 2:1 and so on. | 2. Increase the level of operation of an existing product. | 2. Paying a Constant percentage of earnings dividends.   |
|  |  | 3. Cost reduction and deficient utilization of resources.  | 3. Pay a minimum dividend per share and additional dividend when earnings are higher than the normal earnings. |
|  |  |  | 4. Whether to pay dividends in cash or as stock dividend.  |

Thus, the financial policy cannot be worked out in isolation of other functional policies.

### 1.4 Strategy at different hierarchy levels



### 1.5 Financial Planning

| Short Note on Financial Planning   | Outcomes of Financial Planning<br>(May, 2022)   |
|--|---|
| <ul style="list-style-type: none"> <li>Financial planning is the backbone of the business planning and corporate planning. Financial Planning = FR + FT + FG</li> <li>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.</li> <li>There are 3 components of Financial planning:                             <ul style="list-style-type: none"> <li>Financial Resources (FR)</li> <li>Financial Tools (FT)</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li><b>Financial Objectives</b> - These are 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.</li> <li><b>Financial Decision Making</b> - It helps in analyzing the financial problems faced by the Co. and accordingly deciding the appropriate action.</li> <li><b>Financial Measures</b> - The financial measures like ratio analysis, cash flow analysis are used to evaluate Co's performance. Selection of these</li> </ul> |

|                        |   |
|------------------------|---|
| • Financial Goals (FG) | measures again depends upon the corporate objectives. |
|------------------------|---|

**1.6 Sustainable Growth or**

**Write a short note on Balancing Financial Goals vis-à-vis Sustainable Growth.**

**(SM)**

|  |  |
|--|--|
| <p><b>Sustainable Growth Rate</b><br/><br/>(Nov. 2022)</p>                             | <ul style="list-style-type: none"> <li>• Concept of sustainable growth can be helpful for planning healthy corporate growth. This concept forces managers to consider the financial consequences of sales increases. A conflict can arise if growth objectives are not consistent with the value of the organization's sustainable growth.</li> <li>• <b>Example - Oil Industry:</b> <ul style="list-style-type: none"> <li>✓ A DEMARKETING campaign was launched by fuel industry, which was focused on fuel conservation. This was done to ensure that the limited resources are used judiciously.</li> <li>✓ This is an example of stable growth strategy adopted by the oil industry. Some other variants of stable growth strategy are incremental growth strategy, profit strategy and pause strategy.</li> </ul> </li> <li>• Sustainable growth is important to enterprise long-term development. Too fast or too slow growth will go against enterprise growth and development, so, financial policy should ensure that the enterprise growth rate is close to the sustainable growth rate.</li> <li>• 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 pay-out and debt (financial leverage) ratios.</li> </ul> <p style="color: red; margin-top: 10px;">→ <b>SGR = ROE x (1- Dividend payment ratio)</b></p> |
| <p><b>Assumptions of Sustainable Growth Model</b></p>                                  | <ul style="list-style-type: none"> <li>• <b>Sustainable growth models assume that the business wants to:</b> <ul style="list-style-type: none"> <li>✓ maintain a target capital structure without issuing new equity;</li> <li>✓ maintain a target dividend payment ratio; and</li> <li>✓ Increase sales as rapidly as market conditions allow.</li> </ul> </li> <li>• <b>Sustainable growth model assumes that asset to equity ratio is constant, therefore, new growth can only be funded by:</b> <ul style="list-style-type: none"> <li>✓ Retained earnings or by issuing additional debt that the retained earnings can support.</li> <li>✓ Alternatively, a co. may also issue fresh equity to fund its growth. In such a case, there is no financial constraint on its growth rate. However, most of the companies are reluctant to issue fresh capital.</li> </ul> </li> </ul>  |
| <p><b>What makes an organisation sustainable?</b><br/><b>CLASS</b><br/>(Nov. 2022)</p> | <ul style="list-style-type: none"> <li>• <b>Community support</b> - get community support for its work.</li> <li>• <b>Leverage financial resources</b> - to create an impact</li> <li>• <b>Administrative &amp; financial infrastructure</b> - should be adequate</li> <li>• <b>Strategic direction</b> - should be clear.</li> <li>• <b>Staff</b>- be able to attract, manage and retain competent staff.</li> </ul>  |
| <p><b>What makes an organisation financially sustainable?</b><br/>(May, 2023)</p>      | <ul style="list-style-type: none"> <li>• have more than one <b>source of income;</b></li> <li>• have more than one <b>way of generating income;</b></li> <li>• have a good <b>public image;</b></li> <li>• be clear about its <b>values</b> (value clarity)</li> <li>• have <b>financial autonomy.</b></li> <li>• have adequate <b>financial systems</b></li> </ul>  |
| <p><b>Write a short note</b></p>   | <ul style="list-style-type: none"> <li>• These firms may have <b>growth rate less than sustainable growth rate.</b></li> </ul>   |

|  |   |
|--|---|
| <b>on Growth rate in case of mature / cash-rich firms.</b> | <ul style="list-style-type: none"> <li>In such cases management may:                             <ul style="list-style-type: none"> <li>✓ Try to increase the growth rate through acquisition of rapidly growing companies.</li> <li>✓ Return the excess cash to shareholders through increased dividend, share buyback etc. This decreases the (required) sustainable growth rate of the company.</li> </ul> </li> </ul> <p><b>Growth can come from two sources: increased volume and inflation.</b></p> <ul style="list-style-type: none"> <li>✓ Inflation increases the amount of external financing required and increases the debt-to-equity ratio when this ratio is measured on a historical cost basis.</li> <li>✓ Thus, if creditors require that a firm's historical cost debt-to-equity ratio stay constant, inflation lowers the firm's sustainable growth rate.</li> </ul> |
|--|---|

### 1.7 Strategy

|   |   |
|---|---|
| <b>Processes of Strategic Decision Making</b>                 | <ul style="list-style-type: none"> <li>Investors want to maximize their wealth by selecting investments that will give maximum expected <b>returns at minimum risk</b>.</li> <li>This is the highest priority of management as well i.e. Wealth maximization.</li> <li>Capital is limiting factor. So, it should be allocated such that it that sustain or increase investor returns.</li> </ul> <p>Therefore, all businesses need to have the following three fundamental essential elements:</p> <ol style="list-style-type: none"> <li>A clear and realistic strategy,</li> <li>The financial resources, controls and systems to see it through and</li> <li>The right management team and processes to make it happen.</li> <li>We may summarise this by saying that:</li> </ol> <p style="text-align: center;"><b>Strategy + Finance + Management = Fundamentals of Business</b></p> |
| <b>Importance of Strategic Management In Today's Scenario</b> | <ol style="list-style-type: none"> <li>Strategic management intends to run an org in a systematized manner by developing a series of plans and policies.</li> <li>It is concerned with where the org wants to reach and how it intends to reach there.</li> <li>It tries to reduce uncertainty through continuous review of planning and implementation process.</li> <li>It is therefore necessary for an org to go for strategic planning.</li> </ol>   |
| <b>Characteristics of Strategy</b><br><b>DLS<sup>3</sup></b>  | <ul style="list-style-type: none"> <li><b>Dynamic in nature</b></li> <li><b>Long term in nature</b></li> <li><b>Strategy are complex</b></li> <li><b>Strategy are directed towards in goal of org</b></li> <li><b>Strategy affects the whole organisation.</b></li> </ul>   |

### 1.8 Role of CFO in various matters including value creation

(RTP May, 2024)

|                         |   |
|-------------------------|---|
| <b>Traditional Role</b> | Concentrated to wealth maximisation by taking care of financial health & overseeing and implementing adequate financial controls.   |
| <b>At Present times</b> | CFOs are also expected to contribute in strategic and operational decision making. Take a leadership role in long term sustainable value creation.  |
| <b>REMS</b>             | <p>In post-pandemic time their role has been advanced in the following areas in addition to traditional role:</p> <ol style="list-style-type: none"> <li><b>Risk Management</b> - Look after the overall functioning of Risk</li> </ol> |

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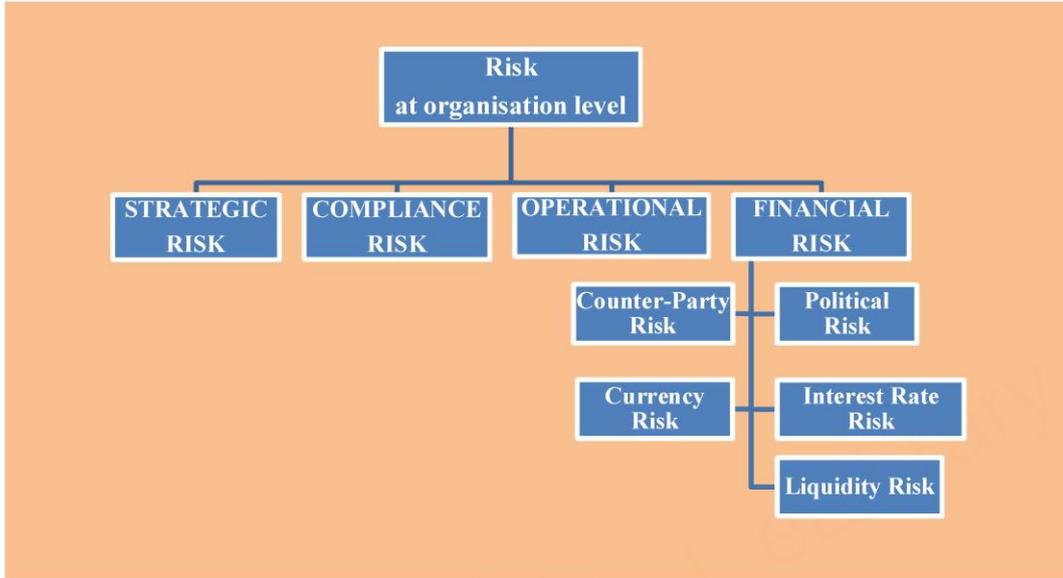
|  |   |
|--|---|
|  | <p>Management framework.</p> <ul style="list-style-type: none"><li><b>b) Environmental, Social and Governance (ESG) Financing</b> - With the evolving of the concept of ESG their role has been shifted from traditional financing to sustainability financing.</li><li><b>c) Mergers, acquisitions, and Corporate Restructuring</b> - Look after M&amp;A decisions. Since these are strategic decision, any error here can lead to collapse of the whole business.</li><li><b>d) Supply Chain</b> - CFOs needs to consider the financial viability of the supply chain as it directly affects the financial health of the company.</li></ul> |
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## Chapter 2 – Risk Management

### 2.1 Risk at organisation level



### 2.2 Risks Faced at organisational level

(May, 2022)

| STRATEGY RISK  | COMPLIANCE RISK  | OPERATIONAL RISK   | FINANCIAL RISK   |
|--|--|--|--|
| Risk that co. strategy may become less effective and it may struggle to achieve its goal.                      | Risk that co. may not be able to comply with the rules & regulations applicable to it such as companies law, SEBI regulations etc. | This relates to failure on part of the company to cope with day to day operational problems. | Risk due to unexpected changes in financial conditions such as prices, exchange rate, credit rating 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 financial loss |
| This may be due to technological changes, a new competitor entering the market, shifts in customer demand etc. | This risk increases when the company enters into a new line of business.   | Operational risk relates to <b>'People as well as Processes'</b> .                           |  |
| eg: Nokia failed to develop touchscreen mobile phones which enabled Samsung to become a market leader.         | eg: an automobile company venturing into sugar cane business.  | eg: an employee paying out Rs.1,00,00 from the account of the company instead of ₹10,000.    | Types of Financial Risk:<br>i. Counterparty risk<br>ii. Political risk<br>iii. Interest-rate risk<br>iv. Currency risk<br>v. Liquidity risk.   |

### 2.3 Types of Financial Risk.

**1. Counter Party Risk (CPR):** Risk That Counterparty May Not Honour Its Obligation. Eg: Non-Repayment Of Borrowing And Interest. Failure To Deliver The Goods For Which Payment is Already Made. **IT ALSO COVERS 'CREDIT RISK' I.E. DEFAULT BY COUNTERPARTY.**

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|  |   |
|--|---|
| (Dec., 2021)   |   |
| <b>Identification of CPR</b><br><br><b>FILAH</b>   | <ul style="list-style-type: none"> <li>• <b>Failure to obtain necessary resources to complete a project or transaction undertaken.</b></li> <li>• <b>Insolvent - 3rd party became Insolvent.</b></li> <li>• <b>Let down by Third party.</b></li> <li>• <b>Any regulatory restrictions from Govt.</b></li> <li>• <b>Hostile action of foreign government.</b></li> </ul>   |
| <b>Techniques to manage CPR</b><br><br><b>DESIL</b><br><br>(Dec., 2021)  | <ul style="list-style-type: none"> <li>• <b>Due diligence</b> - Carry due diligence before dealing with any 3rd party.</li> <li>• <b>Exposure</b> - Know your exposure limits.</li> <li>• <b>Single entity</b> - Do not overcommit to a single entity or group of connected entities.</li> <li>• <b>Insurance</b> - Use Insurance, performance guarantee etc.</li> <li>• <b>Limits</b> - Review credit limits regularly.</li> </ul> |
| <b>2. Political Risk (PR):</b> Risk faced by an overseas investor that the adverse actions of the govt. of host country may lead to huge losses.   |   |
| <b>What is Political Risk?</b><br><br><b>PR<sup>2</sup>ICE</b>   | <b>Definition of PR +</b><br>1. <b>Price</b> control of products.<br>2. <b>Restriction</b> on conversion of currency.<br>3. <b>Rationing</b> of remittance to home country.<br>4. <b>Invalidation</b> of patents.<br>5. <b>Confiscation</b> of overseas properties.<br>6. <b>(External) borrowings</b> - Restriction as to borrowings.  |
| <b>Assess Political Risk</b><br><br><b>MAP Ranking</b>   | 1. <b>Macro-economic conditions</b> - Evaluate<br>2. <b>Advice from embassies</b> of home country in the host country.<br>3. <b>Popularity of current govt.</b> & its stability.<br>4. <b>Political Ranking</b> - Refer Political rankings published by different business magazines.   |
| <b>Identify Political Risk</b><br><br><b>RIPE</b>  | 1. <b>Restriction on conversion of currency.</b><br>2. <b>Insistence on resident investors or labour.</b><br>3. <b>Price fixation of the products.</b><br>4. <b>Expropriation of foreign assets by local govt.</b>  |
| <b>Minimize / Mitigate PR</b><br><br><b>Local RFBG</b>   | 1. <b>Local Raw material and labour.</b><br>2. <b>Local Financing.</b><br>3. <b>Local Business partners</b> i.e. Enter into joint venture.<br>4. <b>Local Govt.</b> - Prior negotiations.   |
| <b>3. Currency Risk:</b> Risk that the cash flows of an entity may be adversely affected due to fluctuations in foreign exchange (Fx).<br><br>(Nov., 2023)   |   |
| <b>Parameters to Identify Currency Risk</b><br><br><b>War-NING</b>   | 1. <b>War, Coup, rebellion</b> etc.<br>2. <b>Natural calamity</b><br>3. <b>Inflation rate</b> - As per PPPT, it affects exchange rate.<br>4. <b>Nominal Interest rate</b> - as per IRPT, it affects exchange rate.<br>5. <b>Govt. Actions or Change in Govt.</b> - can have a deep impact on the currency of a country. Eg: Govt. attitude towards foreign investment.  |
| <b>4. Interest rate risk:</b> Risk that Interest rate may change which may affect the value of asset & liability of an entity. 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.                             |   |
| <b>How to Identify Interest rate risk?</b><br><br><b>SIE-RAM</b>   | 1. <b>Stock market changes</b><br>2. <b>Investment by foreign investors</b><br>3. <b>Economic Growth</b><br>4. <b>Release of Industrial Data</b><br>5. <b>Any action by Government</b> such as demonetization<br>6. <b>Monetary Policy of the Government.</b>   |
| <b>5. Liquidity Risk:</b> Risk that an entity to meet its liabilities whenever they become due. This risk mainly arises when organization is unable to generate adequate cash or there may be some mismatch in period of cash flow generation. This type of risk is more prevalent in banking business where there may be mismatch in maturities |   |

### 2.4 Evaluation of Financial Risk: Financial Risks from Different Stakeholder's viewpoint or **Financial Risk can be viewed from different perspective.**

| From Company's Viewpoint   | From Gov.'s Viewpoint  | From Stakeholder's Viewpoint   |
|--|--|--|
| If a company borrows excessively or lend to someone who defaults, then can be forced to go into liquidation. | <ul style="list-style-type: none"> <li>- Sovereign debt crisis</li> <li>- Failure of any bank</li> <li>- Down grading of any financial institution leading to spread of distrust among society.</li> <li>- Wilful defaulters.</li> </ul> | <p><b>EQUITY SHs</b> - View Debt-equity ratio as a risk. As they are least prioritized in the event of winding up of co.</p> <p><b>LENDERS</b> - View Debt-equity ratio as risk. As high debt = higher default risk.</p> |

### 2.5 Value at Risk (VAR)

**1. VAR:** VAR is a measure of risk of investment. It tells us about how much loss may be incurred on an investment under normal market conditions, in a particular period, say 1 day. First applied in 1992 in New York Stock Exchange, Introduced in 1990s.

It answers two basic questions;

- (i) **What is worst case scenario?**
- (ii) **What will be loss?**

|  |  |
|--|--|
| <p><b>Features of VaR</b></p> <p><b>Chandigarh To Shimla via Private Road</b></p>  | <p><b>i. Components:</b> VAR calculation is based on 3 components:</p> <ol style="list-style-type: none"> <li>a) Time Period</li> <li>b) Confidence Level</li> <li>c) Loss (in % or Rs.)</li> </ol> <p><b>ii. Time Horizon:</b> VAR can be calculated for different time horizons. Eg: 1-day, 10-days etc.</p> <p><b>iii. Statistical Method:</b> VaR is a statistical tool based on SD.</p> <p><b>iv. Probability:</b> Assuming the values are normally distributed, probability of maximum loss can be predicted.</p> <p><b>v. Risk Control:</b> Risk can be controlled by setting VaR limits.</p> <p><b>vi. Z Score:</b> Z Score when is multiplied with SD provides VaR.</p> |
| <p><b>Significance/ Application / Uses of VAR</b></p> <p><b>METAL</b></p> <p style="text-align: right;">(Nov., 2022)</p> | <p>VaR can be applied -</p> <ol style="list-style-type: none"> <li>a. to measure the <b>Maximum</b> possible loss on any portfolio.</li> <li>b. <b>Evaluate</b> performance of any operation.</li> <li>c. <b>Trading strategy</b> - management can decide the trading strategies using VaR.</li> <li>d. <b>ALM</b> - as a tool for Asset &amp; Liability Management especially in banks.</li> <li>e. <b>Limits</b> - to fix limits for individuals dealing in front office of a treasury department.</li> </ol>  |

### 2.6 Examples:

**E1. Suppose Mr. A hold worth ₹2.00 lakh shares of Z Ltd. Whose market price standard deviation is 2% per day. Assuming 252 trading days a year, determine maximum loss level over the period of 1 trading day and 10 trading day with 99% confidence level.**

**Sol.** Assuming share prices are normally distributed for level of 99%, the equivalent Z score from Normal table of Cumulative Area shall be **2.33**.

Volatility in terms of rupees shall be:

$$2\% \text{ of } ₹2 \text{ lakh} = ₹4000$$

The maximum loss for 1 day at 99% Confidence Level shall be:

$$₹4000 \times 2.33 = ₹9320,$$

and expected maximum loss for 10 trading days shall be:

$$\sqrt{10} \times ₹9320 = ₹29472.43$$

### 2.7 Other SM/MTP/RPT/Exam Questions:

|             |   |
|-------------|---|
| <b>Q.1</b>  | <b>Q1. Consider a portfolio consisting of a ₹200,00,000 investment in share ABC and a ₹200,00,000 investment in share PQR. The daily standard deviation of both shares is 1% and that the coefficient of correlation between them is 0.3. You are required to determine the 10-day 99% value at risk for the portfolio?</b>   |
|             | <b>(SM)</b>   |
| <b>Ans.</b> | <p>The standard deviation of the daily change in the investment in each asset is ₹2,00,000 i.e. 2 lakhs. The variance of the portfolio's daily change is</p> $V = 2^2 + 2^2 + 2 \times 0.3 \times 2 \times 2 = 10.4$ <p><math>\sigma</math> (Standard Deviation) = <math>\sqrt{10.4} = ₹3.22</math> lakhs</p> <p>Alternatively, it can also be computed as follows:</p> $= (1)^2(0.50)^2 + (1)^2(0.50)^2 + 2(1)(1)(0.3)(0.50)(0.50)$ $= 0.25 + 0.25 + 0.15 = 0.65\%$ <p><math>\sigma</math> (Standard Deviation) = <math>\sqrt{0.65} = 0.80623\%</math></p> <p><math>\sigma</math> (Standard Deviation) in Amount = ₹ 400 lakhs <math>\times</math> 0.80623% = ₹3.22 lakhs</p> <p>Accordingly, the standard deviation of the 10-day change is</p> $₹3.22 \text{ lakhs} \times \sqrt{10} = ₹10.18 \text{ lakh}$ <p>From the Normal Table we see that z score for 1% is 2.33. This means that 1% of a normal distribution lies more than 2.33 standard deviations below the mean. The 10-day 99 percent value at risk is therefore;</p> $2.33 \times ₹10.18 \text{ lakh} = ₹23.72 \text{ lakh}$ |

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## Chapter 3 – Security Analysis

### 3.1 Introduction

Let us say you want to invest in the shares. But there are thousands of stocks listed on stock market, how do you choose the stocks that are worth investing?

The simple answer is: You must analyse the stocks and choose the best one as per your judgement.

### 3.2 But how to analyse the stocks?

This is the most basic question that faces when he/she starts investing in the stock market. There are 2 disciplines of analysing the stocks;

| Fundamental analysis  | Technical analysis  |
|---|---|
| It assumes that the share price depends on the future dividends.  | It assumes that all the relevant information is included in the price-volume chart of that stock.   |
| The investor calculates the intrinsic value = PVCI  | Investors believe that the price trends are repetitive.   |
| <b>If price &gt; Value -&gt; Over-valued (sell it)</b>  | Therefore, if something happened before, it is likely to happen again.  |
| <b>If price &lt; Value -&gt; under-valued (buy it)</b>  |   |
| <b>Method:</b> 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. | <b>Method:</b> Predicts future prices and their direction using purely historical market data and information such as their Price Movements, Volume, Open Interest etc. |
| <b>Rule:</b> Prices of a share discounts everything.  | <b>Rule:</b> Price captures everything  |
| <b>Use:</b> For Long-Term Investing   | <b>Use:</b> For Short-term Investing  |

### 3.3 Fundamental Analysis

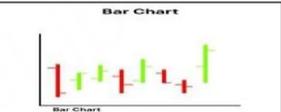
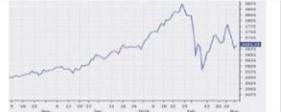
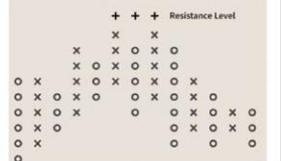
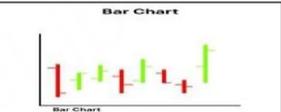
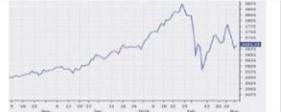
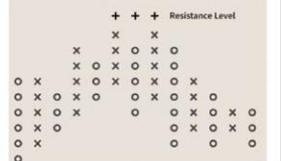
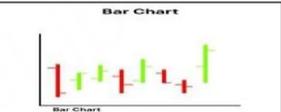
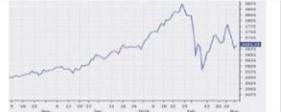
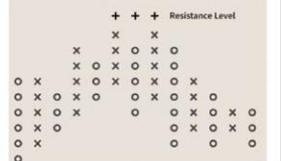
|            |   |
|------------|---|
| <b>Q.1</b> | <b>What are the different approaches of fundamental analysis?</b>   |
| Ans.       | <p><b>1. Constant Dividend Approach:</b> Under this approach company it is expected that the company will a constant dividend every year.</p> $P_0 = \frac{DPS}{(1+Ke)^1} + \frac{DPS}{(1+Ke)^2} + \frac{DPS}{(1+Ke)^3} + \dots \infty \quad \text{or} \quad P_0 = \frac{DPS}{Ke}$ <p><b>2. Dividend Growth Approach:</b> Practically, we observe that DPS changes due to change in company's earnings. This change in DPS can be captured by using Dividend growth model.</p> <p>Value as per Dividend growth approach = <math>\frac{DPS_1}{(1+Ke)^1} + \frac{DPS_1(1+g)}{(1+Ke)^2} + \frac{DPS_1(1+g)^2}{(1+Ke)^3} + \dots \infty</math></p> $\text{or } P_0 = \frac{DPS_1}{Ke-g} \quad \text{or} \quad \frac{DPS_0(1+g)}{Ke-g}$ <p><b>3. Earning Growth Model:</b> <math>P_0 = \frac{EPS_0(1+g)(1-b)}{Ke-g}</math> or <math>\frac{EPS_1(1-b)}{Ke-g}</math></p> |
| <b>Q.2</b> | <b>How is decision taken by a fundamental analyst?</b>  |
| Ans.       | If price > Value -> Over-valued (sell it)<br>If price < Value -> under-valued (buy it)  |
| <b>Q.3</b> | <b>What are the key areas / variables on which a fundamental analyst focuses? Or How to fundamentally analyse a security?</b>   |
| Ans.       | <b>The 3 main areas are:</b>  |

|            |  |
|------------|--|
|            | <p>1. Economic analysis<br/>2. Industry analysis<br/>3. Company analysis</p> <p>By analysing these three areas, an analyst can fundamentally analyse the share of a company.</p>   |
| <b>Q.4</b> | <b>What is economic analysis?</b>  |
| Ans.       | Economic analysis includes analysis of macro-economic factors such as<br>- Growth of different sectors of economy<br>- trends in people's income & expenditure<br>- Consumption patterns etc.  |
| <b>Q.5</b> | <b>What are the factors affecting economic analysis?</b>   |
| Ans.       | <ul style="list-style-type: none"> <li>• <b>Growth Rates of National Income and Related Measures:</b> The GDP growth rate of the economy affects industries and therefore affects the returns that an investor will earn from his investment.</li> <li>• <b>Growth Rates of Industrial Sector:</b> GDP growth rate can be further broken down into growth rates of various industries based on estimated demand of the product in that industry.</li> <li>• <b>Inflation:</b> The demand in some industries, particularly the consumer products industries, is significantly influenced by the inflation rate.</li> <li>• <b>Monsoon:</b> Because of the strong forward and backward linkages, monsoon is of great concern to investors.</li> </ul>  |
| <b>Q.6</b> | <b>What are the techniques used for economic analysis?</b>   |
| Ans.       | <p><b>a. Anticipatory Surveys:</b> They help investors to form an opinion about the future state of the economy. It incorporates expert opinion on construction activities, future spending habits of consumers etc.</p> <p><b>b. Barometer / Indicator Approach:</b> Various indicators are used to find out how the economy shall perform in the future. The indicators have been classified as under:</p> <ul style="list-style-type: none"> <li>➤ <b>Leading Indicators:</b> 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.</li> <li>➤ <b>Roughly Coincidental Indicators:</b> They reach their peaks (high) and troughs (low) at approximately the same time in the economy.</li> <li>➤ <b>Lagging Indicators:</b> They are time series data of variables that lag behind in their consequences vis-à-vis the economy. They reach their turning points after the economy has reached its own already.</li> </ul> <p><b>c. Economic Model Building Approach:</b> Modelling includes building a relationship between dependent &amp; independent variables. A model can be built to estimate the future GNP. This modelling exercise can include:</p> <ul style="list-style-type: none"> <li>➤ Estimating the various components of the GNP such as consumption, govt. expenditure etc.</li> <li>➤ Add the individual components to get GNP.</li> </ul> |
| <b>Q.7</b> | <b>What are the drawbacks of anticipatory surveys?</b>   |
| Ans.       | <p><b>a.</b> Survey results do not guarantee that intentions surveyed would materialize.</p> <p><b>b.</b> They are not regarded as forecasts per se, as there can be a consensus approach by the investor for exercising his opinion.</p>  |
| <b>Q.8</b> | <b>What is industry analysis?</b>  |
| Ans.       | When an economy grows, the different industries in the economy will grow at different rates. So, we need industry analysis to analyse how well a particular industry is expected to perform in future.   |
| <b>Q.9</b> | <b>What are the factors affecting industry analysis?</b>   |
| Ans.       | <p><b>a. Product Life-Cycle:</b> 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.</p> <p><b>b. Demand Supply Gap:</b> Excess supply reduces the profitability of the industry because of the decline in the unit price, while insufficient supply tends to improve the profitability because of higher unit price.</p> <p><b>c. Barriers to Entry:</b> Any industry with high profitability would attract fresh investments. The potential entrants to the industry may face different types of barrier to entry such as technological</p>  |

|             |   |
|-------------|---|
|             | <p>barrier, legal barrier etc.</p> <p><b>d. Government Attitude:</b> The government attitude towards an industry is crucial determinants of its prospects.</p> <p><b>e. State of Competition in the Industry:</b> Competition depends on the</p> <ul style="list-style-type: none"> <li>- Type of products manufactured viz. homogeneous or highly differentiated,</li> <li>- Type of industry the firm is placed viz. growth, cyclical, defensive or decline.</li> </ul> <p><b>f. Cost Conditions and Profitability:</b> The price of a share depends on profitability of the firm. Profitability depends on the state of competition in the industry, cost control measures adopted by the units etc.</p> <p><b>g. Technology and Research:</b> Technology is subject to change very fast leading to obsolescence. Industries which update themselves have a competitive advantage over others in terms of quality price etc.</p>   |
| <b>Q.10</b> | <b>What are the techniques used for industry analysis?</b>  |
| Ans.        | <ul style="list-style-type: none"> <li>• <b>Regression analysis:</b> Regression can be used to forecast the demand. Various inputs such as per capita income, price elasticity of demand are used as input in the regression analysis.</li> <li>• <b>Input – output analysis:</b> It reflects flow of goods &amp; services as goods proceed through raw material stage through final consumption. This is used to detect changing trends indicating growth/decline of industries.</li> </ul>  |
| <b>Q.11</b> | <b>What is company analysis?</b>  |
| Ans.        | Economic and industry analysis provides investors the information about the industry in which investment should be done. At this stage it is important to identify a good company within the chosen industry. This requires careful examination of the company's quantitative and qualitative fundamentals.   |
| <b>Q.12</b> | <b>What are the factors affecting company analysis?</b>   |
| Ans.        | <p><b>1. Net Worth &amp; Book Value:</b> Net worth = Equity share capital + free reserves – Intangible assets – c/f losses<br/>Book value per share = Total net worth / Number of shares</p> <p><b>2. Analysis of Sources and Uses of Funds (Fund flow analysis):</b> 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.</p> <p><b>3. Cross-Sectional and Time Series Analysis:</b> We Compare 2 firms, compare a firm against some benchmark figures for its industry. The techniques that are used are: common-sized statement, and financial ratio analysis.</p> <p><b>4. Size and Ranking:</b> Measures used to calculate co.'s rank within its industry-&gt; sales, net profits, ROI etc.</p> <p><b>5. Growth Record:</b> Growth in sales, net income and EPS of the co. in the past few years should be examined.</p> <p><b>6. Financial Analysis:</b> It includes calculating and analysing certain fundamental ratios. It helps in analysing the financial solvency and liquidity of co., the efficiency with which the funds are used.</p> <p><b>7. Quality of Management:</b> It has to be seen with reference to the experience, skills and integrity of management.</p> <p><b>8. Marketability of shares:</b> Shares of the co. must be liquid so that they can be bought and sold easily.</p> |
| <b>Q.13</b> | <b>What are the techniques used for company analysis?</b>   |
| Ans.        | <p><b>1. Correlation &amp; regression Analysis:</b> 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.</p> <p><b>2. Trend Analysis:</b> The relationship of one variable is tested over time using regression analysis. It gives an insight to the historical behaviour of the variable.</p> <p><b>3. Decision Tree Analysis:</b> 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.</p>   |

### 3.4 Technical Analysis

|             |  |
|-------------|--|
| <b>Q.14</b> | <b>What is technical analysis (TA)?</b>  |
| Ans.        | <p>Technical analysis is a study of the share price movements by analysing the price charts.</p> <ul style="list-style-type: none"> <li>• It assumes 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.</li> <li>• A technical analyst attempts to answer two basic questions:</li> </ul> |

|  |  |  |  |   |   |  |   |  |   |
|--|--|--|--|---|---|--|---|--|---|
|  | <ul style="list-style-type: none"> <li>➤ Is there a discernible trend in the prices?</li> <li>➤ If there is, then are there indications that the trend would reverse?</li> </ul> <p>• 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.</p>  |  |  |   |   |  |   |  |   |
| <b>Q.15</b>  | <b>What are the assumptions of technical analysis?</b>   |  |  |   |   |  |   |  |   |
| Ans.   | <ol style="list-style-type: none"> <li>1. The market value of stock depends on the demand and supply for a stock.</li> <li>2. The supply and demand are governed by several factors which can be rational or irrational.</li> <li>3. Stock prices generally move in trends which continue for a substantial period.</li> <li>4. 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 &amp; loss account.</li> </ol>  |  |  |   |   |  |   |  |   |
| <b>Q.16</b>  | <b>What are the principals of technical analysis? Or Describe briefly on which principles Technical Analysis is based.</b>   |  |  |   |   |  |   |  |   |
|  | <b>(Dec. 21 – 4 Marks)</b>   |  |  |   |   |  |   |  |   |
| Ans.   | <ol style="list-style-type: none"> <li>1. <b>The Market Discounts Everything:</b> Technical analysts generally have the view that a company's share price includes everything including the fundamentals of a company.</li> <li>2. <b>Price Moves in Trends:</b> 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.</li> <li>3. <b>History Tends to Repeat Itself:</b> Technical Analysts believe that history tends to repeat itself. Technical analysis uses chart patterns to analyze subsequent market movements to understand trends.</li> </ol>  |  |  |   |   |  |   |  |   |
| <b>Q.17</b>  | <b>Explain the types of charts used in technical analysis.</b>   |  |  |   |   |  |   |  |   |
| Ans.   | <p><b>The type of charts used in technical analysis are:</b></p> <table border="1"> <tr> <td> <p><b>1. Bar chart</b> – In a bar chart, a vertical line (bar) represents the lowest to highest price, with a short horizontal line indicating the closing price for the period.</p> </td> <td></td> </tr> <tr> <td> <p><b>2. Line chart</b> – The closing price for each period is plotted as a point. These points are joined by a line to form a chart. The period may be a day, a week, a month.</p> </td> <td></td> </tr> <tr> <td> <p><b>3. Point and figure chart</b> – These are more complex than line or bar charts. They are used to detect reversals in trends. 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 Rs.1, 2 or 0.50. The smaller the box size, the more sensitive would the chart be to price change.</p> </td> <td></td> </tr> <tr> <td> <p><b>4. Japanese candlestick chart</b> – Like Bar chart this chart also shows the same information i.e. Opening, Closing, Highest and Lowest prices of any stock on any day but this chart more visualizes the trend as change in the opening and closing prices is indicated by the colour of candlestick.</p> </td> <td></td> </tr> </table> | <p><b>1. Bar chart</b> – In a bar chart, a vertical line (bar) represents the lowest to highest price, with a short horizontal line indicating the closing price for the period.</p> |  | <p><b>2. Line chart</b> – The closing price for each period is plotted as a point. These points are joined by a line to form a chart. The period may be a day, a week, a month.</p> |  | <p><b>3. Point and figure chart</b> – These are more complex than line or bar charts. They are used to detect reversals in trends. 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 Rs.1, 2 or 0.50. The smaller the box size, the more sensitive would the chart be to price change.</p> |  | <p><b>4. Japanese candlestick chart</b> – Like Bar chart this chart also shows the same information i.e. Opening, Closing, Highest and Lowest prices of any stock on any day but this chart more visualizes the trend as change in the opening and closing prices is indicated by the colour of candlestick.</p> |  |
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| <b>Q.18</b>  | <b>What are support and resistance levels?</b>   |  |  |   |   |  |   |  |   |
| Ans.   | <ol style="list-style-type: none"> <li>1. When the index/price goes down from a peak, the peak becomes the resistance level.</li> <li>2. When it rebounds after reaching a trough subsequently, the lowest value reached becomes the support level.</li> <li>3. 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.</li> <li>4. A breach of these levels indicates a distinct departure from status quo, and an attempt to set newer levels.</li> </ol>   |  |  |   |   |  |   |  |   |
| <b>Q.19</b>  | <b>Explain some of the market indicators.</b>  |  |  |   |   |  |   |  |   |
| Ans.   | <ol style="list-style-type: none"> <li>1. <b>Breath Index or Market breath</b> – It is computed by dividing the net advances or declines in the market by the number of issues traded. <ul style="list-style-type: none"> <li>➤ If breath index supports the Dow Jones Averages. ➡ This is a sign of technical strength.</li> <li>➤ If breath index does not support the Dow Jones Averages. ➡ This is a sign of technical weakness (i.e. an expectation that market may move into direction opposite to the Dow Jones averages).</li> </ul> </li> </ol>   |  |  |   |   |  |   |  |   |

**2. Volume of Transactions** – Volume plays a key role in the stock market.

- If the price of a share/index is rising along with an increased volume. ➡ This means that a lot of people want to buy and there is unsatisfied demand in the market.
- Similarly, a falling market with increasing volume means. ➡ A lot of people want to exit the security. Therefore, signalling bear market.
- Volume is best used along with some other indicator (as volume tells the strength of that indicator)

**3. Confidence Index – CI** = Ratio of High-grade bond yields to Low-grade bond yields.

- Rising CI is expected to precede a rising stock market.
- A fall in CI is expected to precede a fall stock market.

**4. Relative Strength Index (RSI)** – The relative strength concept suggests that price of some securities rise relatively faster in a bull market or declines more slowly in a bear market than other securities i.e. some securities exhibit relative strength. There are several ways to measure the RSI like using ratios.

**5. 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. It is mainly used to predict tops in bull market and to predict reversals in individual securities.

**Q.20 Discuss some of the important price patterns used by technical analysts.**

|      |  |  |
|------|--|--|
| Ans. | <p><b>1. Channel:</b> 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.</p>   |  |
|      | <p><b>2. Wedge:</b> 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.</p>   |  |
|      | <p><b>3. Head and Shoulders:</b> It has a large lump (for head) in the middle of two smaller humps (for shoulders). 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.</p> |  |
|      | <p><b>4. Head and Shoulder Top Pattern:</b> This has a left shoulder, a head and a right shoulder. Such formation represents bearish development. If the price falls below the neck line (line drawn tangentially to the left and right shoulders) a price decline is expected. Hence it's a signal to sell.</p>   |  |
|      | <p><b>5. Inverse Head and Shoulder Pattern:</b> As the name indicates this formation, it is an inverse of head and shoulder top formation. Hence it reflects a bullish development. The price rise to above the neck line suggests price rise is imminent and a signal to purchase.</p>  |  |
|      | <p><b>6. Triangle or Coil Formation:</b> This formation represents a pattern of uncertainty and is difficult to predict in which way the price will break out.</p>   |  |

|                    |  |  |
|--------------------|--|--|
|                    | <p><b>7. Flags and Pennants Form:</b> This form signifies a phase after which the previous price trend is likely to continue.</p>  |  |
|                    | <p><b>8. Double Top Form:</b> This form represents a bearish development, signals that price is expected to fall.</p>  |  |
|                    | <p><b>9. Double Bottom Form:</b> This form represents bullish development signalling price is expected to rise.</p>  |  |
|                    | <p><b>10. Gap:</b> 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.</p>   |  |
| <p><b>Q.21</b></p> | <p><b>What are the arguments in favour of &amp; against technical analysis? Or Evaluate technical analysis?</b></p>  |  |
| <p>Ans.</p>        | <p><b>IN FAVOUR:</b></p> <ul style="list-style-type: none"> <li>➤ Under influence of crowd psychology, trends persist for some time. Tools of technical analysis help in identifying these trends early and help in investment decision making.</li> <li>➤ 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.</li> <li>➤ 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.</li> </ul> <p><b>AGAINST:</b></p> <ul style="list-style-type: none"> <li>➤ Most technical analysts are not able to offer a convincing explanation for the tools employed by them.</li> <li>➤ Empirical evidence in support of random walk hypothesis cast its shadow over usefulness of technical analysis.</li> <li>➤ By the time an up-trend or down trend maybe signalled by technical analysis it may already have taken place.</li> <li>➤ Ultimately technical analysis must be self- defeating proposition. With more and more people employing it, the value of such analysis tends to decline.</li> </ul> |  |
| <p><b>Q.22</b></p> | <p><b>What are the different theories on technical analysis?</b></p>   |  |
| <p>Ans.</p>        | <p><b>There are 3 theories under this topic.</b></p> <ol style="list-style-type: none"> <li>1. Elliot wave theory</li> <li>2. The Dow theory</li> <li>3. Random walk theory.</li> </ol>  |  |
| <p><b>Q.23</b></p> | <p><b>Explain the Elliot Wave Theory of technical analysis?</b></p>  |  |
| <p>Ans.</p>        | <ul style="list-style-type: none"> <li>➤ This theory was given by Ralph Elliot. He defined price movements in terms of waves.</li> <li>➤ These waves are resulted from buying and selling impulses emerging from the demand and supply pressures on the market.</li> <li>➤ <b>As per this theory, waves can be classified into Two Parts:</b> <ul style="list-style-type: none"> <li>• <b>IMPULSIVE PATTERNS (BASIC WAVES)</b> - 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.</li> <li>• <b>CORRECTIVE PATTERNS (REACTION WAVES)</b> - These waves are against the basic direction of the basic movement. Correction involves fall in case of bull market and rise in case of bear market.</li> </ul> </li> </ul>   |  |



**Q.24 What is the Dow Jones Theory?**

Ans. The Dow Theory (by Charles Dow) is one of the oldest and most famous technical theories. The Dow Theory is based upon the movements of two indices, constructed by Charles Dow,

- I. Dow Jones Industrial Average (DJIA)
- II. Dow Jones Transportation Average (DJTA).

The movements of the market are divided into three classifications, Primary movement, Secondary movement, Daily fluctuations (not exactly a part of Dow theory).

- ✓ **PRIMARY MOVEMENT**- It is the main trend of the market, which lasts from one year to 36 months or longer. This trend is commonly called bear or bull market.
  - ✓ **SECONDARY MOVEMENT** - It is shorter in duration than the primary movement, and is opposite in direction. It lasts from two weeks to a month or more.
  - ✓ **DAILY FLUCTUATIONS** - These are the narrow movements from day-to-day.
- Purpose of Dow theory ➡ The purpose is to determine where the market is and where it is going.

**What the theory states?**

➡ The theory states that if successively high and the successive lows are higher, then the market trend is up and a bullish market exists. Contrarily, if the successive high and successive lows are lower, then the direction of the market is down and a bearish market exists.



**The logic or the reason given by Charles Dow for the theory.**

Charles Dow proposed that the primary uptrend would have three moves up.

- **1st Move** - Caused by accumulation of shares by the far-sighted, knowledgeable investors.
- **2nd Move** - Caused by the arrival of the first reports of good earnings by corporations.
- **3rd & the last move** – Caused by widespread report of financial well-being of corporations. The third stage would also see rampant speculation in the market.

**Q.25 How should any investor time her investment decision as per Dow Jones theory?**

Ans. Ideally, an investment manager would like to purchase shares when they have reached lowest trough and sell them when they reach highest peak. However, in practice it is extremely difficult to identify when a share has reached its highest peak lowest trough. For this the investment manager should be able to identify exactly when the rising or falling trend has begun.

Dow Jones theory helps us in identification of this trend. It states that if successively high and the successive lows are higher, then the market trend is up and a bullish market exists. Contrarily, if the successive high and successive lows are lower, then the direction of the market is down and a

|             |   |
|-------------|---|
|             | bearish market exists.  |
| <b>Q.26</b> | <b>Explain the Random Walk Theory?</b>  |
| Ans.        | <ul style="list-style-type: none"> <li>➤ This theory 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 i.e. these are independent of each other.</li> <li>➤ In the layman's language it may be said that prices on the stock exchange behave exactly the way a drunk would behave while walking in a blind lane, i.e., up and down, with an unsteady way going in any direction he likes, bending on the side once and on the other side the second time.</li> </ul> <p><b>The supporters of this theory put out a simple argument, it follows that:</b></p> <ul style="list-style-type: none"> <li>➤ Prices of shares in stock market can never be predicted.</li> <li>➤ 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.</li> <li>➤ 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).</li> </ul> |
| <b>Q.27</b> | <b>What is efficient market Hypothesis/theory (EMH)?<br/>What conclusions from random walk theory led to evolution of Efficient market hypothesis?</b>  |
| Ans.        | <p><b>Efficient market Hypothesis:</b> As per this theory;</p> <ul style="list-style-type: none"> <li>➤ at any given time, all available price sensitive information is fully reflected in securities' prices. This theory implies that as every stock is appropriately priced based on available information, it is impossible to outperform the overall market through expert stock selection or market timing and the only way an investor can possibly obtain higher returns is by purchasing riskier investments.</li> </ul> <p><b>Conclusions from random walk theory:</b> As per this theory;</p> <ul style="list-style-type: none"> <li>➤ Information is freely and instantaneously available to all market participants.</li> <li>➤ 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.</li> <li>➤ Price change only response to new information that is unrelated to previous information &amp; therefore unpredictable.</li> </ul>   |
| <b>Q.28</b> | <b>Explain the different levels or forms Efficient Market Theory?</b>   |
| Ans.        | <ul style="list-style-type: none"> <li>➤ <b>Weak form efficiency:</b> Price reflects all information found in the record of past prices and volumes. This means that there is no relationship between the past and future price movements.</li> <li>➤ <b>Semi-Strong efficiency:</b> Price reflects not only all information found in the record of past prices and volumes but also, all other publicly available information.</li> <li>➤ <b>Strong form efficiency:</b> Price reflects all available information public as well as private.</li> </ul>  |
| <b>Q.29</b> | <b>Explain the Misconception about Efficient Market Theory?</b>   |
| Ans.        | <p><b>Myth 1 – As per EMH investors cannot outperform the market.</b><br/>EMH 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.</p> <p><b>Myth 2: As per EMH market prices always reflect fair value.</b><br/>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.</p> <p><b>Myth 3: The random movement of stock prices suggests that stock market is irrational.</b><br/>Randomness and irrationality are two different things, if investors are rational and competitive, price changes are bound to be random.</p>   |
| <b>Q.30</b> | <b>Explain the different challenges to Efficient Market Theory?</b>   |
| Ans.        | <ul style="list-style-type: none"> <li>➤ <b>Information inadequacy</b> – Information is neither freely available nor rapidly transmitted to all participants in the stock market. There is a calculated attempt by many companies to circulate misinformation.</li> <li>➤ <b>Limited information processing capabilities</b> – Human information processing capabilities are sharply limited.</li> <li>➤ <b>Irrational Behaviour</b> - The market participants can at times act irrationally. The effect of irrationality can be more profound when emotions enter into decision making.</li> <li>➤ <b>Monopolistic Influence</b> – In theory, market is regarded as highly competitive. No single buyer or seller can have undue influence over prices. But in practice, powerful institutions and big operators yield great influence over the market. The monopolistic power enjoyed by them diminishes the competitiveness of the market.</li> </ul>  |

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| <b>Q.31</b> | <p><b>Write a short note on Empirical Evidence on weak form of Efficient Market Theory.</b></p> <p style="text-align: center;"><b>OR</b></p> <p><b>Explain the types of tests that can be employed to empirically verify the weak form of Efficient Market Theory.</b></p> <p style="text-align: right;"><b>(RTP Nov., 2024)</b></p>   |
| Ans.        | <p><b>Three types of tests have been employed to empirically verify the weak form of Efficient Market Theory- Serial Correlation Test, Run Test and Filter Rule Test.</b></p> <ul style="list-style-type: none"> <li>➤ <b>Serial Correlation Test (to test randomness of stock price changes):</b> Price change in one period is correlated with price change in some other period. Price changes are considered to be serially independent. Several serial correlation studies were conducted employing different stocks, different time lags etc. but no significant serial correlation was found. These studies were carried on short term trends viz. daily, weekly, fortnightly and monthly and not in long term trends in stock prices as in such cases stock prices tend to move upwards.</li> <li>➤ <b>Run Test:</b> Given a series of stock price changes each price change is designated + if it represents an increase and – if it represents a decrease. The resulting series may be -, +, -, -, -, +, +, +. <ul style="list-style-type: none"> <li>✓ A run occurs when there is no difference between the sign of two changes. When the sign of change differs, the run ends and new run begins.</li> <li>✓ 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.</li> </ul> </li> <li>➤ <b>Filter Rules Test:</b> If 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.</li> </ul> |
| <b>Q.32</b> | <p><b>Write a short note on Empirical Evidence on Semi-Strong form of Efficient Market Theory</b></p>  |
| Ans.        | <p>Semi-strong form efficient market theory holds that stock prices adjust rapidly to all publicly available information. By using publicly available information, investors will not be able to earn above normal rates of return after considering the risk factor.</p> <p><b>Studies were conducted to test semi-strong form EMH, which lead to following queries:</b></p> <ul style="list-style-type: none"> <li>➤ Whether it was possible to earn on the above normal rate of return after adjustment for risk, using only publicly available information and how rapidly prices adjust to public announcement with regard to earnings, dividends, mergers, acquisitions, stock-splits?</li> </ul> <p><b>Several studies support the Semi-strong form Efficient Market Theory.</b></p> <ul style="list-style-type: none"> <li>➤ A study found that prior to the split; stock earns higher returns than predicted by any market model.</li> <li>➤ Another study divided the firms into two groups. First group consists of firms whose earnings increased in relation to the average corporate earnings while second group consists of firms whose earnings decreased in relation to the average corporate earnings. They found that before the announcement of earnings, stock in the first group earned positive abnormal returns while stock in the second group earned negative abnormal returns. After the announcement of earnings stock in both the groups earned normal returns.</li> </ul>  |
| <b>Q.33</b> | <p><b>Write a short note on Empirical Evidence on Strong form of Efficient Market Theory</b></p>   |
| Ans.        | <ul style="list-style-type: none"> <li>• To test this theory, the researcher analysed returns earned by certain groups viz. corporate insiders, specialists on stock exchanges, mutual fund managers who have access to internal information (not publicly available), or possess greater resource or ability to intensively analyse information in the public domain. They suggested that corporate insiders (having access to internal information) and stock exchange specialists (having monopolistic exposure) earn superior rate of return after adjustment of risk.</li> <li>• Mutual Fund managers do not on an average earn a superior rate of return. No scientific evidence has been formulated to indicate that investment performance of professionally managed portfolios as a group has been any better than that of randomly selected portfolios.</li> </ul>   |

|             |  |
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| <b>Q.34</b> | <b>Write a short on equity research.</b>   |
| Ans.        | <p><b>Equity Research:</b> analysing co.'s financial performance and other factors to determine whether the equity share of a company should be bought/sold or continued to be hold.</p> <ul style="list-style-type: none"> <li>➤ It can also be applied in any M&amp;A scenario to decide about swap ratio.</li> <li>➤ Equity Research Analysts = People performing equity research.</li> <li>➤ Earlier, equity research was paper based. But now analysts use various online tools.</li> </ul> |

### 3.5 SM/MTP/RTP/Exam Questions

**Q1. Closing values of NSE Nifty from 6<sup>th</sup> to 17<sup>th</sup> day of the month of January of the year 2020 were as follows:**

| Days | Date | Day       | Sensex     |
|------|------|-----------|------------|
| 1    | 6    | THURSDAY  | 14522      |
| 2    | 7    | FRIDAY    | 14925      |
| 3    | 8    | SATURDAY  | No Trading |
| 4    | 9    | SUNDAY    | No Trading |
| 5    | 10   | MONDAY    | 15222      |
| 6    | 11   | TUESDAY   | 16000      |
| 7    | 12   | WEDNESDAY | 16400      |
| 8    | 13   | THURSDAY  | 17000      |
| 9    | 14   | FRIDAY    | No Trading |
| 10   | 15   | SATURDAY  | No Trading |
| 11   | 16   | SUNDAY    | No Trading |
| 12   | 17   | MONDAY    | 18000      |

Calculate Exponential Moving Average (EMA) of Sensex during the above period. The previous day exponential moving average of Sensex can be assumed as 15,000. The value of exponent for 31 days EMA is 0.062.

Give detailed analysis on the basis of your calculations.

**Sol.**

**EMA = EMA for Previous Day + {(Index Value Today – EMA for Previous Day) x Value of Exponent}**

| Date | 1<br>Sensex | 2<br>EMA for Previous Day | 3<br>1-2 | 4<br>3x0.062 | 5<br>EMA = 2 + 4 |
|------|-------------|---------------------------|----------|--------------|------------------|
| 6    | 14522       | 15000                     | (478)    | (29.636)     | 14970.364        |
| 7    | 14925       | 14970.364                 | (45.364) | (2.812)      | 14967.55         |
| 10   | 15222       | 14967.55                  | 254.45   | 15.776       | 14983.32         |
| 11   | 16000       | 14983.32                  | 1016.68  | 63.034       | 15046.354        |
| 12   | 16400       | 15046.354                 | 1353.646 | 83.926       | 15130.28         |
| 13   | 17000       | 15130.28                  | 1869.72  | 115.922      | 15246.202        |
| 17   | 18000       | 15246.202                 | 2753.798 | 170.735      | 15416.937        |

**Conclusion** – The market is bullish. The market is likely to remain bullish for short term to medium term if other factors remain the same. On the basis of this indicator (EMA) the investors/brokers can take long position.

**Q2. The closing value of a Stock Market Index for the month of October, 2007 is given below:**

| Date Closing | Sensex |
|--------------|--------|
| 01.10.07     | 2800   |
| 03.10.07     | 2780   |
| 04.10.07     | 2795   |
| 05.10.07     | 2830   |
| 08.10.07     | 2760   |

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|          |      |
|----------|------|
| 09.10.07 | 2790 |
| 10.10.07 | 2880 |
| 11.10.07 | 2960 |
| 12.10.07 | 2990 |
| 15.10.07 | 3200 |
| 16.10.07 | 3300 |
| 17.10.07 | 3450 |
| 19.10.07 | 3360 |
| 22.10.07 | 3290 |
| 23.10.07 | 3360 |
| 24.10.07 | 3340 |
| 25.10.07 | 3290 |
| 29.10.07 | 3240 |
| 30.10.07 | 3140 |
| 31.10.07 | 3260 |

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

Value of t at 5% is 2.101 at 18 degrees of freedom  
Value of t at 10% is 1.734 at 18 degrees of freedom

**Sol.**

**EMA = EMA for Previous Day  $\pm$  {(Index Value Today – EMA for Previous Day) x Value of Exponent}**

| Date     | Closing Index | Sign of Price Charge |
|----------|---------------|----------------------|
| 01.10.07 | 2800          |                      |
| 03.10.07 | 2780          | -                    |
| 04.10.07 | 2795          | +                    |
| 05.10.07 | 2830          | +                    |
| 08.10.07 | 2760          | -                    |
| 09.10.07 | 2790          | +                    |
| 10.10.07 | 2880          | +                    |
| 11.10.07 | 2960          | +                    |
| 12.10.07 | 2990          | +                    |
| 15.10.07 | 3200          | +                    |
| 16.10.07 | 3300          | +                    |
| 17.10.07 | 3450          | +                    |
| 19.10.07 | 3360          | -                    |
| 22.10.07 | 3290          | -                    |
| 23.10.07 | 3360          | +                    |
| 24.10.07 | 3340          | -                    |
| 25.10.07 | 3290          | -                    |
| 29.10.07 | 3240          | -                    |
| 30.10.07 | 3140          | -                    |
| 31.10.07 | 3260          | +                    |

Total of sign of price changes (r) = 8

No of Positive changes = n1 = 11

No. of Negative changes = n2 = 8

$$\mu_r = \frac{2n_1n_2}{n_1+n_2} + 1 = \frac{2 \times 11 \times 8}{11+8} + 1 = 176/19 + 1 = 10.26$$

$$\begin{aligned}\sigma &= \frac{\sqrt{2n_1n_2(2n_1n_2 - n_1 - n_2)}}{\sqrt{(n_1 + n_2)^2 (n_1 + n_2 - 1)}} \\ &= \frac{\sqrt{(2 \times 11 \times 8)(2 \times 11 \times 8 - 11 - 8)}}{\sqrt{(11 + 8)^2 (11 + 8 - 1)}} \\ &= \frac{\sqrt{176 \times 157}}{\sqrt{(19)^2 (18)}} \\ &= \sqrt{4.252} = 2.06\end{aligned}$$

Since too few runs in the case would indicate that the movement of prices is not random. We employ a two-tailed test the randomness of prices.

Test at 5% level of significance at 18 degrees of freedom using t- table

The lower limit  
 $= \mu - t \times \sigma = 10.26 - 2.101 \times 2.06 = 5.932$

Upper limit  
 $= \mu + t \times \sigma = 10.26 + 2.101 \times 2.06 = 14.588$

At 10% level of significance at 18 degrees of freedom

Lower limit  
 $= 10.26 - 1.734 \times 2.06 = 6.688$

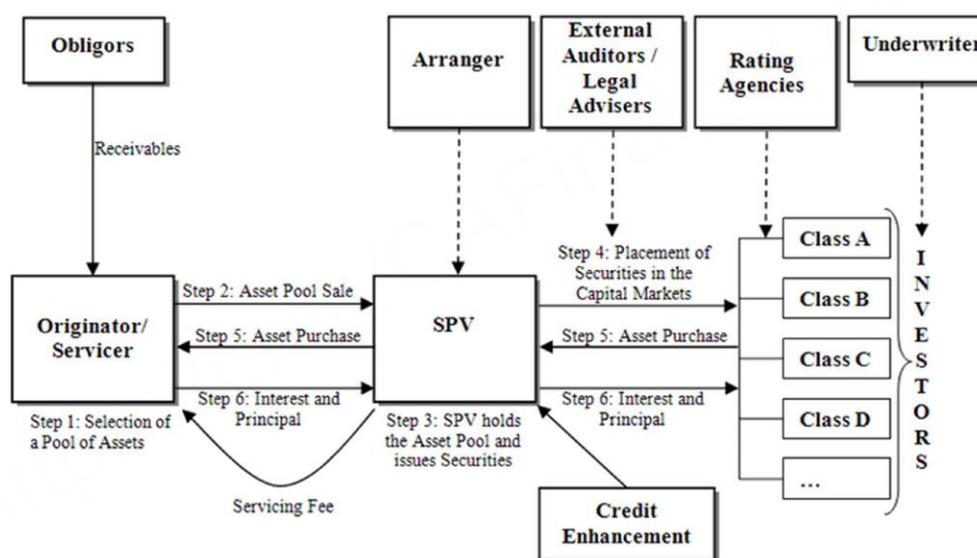
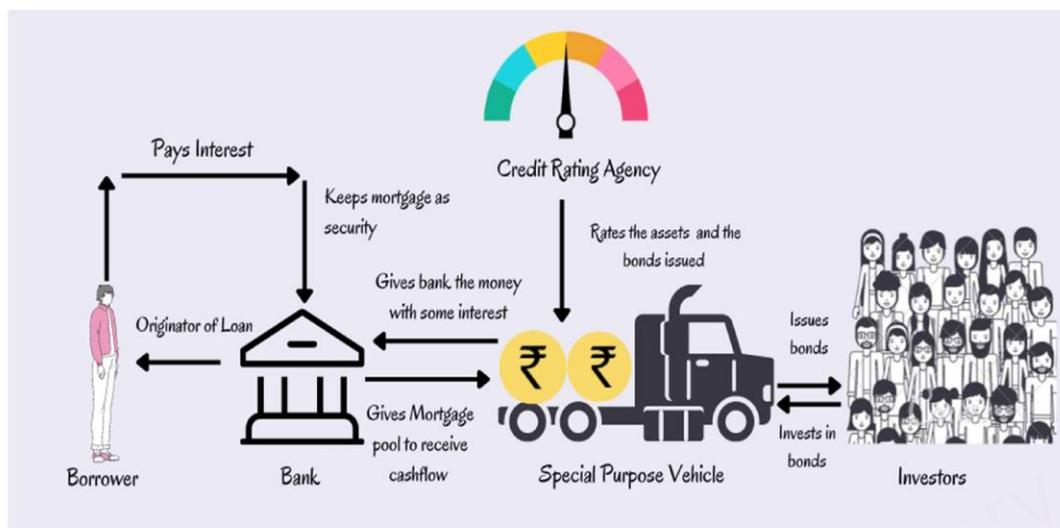
Upper limit  
 $= 10.26 + 1.734 \times 2.06 = 13.832$

As seen r lies between these limits. Hence, the market exhibits weak form of efficiency.

\*For a sample of size n, the t distribution will have n-1 degrees of freedom.

\*\*\*\*\*

**Chapter 4 – Securitization**



**Fig. 2. Basic securitization process**

**4.1 Securitization**

- Securitization is the process of re-bundling of illiquid assets into marketable securities. These assets can be automobile loans, credit card receivables, residential mortgages or any other form of future receivables.
- As per RBI, Securitization = Transactions where credit risks in assets are redistributed by repackaging them into tradable securities.

**4.2 Mechanics of securitization/ Steps involved in securitization/ Process of securitization**

|               |                                   |   |
|---------------|-----------------------------------|---|
| <b>Step 1</b> | <b>Creation of Pool of Assets</b> | Segregating assets backed by similar types of mortgages.      |
| <b>Step 2</b> | <b>Transfer To SPV</b>            | The pooled assets are transferred to SPV.                     |
| <b>Step 3</b> | <b>Sale of Securitized Papers</b> | SPV designs instruments from the pool of assets. These can be |

|               |                                     |  |
|---------------|-------------------------------------|--|
|               |                                     | PTS (Pass Through Securities) or PTC (Pay Through Certificates).   |
| <b>Step 4</b> | <b>Administration of Assets</b>     | It may be subcontracted back to originator, which collects principal & interest and transfers it to SPV. |
| <b>Step 5</b> | <b>Repayment of Funds</b>           | SPV will pay interest & repay principal to the investors.  |
| <b>Step 6</b> | <b>Credit Rating of Instruments</b> | Credit rating may be done to assess the risk of issuer.  |
| <b>Step 7</b> | <b>Recourse to Originator</b>       | If assets are securitized on recourse basis, assets will go back to originator in case of default.       |

### 4.3 Participants in Securitization

#### A. Primary Participants

|  |   |
|--|---|
| <b>1. Originator / Initiator / Securitizer</b> | <ul style="list-style-type: none"> <li>➤ It sells its assets books to SPV.</li> <li>➤ It receives the funds generated through the sale of such assets.</li> </ul>   |
| <b>2. Special Purpose Vehicle (SPV)</b>        | <ul style="list-style-type: none"> <li>➤ It is created especially for securitization only.</li> <li>➤ SPV BUYS the assets from originator and hence it holds the LEGAL TITLE of these assets.</li> <li>➤ Main objective of creating SPV is to remove the asset from the Balance Sheet of Originator.</li> <li>➤ It issues securities (called Asset Based Securities or Mortgage Based Securities) to the investors.</li> <li>➤ It can be in form of co., firm, society or trust.</li> </ul> |
| <b>3. Investors</b>                            | <p><b>Buyers of securitized papers.</b></p> <ul style="list-style-type: none"> <li>➤ Investors can be RETAIL investors or INSTITUTIONAL investors (mutual funds, provident funds etc.)</li> <li>➤ They receive their money back in the form of interest and principal as per the terms agreed.</li> </ul>   |

#### B. Secondary Participants

|   |   |
|---|---|
| <b>1. Obligor</b>   | <ul style="list-style-type: none"> <li>➤ They are the parties who owe money to the Co. &amp; are assets in Balance Sheet of Originator.</li> <li>➤ ii) The amount due from the obligor is transferred to SPV</li> </ul>   |
| <b>2. Structurer / Arranger</b>   | <ul style="list-style-type: none"> <li>➤ It brings together the originator, investors, other parties to securitization deal.</li> <li>➤ Normally, these are investment bankers.</li> <li>➤ Ensures that deal meets all legal, regulatory etc. requirements.</li> </ul>  |
| <b>3. Trustee OR Agent:</b>   | <ul style="list-style-type: none"> <li>➤ They oversee that all parties to the deal perform in the true spirit of terms of agreement.</li> <li>➤ Normally, it takes care of interest of investors.</li> </ul>  |
| <b>4. Administrator / Receiving &amp; Paying agent (RPA)/ Servicer:</b> | <ul style="list-style-type: none"> <li>➤ It collects the payment due from obligor(s) and passes it to SPV.</li> <li>➤ It also follow-up with defaulting borrower.</li> <li>➤ Generally, originator or its affiliates acts as servicer.</li> </ul>   |
| <b>5. Rating Agency</b>   | <p>Assets have to be assessed in terms of its credit quality. Rating agency assesses:</p> <ul style="list-style-type: none"> <li>- Credit quality of obligors.</li> <li>- Mechanism for timely payment of interest &amp; principle</li> <li>- Strength of legal framework.</li> </ul>                         |
| <b>6. Credit Enhancer:</b>  | <ul style="list-style-type: none"> <li>➤ Investors are directly exposed to the performance of underlying assets. So, they seek credit enhancement.</li> <li>➤ It may be provided by originator (eg: over collateralization or cash collateral) or by a 3rd party like bank (eg: letter of credit).</li> </ul> |

### 4.4 Pricing of Securitized Instruments or

**Explain the pricing of the securitized instruments.**

**(Dec. 21 – 4 Marks)**

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

|                                |                                      |
|--------------------------------|--------------------------------------|
| <b>From originator's Point</b> | <b>From Investor's point of view</b> |
|--------------------------------|--------------------------------------|

|  |  |
|--|--|
| <p>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.</p> | <p><b>Student note only -&gt; Price = PV of expected future cash flows</b><br/>Yield = Yield of comparable security with same credit quality &amp; maturity.<br/><b>Alternatively,</b> yield = yield of marketable securities, but some adjustment to spread is needed in this case because of difference in credit quality.</p> |
|--|--|

**4.5 Securitization Instruments or Instruments Created Out of Securitization or Difference between PTS & PTC**

(SMQ), (May, 2023)

| Pass Through Certificates (PTC)  | Pay Through Securities (PTS)  | Stripped Securities   |
|--|---|---|
| <ul style="list-style-type: none"> <li>➤ Originator transfers the entire receipt of cash in the form of interest or principal repayment from the assets sold.</li> <li>➤ Thus, these securities represent direct claim of the investors on the securitized assets.</li> <li>➤ Since it is a direct route, any prepayment of principal is also proportionately distributed among the securities holders.</li> <li>➤ Due to these characteristics on completion of securitization by the final payment of assets, all the securities are terminated simultaneously.</li> </ul> | <p>In PTS, SPV can structure different tranches of debt securities which can carry different levels of risk &amp; reward.</p> <p>This structure permits the SPV to:</p> <ul style="list-style-type: none"> <li>➤ Issue several debt tranches with varying maturities.</li> <li>➤ De-link the cash inflows (from underlying assets) from the cash outflows (on the issued securities).</li> <li>➤ Reinvest surplus funds for short term in case of early retirement of receivables.</li> </ul> | <p>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.</p> |

| WHEN INTEREST RATE INCREASES  | WHEN INTEREST RATE FALLS   |
|---|--|
| <ul style="list-style-type: none"> <li>➤ Borrowers will prefer to postpone the payment on cheaper loans (i.e. Principal repayments will be received later than expected).</li> <li>➤ PO will fall.</li> <li>➤ But value of IO increases as more interest is collected on borrowings.</li> </ul> | <ul style="list-style-type: none"> <li>➤ Borrowers will repay existing loans faster &amp; take new loans at reduced rate. (i.e. Principal repayments will be received earlier than expected.)</li> <li>➤ Value of PO will rise.</li> <li>➤ Due to faster principal repayments, lesser interest will be collected. IO will fall.</li> </ul> |

**4.6 Features of securitization**

(Nov., 2022)

| <b>CREATE BUNDLE OF TOOL &amp; STRUCTURE TRE HOME</b> |  |   |
|---|--|---|
| 1.  | <b>Creation of Financial Instruments</b> | The process of securities can be viewed as process of creation of additional financial product of securities in market backed by collaterals                                      |
| 2.  | <b>Bundling and Unbundling</b>           | When all the assets are combined in one pool it is bundling and when these are broken into instruments of fixed denomination it is unbundling.                                    |
| 3.  | <b>Tool of Risk Management</b>           | In case of assets are securitized on non-recourse basis, then securitization process acts as risk management as the risk of default is shifted.                                   |
| 4.  | <b>Structured Finance</b>                | In the process of securitization, financial instruments are tailor structured to meet the risk return trade of profile of investor.   |
| 5.  | <b>Trenching</b>                         | Portfolios of different asset are split into several parts based on risk and return they carry called ' <b>tranche</b> '. Each Trench carries a different level of risk & return. |
| 6.  | <b>Homogeneity</b>                       | Under each tranche the securities issued are of homogenous nature even meant for small investors who can afford to invest in small amounts.                                       |

**4.7 Benefits of securitization**

## Advanced Financial Management By Avnish Vats

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(May, 2022)

| From the angle of originator<br>(entity which sells assets collectively to Special Purpose Vehicle) |  |  | From the angle of Investors |                                   |  |
|---|--|--|-----------------------------|-----------------------------------|--|
| 1.  | <b>More Focus on main business</b>       | By transferring the assets the entity could concentrate more on core business as servicing of loan is transferred to SPV.                              | 1.                          | <b>Diversification of Risk</b>    | Purchase of securities backed by different types of assets results in diversification of portfolio leading to risk reduction.  |
| 2.  | <b>Off Balance Sheet Financing</b>       | When receivables are securitized it releases a portion of capital tied up in these assets resulting in off Balance Sheet financing.                    | 2.                          | <b>Regulatory requirement</b>     | Acquisition of asset backed belonging to a particular industry say micro industry helps banks to meet regulatory requirement of investment in that industry.   |
| 3.  | <b>Helps to improve financial Ratios</b> | Especially in case of Financial Institutions and Banks, it helps to manage Capital – To-Weighted Asset Ratio effectively.                              | 3.                          | <b>Protection against default</b> | In case of recourse arrangement if there is any default by any third party then originator shall make good the amount. Moreover, there can be insurance arrangement for compensation for any such default. |
| 4.  | <b>Reduced Borrowing Cost</b>            | Credit rating of securitized instruments can be increased by using credit enhancement techniques. This results in lower borrowing cost for originator. |                             |                                   |  |

### 4.8 Securitization in INDIA

| Industry Action  | Govt. Action  |
|--|---|
| <ul style="list-style-type: none"> <li>➤ Citi Bank pioneered the concept of securitization in India by bundling auto loans into securitized instruments. After that many organizations securitized their receivables.</li> <li>➤ Securitization in Indian Market is dominated by a few players e.g. ICICI Bank, HDFC Bank etc.</li> <li>➤ CRISIL estimates that securitization market volume may reach Rs.1.9 Trillion.</li> <li>➤ Securitization may become a key funding source for non-banks as well as for banks.</li> </ul> | <ul style="list-style-type: none"> <li>➤ 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 the Court.</li> <li>➤ In order to further enhance the investor base in securitized debts, SEBI has allowed FPIs to invest in securitized debt of unlisted companies up to a certain limit.</li> </ul> |

### 4.9 Problems of Securitization in INDIA

(SMQ), (Nov., 2023)

| DEBT TALES                            |   |
|---------------------------------------|---|
| <b>Inadequate Debt Market</b>         | ✓ Lack of existence of a well-developed debt market in India is another obstacle.   |
| <b>Taxation</b>                       | <ul style="list-style-type: none"> <li>✓ In the absence of any specific provision relating to securitized instruments in Income Tax Act experts' opinion differ a lot.</li> <li>✓ Some opine that SPV should be taxed IN REPRESENTATIVE CAPACITY.</li> <li>✓ Others say that investors should be taxed on their share of income.</li> </ul> |
| <b>Accounting</b>                     | <ul style="list-style-type: none"> <li>✓ Although securitization is slated to be an off-balance sheet instrument but in true sense receivables are removed from originator's balance sheet.</li> <li>✓ Problem arises especially when assets are transferred without recourse.</li> </ul>   |
| <b>Lack of standardization</b>        | ✓ Every originator following his own format for documentation and administration.   |
| <b>Not Effective Foreclosure laws</b> | <ul style="list-style-type: none"> <li>✓ Foreclosure laws are not supportive to lending institutions.</li> <li>✓ Lenders face difficulty in event of default by borrower.</li> <li>✓ This makes securitized instruments less attractive.</li> </ul>   |
| <b>Stamp Duty</b>                     | <ul style="list-style-type: none"> <li>✓ Under Transfer of Property Act, 1882, a mortgage debt stamp duty is charged.</li> <li>✓ This even goes upto 12% in some states of India.</li> </ul>  |

### 4.10 Risks in Securitization

| MLC   |  |  |                    |                    |   |  |  |  |  |
|---|--|--|--------------------|--------------------|---|--|--|--|--|
| <b>Market risks</b>   | It include risks due to market-related factors like; <b>PIM</b>  |  |                    |                    |   |  |  |  |  |
|   | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #d9e1f2;"> <th style="padding: 2px;">Prepayment Risk</th> <th style="padding: 2px;">Interest Rate risk</th> <th style="padding: 2px;">Macroeconomic Risk</th> </tr> </thead> <tbody> <tr> <td style="padding: 2px;"> <ul style="list-style-type: none"> <li>▪ Reduced interest rates increases prepayment of retail loans, resulting in reinvestment risk for investors.</li> <li>▪ As investors may not be able to reinvest the received amount at the same yield.</li> </ul> </td> <td style="padding: 2px;"> <ul style="list-style-type: none"> <li>▪ This risk is prominent where the loans are based on floating rate and investor pay-outs are based on a fixed rate or vice versa.</li> <li>▪ It results in an interest rate mismatch where pool of cash inflow may not be sufficient to meet investor pay-outs.</li> <li>▪ Interest rate swaps can be used to hedge this.</li> </ul> </td> <td style="padding: 2px;"> <ul style="list-style-type: none"> <li>▪ Macroeconomic factors, such as industry downturns or adverse price movements can affect loan performance.</li> <li>▪ Ex – If transport industry declines, then commercial vehicle (CV) owners may default on CV loans due to reduced earnings or If price of new CV falls substantially, then existing borrowers may wilfully default on the loan.</li> </ul> </td> </tr> </tbody> </table> | Prepayment Risk  | Interest Rate risk | Macroeconomic Risk | <ul style="list-style-type: none"> <li>▪ Reduced interest rates increases prepayment of retail loans, resulting in reinvestment risk for investors.</li> <li>▪ As investors may not be able to reinvest the received amount at the same yield.</li> </ul> | <ul style="list-style-type: none"> <li>▪ This risk is prominent where the loans are based on floating rate and investor pay-outs are based on a fixed rate or vice versa.</li> <li>▪ It results in an interest rate mismatch where pool of cash inflow may not be sufficient to meet investor pay-outs.</li> <li>▪ Interest rate swaps can be used to hedge this.</li> </ul> | <ul style="list-style-type: none"> <li>▪ Macroeconomic factors, such as industry downturns or adverse price movements can affect loan performance.</li> <li>▪ Ex – If transport industry declines, then commercial vehicle (CV) owners may default on CV loans due to reduced earnings or If price of new CV falls substantially, then existing borrowers may wilfully default on the loan.</li> </ul> |  |  |
| Prepayment Risk   | Interest Rate risk   | Macroeconomic Risk   |                    |                    |   |  |  |  |  |
| <ul style="list-style-type: none"> <li>▪ Reduced interest rates increases prepayment of retail loans, resulting in reinvestment risk for investors.</li> <li>▪ As investors may not be able to reinvest the received amount at the same yield.</li> </ul> | <ul style="list-style-type: none"> <li>▪ This risk is prominent where the loans are based on floating rate and investor pay-outs are based on a fixed rate or vice versa.</li> <li>▪ It results in an interest rate mismatch where pool of cash inflow may not be sufficient to meet investor pay-outs.</li> <li>▪ Interest rate swaps can be used to hedge this.</li> </ul>   | <ul style="list-style-type: none"> <li>▪ Macroeconomic factors, such as industry downturns or adverse price movements can affect loan performance.</li> <li>▪ Ex – If transport industry declines, then commercial vehicle (CV) owners may default on CV loans due to reduced earnings or If price of new CV falls substantially, then existing borrowers may wilfully default on the loan.</li> </ul> |                    |                    |   |  |  |  |  |
| <b>Legal risks</b>  | Securitization is a recently developed concept (in India) and there is an absence of statutory provisions or judicial precedents. So any legal dispute can result in uncertain cash flows for investors.   |  |                    |                    |   |  |  |  |  |
| <b>Credit Counterparty risk</b>   | Risk of bankruptcy and non-performance of servicer is the prime risk of investor.  |  |                    |                    |   |  |  |  |  |

#### 4.11 Block-Chain (or DLT)

|                                    |  |
|------------------------------------|--|
| <b>Block-Chain (DLT)</b>           | <p>Block-chain or Distributed Ledger Technology (DLT) is a Peer-to-peer, decentralized open ledger of transaction system with no trusted 3rd parties in between. A block chain generally uses a chain of blocks, with each block representing the digital information stored in public database (“the chain”).</p> <p style="text-align: center;"><b>‘PANI’</b></p> <ul style="list-style-type: none"> <li>✓ Every entry in this database is <b>Permanent</b>.</li> <li>✓ It is an <b>Append-only</b> database which cannot be changed or altered.</li> <li>✓ Any change in a transaction is recorded as a <b>New transaction</b>.</li> <li>✓ All transactions are fully <b>Irreversible</b>.</li> </ul>   |
| <b>Tokenization (May, 2024)</b>    | <p>Tokenization is a process of converting tangible and intangible assets into block-chain tokens. It can be effective in conventional industries like real estate, artwork etc.</p> <p>Similarity b/w Securitization &amp; Tokenization</p> <p>Tokenization = Attempt to convert illiquid assets into a liquid and tradable product. (Similar to Securitization).</p> <ol style="list-style-type: none"> <li>i. <b>Liquidity</b> - Both inject liquidity in the market for otherwise illiquid assets.</li> <li>ii. <b>Diversification</b> - Both help investors to diversify their portfolio thus managing risk and optimizing returns.</li> <li>iii. <b>Trading</b> - Both are tradable &amp; help to generate wealth.</li> <li>iv. <b>New Opportunities</b> - Both provide opportunities for financial institutions to earn income through fees.</li> </ol> |
| <b>Applications of Block-chain</b> | <ol style="list-style-type: none"> <li>a. <b>Government:</b> It can be used where technical decentralization is necessary along with governance of govt like land registration, vehicle registration, e-voting etc. Blockchain improves transparency &amp; provides a better way to monitor and audit the transactions in these systems.</li> <li>b. <b>Economic Forecasts:</b> We can use blockchain to make financial &amp; economic forecasts based on decentralized prediction markets, decentralized voting, and stock trading.</li> <li>c. <b>Financial Services:</b> It can be used to provide a transaction log of any physical or digital asset such as laptops, automobiles, real estate, etc. (i.e. for Automated trade</li> </ol>  |

|  |  |
|--|--|
|  | <p>lifecycle).</p> <p>d. <b>Healthcare:</b> Blockchain provides secure sharing of data in healthcare industry by increasing the privacy and interoperability of the data by eliminating the interference of third party.</p> <p>e. <b>Travel Industry:</b> It can be used for money transactions, storing passports/other important documents, reservations, travel insurance etc.</p>   |
| <p><b>Risks Associated with Block-chain / DLT (PURI)</b></p> | <p>a. <b>Process Controls:</b> Development and maintenance of process controls can be challenging due to absence of any central authority. So, users of public block-chains may find it difficult to understand the IT controls implemented and its effectiveness.</p> <p>b. <b>Updates:</b> As block-chain involves humongous data updates, the risk of information overload could challenge the required monitoring. Further, finding competent people to design and perform effective monitoring controls may be difficult.</p> <p>c. <b>Reliability:</b> Reliability of financial transactions is dependent on the underlying technology. If the underlying consensus mechanism is tampered with, then it could render the financial information to be inaccurate and unreliable.</p> <p>d. <b>In-Charge:</b> Different members may have different risk appetite that may lead to conflict while designing monitoring controls. Since no one party is in charge, it needs to be defined who is responsible and accountable for managing risks in the blockchain.</p> |

\*\*\*\*\*

## Chapter 5 – Start-up Finance

### 5.1 Some Innovative ways to Finance a start-up or Non-Bank finance for start-ups

(SMQ), (May, 2023)

|    |                                      |   |
|----|--------------------------------------|---|
| 1. | <b>Personal financing</b>            | Else investors may not put their money  |
| 2. | <b>Personal Credit lines</b>         | Eg. Credit cards. Banks will provide this based on cash flow position.  |
| 3. | <b>Purchase order financing</b>      | Advance funds required to complete an order. Start-up can earn profit on the order and can then pay back the Purchase order financing co. |
| 4. | <b>Peer-to-peer lending</b>          | People form small & ethnic business groups that support each other.   |
| 5. | <b>Family &amp; Friends</b>          | Loans should be in writing (eg: promissory notes).  |
| 6. | <b>Factoring Accounts receivable</b> | Start-up can sell its debtors to factor. Factor will pay most of the sold amount upfront & rest of the amount later.                      |
| 7. | <b>Crowd-funding</b>                 | Small amount of capital from large number of individuals. Eg.: crowd-funding website.   |
| 8. | <b>Microloans</b>                    | Given by individuals at lower interest to new business ventures.  |
| 9. | <b>Vendor Financing</b>              | Co. lends money to its customer so that he can buy products from co. itself. Depends on credit worthiness of customer.                    |

### 5.2 Modes of financing

At a very basic stage the start-up uses funds from **INNOVATIVE** sources like friends & family, credit cards etc. But as it grows, it requires more funds and that's when sources like Angel investors and venture capitalists come into picture.

|    |  |  |
|----|--|--|
| 1. | <p><b>Bootstrapping</b></p> <p><b>Q. What is the mode of financing is called in Startups, when a person attempts to found &amp; build a company from personal finances or from the operating revenues of a new company. Explain briefly the methods of this mode.</b></p> <p>(Dec. 2021) &amp; (Nov.,2022)</p> | <p>Funding the co. using <b>OPERATING REVENUES</b> of the new co. or from personal finances. Benefit - The entrepreneur retains the control over the co.</p> <p><b>Trade Credit</b></p> <ul style="list-style-type: none"> <li>- suppliers maybe on unwilling to extend credit</li> <li>- to prepare a well-crafted financial plan</li> <li>- Show suppliers a well-crafted financial plan</li> </ul> <p><b>Factoring</b></p> <ul style="list-style-type: none"> <li>- Accounts receivable is sold to a commercial finance company to raise capital</li> <li>- It can be on non-notification basis i.e. without telling customer that their account is sold.</li> <li>- Reduces cost such as bookkeeping, collection etc.</li> <li>- Frees up money tied in receivables.</li> </ul> <p><b>Leasing</b></p> <p>To take the equipment on lease rather than purchasing it. Reduces capital required (compared to purchasing)</p> <p><b>Benefits to Lessee</b></p> <ul style="list-style-type: none"> <li>- Smaller payments &amp; Tax benefit on lease rentals.</li> </ul> <p><b>Benefits to lessor</b></p> <ul style="list-style-type: none"> <li>- Tax benefits (depreciation) &amp; Profit from lease.</li> </ul> |
| 2. | <p><b>Angel Investors</b></p> <p>(May, 2022)</p>   | <ul style="list-style-type: none"> <li>- Invests own money in SMALL start-ups</li> <li>- Can be among family/friends of entrepreneur (who aims to help the entrepreneur) or can be an affluent individual (who invest in exchange for equity ownership.)</li> </ul> <p>- Also known as Seed investors, Private investors, Informal investors, Business angels etc.</p>   |

|   |  |  |   |  |  |  |
|---|--|--|---|--|--|--|
|   |  | <p><b>Family &amp; friends as Angels:</b></p> <ul style="list-style-type: none"> <li>- They may provide one-time investment or an ongoing injection of money</li> <li>- Provides more favourable terms compare to other lenders</li> <li>- Opposite to venture capitalist</li> </ul> <p><b>Affluent individuals as Angels:</b></p> <ul style="list-style-type: none"> <li>- Invest in exchange of equity or convertible debt</li> <li>- Although Angel investors use their own money but the entity that provides fund maybe a limited liability company, a trust or an investment fund etc.</li> <li>- Professional angel investors define their exit strategy. Eg: Exit via IPO or acquisition.</li> </ul>   |   |  |  |  |
| 3.  | <b>Venture Capital Funds</b><br><br>(Nov. 2022)  | <ul style="list-style-type: none"> <li>- An investment vehicle that invests investors' funds.</li> <li>- Managed by professionals.</li> <li>- Invests in equity of young co. that have the potential to develop into significant economic contributors.</li> </ul> <table border="1" style="width: 100%;"> <tr> <td style="width: 50%;"><b>Characteristics of VC financing</b><br/><br/><b>'HELL'</b><br/><br/>(Dec.21 – 4 Marks)</td> <td style="width: 50%;"> <ol style="list-style-type: none"> <li><b>High-risk high return</b> - VC works on high-risk high return principal.</li> <li><b>Equity participation</b> - VC gets equity. Participate in the management. A lot of board decisions can be supervised by VC.</li> <li><b>Long-term horizon</b> – Min. 3 years to Max. 10 years</li> <li><b>Lack of liquidity</b> - since there is less liquidity on the equity that VC gets. Therefore, they adjust liquidity risk premium against the price and required return.</li> </ol> </td> </tr> <tr> <td><b>Advantages of bringing in VC</b><br/><br/><b>'A-LION'</b></td> <td> <ol style="list-style-type: none"> <li><b>Additional rounds of funding</b> - VC can provide additional funds if required.</li> <li><b>Long term Equity</b> - Sharing both risks &amp; rewards.</li> <li><b>IPO</b> - VCs are experienced in preparing co. for IPO.</li> <li><b>Other co. experience</b> - VCs can provide advice based on their past experience with other co.</li> <li><b>Network of contacts</b> - This can be very valuable for a startup company.</li> </ol> </td> </tr> </table> | <b>Characteristics of VC financing</b><br><br><b>'HELL'</b><br><br>(Dec.21 – 4 Marks) | <ol style="list-style-type: none"> <li><b>High-risk high return</b> - VC works on high-risk high return principal.</li> <li><b>Equity participation</b> - VC gets equity. Participate in the management. A lot of board decisions can be supervised by VC.</li> <li><b>Long-term horizon</b> – Min. 3 years to Max. 10 years</li> <li><b>Lack of liquidity</b> - since there is less liquidity on the equity that VC gets. Therefore, they adjust liquidity risk premium against the price and required return.</li> </ol> | <b>Advantages of bringing in VC</b><br><br><b>'A-LION'</b> | <ol style="list-style-type: none"> <li><b>Additional rounds of funding</b> - VC can provide additional funds if required.</li> <li><b>Long term Equity</b> - Sharing both risks &amp; rewards.</li> <li><b>IPO</b> - VCs are experienced in preparing co. for IPO.</li> <li><b>Other co. experience</b> - VCs can provide advice based on their past experience with other co.</li> <li><b>Network of contacts</b> - This can be very valuable for a startup company.</li> </ol> |
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| 3.1   | <b>VC Process</b>  |  |   |  |  |  |
|   | <b>STEP 1: Deal Origination</b>  | VC operates directly or indirectly through intermediaries (also known as sourcing entity). VC obtains an INFORMATION MEMORANDUM (IM) which covers - Business model, valuation & exit plan.   |   |  |  |  |
|   | <b>STEP 2: Screening</b>   | Generally, done by a committee consisting senior personnel of the VC.  |   |  |  |  |
|   | <b>STEP 3: Due Diligence</b>   | Verify the accuracy of the documents taken. Due diligence is often handled by external bodies. Its fees may be paid by VC or may be shared between VC & Investee co.   |   |  |  |  |
|   | <b>STEP 4: Deal Structuring</b>  | Deal is structured in a way that both the parties win. Often a convertible structure is brought to ensure that the promoter retains its right to buy back the shares.  |   |  |  |  |
|   | <b>STEP 5: Post Investment Activity</b>  | VC nominates its nominee in the board of the company. The company has to adhere to certain guidelines like strong MIS, strong corporate governance and other covenants of the VC.  |   |  |  |  |
|   | <b>STEP 6: Exit Plan</b>   | Mainly exit happens in two ways:<br>a) <b>Sell to 3rd parties</b> – example IPO or private placement to other VCs.<br>b) <b>Buyback commitment</b> from promoter at an agreed rate who often have right to 1 <sup>st</sup> refusal.  |   |  |  |  |
| 3.2   | <b>Structure of VC Funds in India</b>  | <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 5px; background-color: #4a7ebb; color: white; border-radius: 10px;">Domestic Fund</div> <div style="border: 1px solid black; padding: 5px; background-color: #4a7ebb; color: white; border-radius: 10px;">Offshore Fund</div> </div>   |   |  |  |  |

| (May, 2023)                     |                                |  |                        |  |
|---------------------------------|--------------------------------|--|------------------------|--|
| <b>A</b>                        | <b>Domestic Fund</b>           | It raises funds domestically. In this:<br>a) Domestic vehicle is used for pooling of funds. This can be a trust or co. as India does not recognise LLP as pooling vehicle.<br>b) Duties of asset manager is carried out by a separate Investment advisor.  |                        |  |
| <b>B</b>                        | <b>Offshore Funds</b>          | <p><b>Offshore structure:</b></p> <ul style="list-style-type: none"> <li>• An investment vehicle directly makes investment into Indian companies.</li> <li>• Assets are managed by an offshore manager.</li> <li>• Investment advisor in India identifies deals and carries out the due diligence.</li> </ul> <p><b>Unified structure:</b></p> <ul style="list-style-type: none"> <li>• This is used when domestic investors are expected to participate in the fund.</li> <li>• Overseas investors pool their assets in an offshore vehicle that invests in locally many trust, whereas domestic investors directly contribute to the trust.</li> </ul> |                        |  |
| <b>3.3 Stages of VC Funding</b> |                                |  |                        |  |
|                                 | <b>Financial Round/ Stages</b> | <b>Lock-in Period (Yrs)</b>  | <b>Risk Perception</b> | <b>Activity To Be Financed</b>   |
|                                 | Seed money                     | 7-10   | Extreme                | Low level financing for proving new idea/concept or for R&D.                           |
|                                 | Start-up                       | 5-9  | Very High              | For Product development - Prototypes and for Marketing                                 |
|                                 | First stage                    | 3-7  | High                   | For Early manufacturing and Marketing  |
|                                 | Second stage                   | 3-5  | Sufficiently High      | Working capital (co. Selling product but not yet profitable)                           |
|                                 | Third stage                    | 1-3  | Medium                 | Expansion money for newly profitable co. also known as ' <b>Mezzanine financing.</b> ' |
|                                 | Fourth stage                   | 1-3  | Low                    | Facilitating public issue i.e. Going public. Also called ' <b>Bridge financing.</b> '  |
| <b>3.4</b>                      | <b>VC Funds in India</b>       | <ul style="list-style-type: none"> <li>• Started in the decade of 1970. After 10 years, first all India venture capital funding was started by IDBI, ICICI and IFCI.</li> <li>• In November 1998, the government announced it guidelines that focused on a very narrow description of venture capital and hence proved to be extremely restrictive. This made investment in VC highly risky and unattractive.</li> <li>• VC investing got a big boost by the IT revolution in 1997 as the VC became prominent founders of the growing IT and telecom industry.</li> </ul>  |                        |  |

### 5.3 Pitch Presentation: Growing Big? Time to make a pitch presentation (SMQ)

**A brief presentation (<20 mins) explaining the prospects of the company. Quick overview of the business plan & convincing the investors why they should invest in the startup.**

#### **ITP-SMP-CBF**

| Steps    |                                     |  |
|----------|-------------------------------------|--|
| <b>1</b> | <b>Introduction</b>                 | Brief account of yourself i.e. who are you? Huge milestones achieved.  |
| <b>2</b> | <b>Team</b>                         | Introduce people behind the scenes. Background of promoter.  |
| <b>3</b> | <b>Problem</b>                      | Explain the problem that the product is going to solve.  |
| <b>4</b> | <b>Solution</b>                     | How the product will solve the stated problem  |
| <b>5</b> | <b>Marketing/sales</b>              | Market size, profile of target customers, how are you planning to attract the customers                        |
| <b>6</b> | <b>Projections (or Milestones):</b> | Projected financial statement about where is the business heading. Will it be making profit or loss? Includes; |

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|          |                       |   |
|----------|-----------------------|---|
|          |                       | <p><b>- Income statement</b></p> <p>This estimate how much money the business will generate by projecting income and expenses. It shows;</p> <ul style="list-style-type: none"> <li>• How much revenue did the business generate?</li> <li>• How much did it cost to generate and support that revenue?</li> <li>• How much did the business pay its employees?</li> <li>• How much did it pay towards rent?</li> </ul> |
|          |                       | <p><b>- Balance sheet</b></p> <p>It shows the business's overall finances including assets, liabilities and equity and</p> <ul style="list-style-type: none"> <li>• How much cash is in the bank?</li> <li>• How much money does the company owe to suppliers?</li> <li>• How much money has been invested in the company?</li> </ul>   |
|          |                       | <p><b>- Cash flow statement</b></p> <p>It will depict how much cash will be coming into the business and how much cash will be utilized</p>   |
| <b>7</b> | <b>Competition</b>    | How your product is different from competitors? If acquired any competitor -> then details of the acquisition   |
| <b>8</b> | <b>Business Model</b> | <ul style="list-style-type: none"> <li>• The way in which co. earns revenue &amp; profit. Includes business processes, strategies, Infrastructure etc.</li> <li>• Gross profit is used as a measure of effectiveness of business model.</li> </ul>  |
| <b>9</b> | <b>Financing</b>      | If no money raised -> how much work is accomplished. If money raised earlier -> how much raised, who invested, how that money was utilised etc.   |

### 5.4 Unicorn

(RTP Nov., 2024)

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| <p>A Unicorn is a privately held start-up company which has achieved a valuation US\$ 1 billion. This term was coined by venture capitalist Aileen Lee, first time in 2013. Unicorn, a mythical animal represents the statistical rarity of successful ventures.</p> <p>A start-up is referred as a Unicorn if it has following features:</p> <ol style="list-style-type: none"> <li>1. Privately held start-up co.</li> <li>2. Valuation of start-up reaches US\$ 1 Billion. (≥ US\$ 1 Billion.)</li> <li>3. Emphasis is on rarity of success of such start-up.</li> <li>4. Other common features are new ideas, disruptive innovation, high on technology etc.</li> </ol> <p>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'. Hence a start-up may be Unicorn at one point of time and may not be at another point of time.</p> <p>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.</p> <ol style="list-style-type: none"> <li>4. "Unicorn" term was coined by VC Aileen Lee in 2013.</li> <li>5. Next milestone = Decacorn (value &gt; US\$ 10 billion)</li> <li>6. India is 3<sup>rd</sup> largest ecosystem for start-ups.</li> <li>7. As of 2022, India has over 59,000 DPIIT-recognized startups (with 10ft unicorns)</li> </ol> |
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### 5.5 Start-up India Initiative

| <b>Definition of Start-up</b><br>(May, 2022)                      | <b>Benefits of Start-up India</b>                  |
|---|--|
| 1. Up to 10 years from its date of incorporation or registration. | 1. Simple registration process - completely online |

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| 2. Incorporated as either a Pvt. Ltd. Co. or a Registered Partnership Firm or a LLP in India.   | 2. Tax holiday - for 3 years provided startup gets a certification from Inter-Ministerial Board (IMB)  |
| 3. Turnover for any fiscal year has not exceeded INR 100 crore.   | 3. Tenders - Exempted from experience requirement while applying for govt. tender  |
| 4. Entity should not have been formed by splitting up or reconstruction a business already in existence.  | 4. Simplified compliances - various compliances have been simplified for start-ups to save time and money.   |
| 5. Working towards innovation, development or improvement of products processes or services Or has a high potential of employment generation or wealth creation.                    | 5. Reduced patent & trademark registration cost- Government will bear the facilitative fees for patents and trademarks and the start-up will bear only the statutory fees. |
| <b>How Government promoted Start-ups in India</b>   | <b>Start-up India Seed Fund Scheme (SISFS)</b>   |
| 1. Programs like Startup India and StandUp India gave a major boost to Startups in India.   | 1. SISFS was Created by DPIIT in Jan 2021 with an outlay of ₹945 Crores.   |
| 2. By setting up a SIDBI-run Electronic Development Fund (EDF), the Indian Govt. became a Limited Partner (LP) in a fund for the first time ever.                                   | 2. Aim = provide financial assistance for Proof of Concept, prototype development, product trials, and commercialization.  |
| 3. Easy finance options such as Mudra Scheme, tax benefits like 100% tax holiday under section 80-IAC and exemption from angel taxation also provided push to the Indian start-ups. | 3. It will support an approx. 3,600 entrepreneurs through 300 incubators in next 4 year  |
|   | 4. A start-up can get seed fund of as much as ₹50 Lacs under SISFS.  |
| <b>Recognition criteria of DPIIT (for startups)</b>   | <b>Priority sectors for SISFS</b>  |
| 1. Incorporated ≤ 2 years ago at the time of application  | BHARAT –<br>B = Biotechnology, H = Healthcare, A = Agriculture, R = Railways, T = Textile  |
| 2. Business idea to develop a product / service with market fit, viable commercialization and scope of scaling.   | MODI –<br>M = Mobility, O = Oil & Gas, D = Defence, I = Impact (Social Impact)   |
| (*DPIIT = Department of Promotion of Industry and Internal Trade)   | WIFE –<br>W = Water & Waste Management, I = Inclusion (Financial inclusion), F = Food processing, E = Energy   |
|   | SE –<br>S = Space, E = Education   |
| <b>Why India Became a Sustainable environment for startups?</b>   |  |
| <b>(May, 2024)</b>  |  |
| 1. <b>Pool of Talent</b> - Millions of students graduate every year. Many of these students begin their own ventures contributing to the startup growth in India.                   |  |
| 2. <b>Cost Effective Workforce</b> - Workforce in India is cost effective. So, cost of setting up and running a business is comparatively lower.                                    |  |
| 3. <b>Increasing use of the Internet</b> - India has the 2nd largest internet user base (after China). Start-ups leverage this easy access to the internet.                         |  |
| 4. <b>Technology</b> – Major tech developments has made various business processes quick, simple & efficient. Many startups are working in areas of AI & Blockchain.                |  |
| 5. <b>Variety of Funding Options Available</b> – Like angel investors, VC etc. Easing of FDI norms has also increased foreign funding in Indian start-up ecosystem.                 |  |

**5.6 Succession Planning**

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| <b>Definition</b><br><b>(RTP May, 2024)</b> | Identifying critical positions in an org. and developing action plans for individuals to assume those positions. It ensures that right people are available for the right jobs today and in future.<br>It ensures that businesses are fully prepared to promote all employees. It is an imp. |
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| (Nov. 2024)  | priority for family-owned businesses as most of them are managed by a non-family leader even though ownership lies with family.   |
| <b>Why is there a need for succession planning?</b><br><br><b>C<sup>2</sup>ART</b> | <ol style="list-style-type: none"> <li>1. <b>Cause removal</b> – If the existing leader is removed by court, management, stakeholders etc.</li> <li>2. <b>Conflict Resolution Mechanism</b> – it is helpful in promoting transparent communication &amp; conflict settlement.</li> <li>3. <b>Aligning</b> – In family owned business succession planning helps to align with the culture &amp; vision of the business.</li> <li>4. <b>Risk mitigation</b> – If existing leader quits, then it may take 6-9 months to find a new candidate.</li> <li>5. <b>Talent pipeline</b> – It keep employees motivated as they have better visibility about their career paths.</li> </ol> |
| (RTP May, 2024)  |   |
| (Nov. 2024)  |   |
| <b>Business succession strategy</b>  | <p><b>Step 1 – Evaluate key leadership positions:</b> - To evaluate this, risk or impact assessment can be performed.</p> <p><b>Step 2 – Map competencies required:</b> - Identify qualifications, behavioural &amp; technical competencies required to perform the role successfully.</p> <p><b>Step 3 – Identify competencies of current workforce:</b> - Identify if internal options can deliver expected results.</p> <p><b>Step 4 – Bridge Leader:</b> - In family owned business appointment of an outsider as 'Bridge Leaders' will help to prepare young family members for leadership role.</p>   |
| <b>Challenges in Succession Planning</b>   | <ol style="list-style-type: none"> <li>1. <b>Founder mindset might be different than the corporate mindset</b> – This puts off seasoned corporate leaders from joining even matured start-ups.</li> <li>2. <b>Premature for startups to implement business succession</b> - Certain startups are at early growth stage and too much of processes would lead to growth slow-down.</li> <li>3. <b>Founders are the face of startups</b> – One cannot imagine a startup without a founder.</li> </ol>  |

### 5.7 MTP-RTP-EXAM Questions

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| <b>Q.1</b>  | <b>Compare and contrast start-ups and entrepreneurship. Describe the priorities and challenges which start-ups in India are facing.</b><br><br><p style="text-align: right;">(RTP Nov 19, MTP Nov 19/ March 18)</p>   |
| <b>Ans.</b> | <p><b><u>Major differences between startup and entrepreneurship:</u></b></p> <ul style="list-style-type: none"> <li>➤ Start up is a part of entrepreneurship. Entrepreneurship is a broader concept and it includes a startup firm.</li> <li>➤ Main aim of startup is to build a concern and build a product or service. Objective of an already established entrepreneurship concern is to capture best opportunities with their limited resources.</li> <li>➤ A startup generally does not have a major financial motive whereas an established entrepreneurship concern mainly operates on financial motive.</li> </ul> <p><b><u>Priorities regarding start-ups in India</u></b></p> <ul style="list-style-type: none"> <li>➤ The priority is on bringing more and more smaller firms into existence.</li> <li>➤ The focus is on need based, instead of opportunity based entrepreneurship.</li> <li>➤ Encourage self-employment rather than large, scalable concerns.</li> </ul> <p><b><u>Main Challenges that startups are facing</u></b></p> <ul style="list-style-type: none"> <li>➤ Getting the right talent. Shortage of skilled workforce can hinder startup's growth and development.</li> <li>➤ Startups have to comply with numerous regulations which escalate its cost.</li> </ul> |
| <b>Q.2</b>  | <b>Explain the documents that are required to make up Financial Presentations during Pitch.</b><br><br><p style="text-align: right;">(MTP May 20)</p>   |
| <b>Ans.</b> | <ul style="list-style-type: none"> <li>➤ <b>Income statement:</b> This projects how much money the business will generate by projecting income and expenses. For 1st year in business, create a monthly income statement. For 2nd year, quarterly statements &amp; for following years, just make an annual income statement.</li> <li>➤ <b>Cash flow statement:</b> 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.</li> <li>➤ <b>Balance sheet:</b> 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</li> </ul>  |

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| <b>Q.3</b>  | <b>Explain the term business model with the help of an illustration.</b><br><span style="float: right;">(MTP Dec 21)</span>   |
| <b>Ans.</b> | <ul style="list-style-type: none"> <li>➤ <b>Business model is the way in which a company generates revenue and earns profit. Analysts use “Gross profit” as a way to compare the efficiency and effectiveness of a firm's business model.</b></li> <li>➤ It's important to tell investors in pitch presentation about how co. will generate revenue. It is better to show a list of the various revenue streams for a business model and the timeline for each of them.</li> <li>➤ The term business model is a wide term denoting core aspects of a business including purpose, target customers, offerings, strategies, infrastructure, and operational processes and policies including culture.</li> <li>➤ <b>Example of business model</b> – Two companies (A &amp; B) are engaged in the business of renting movies. Both have revenue of ₹5 crores. But co. A which is engaged in physical renting of movies has gross profit of only ₹1 crores (due to higher storage &amp; logistics costs). Whereas co. B offer movies online, and has Gross profit of ₹3 crores, even with the same revenue of ₹5 crores. This is due to lower storage and distribution costs of Co. B.</li> </ul> |

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## Chapter 6 – Other Chapters MTP-RTP-EXAM Questions

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| <b>Q.1</b>  | <b>Buy and hold is one of the policies of portfolio rebalancing. Briefly explain other policies of portfolio rebalancing.</b><br><p style="text-align: right;"><b>(Dec., 2021)</b></p>   |
| <b>Ans.</b> | <p><b>Constant Mix Policy:</b> Contrary to above policy this policy is a 'Do Something Policy'. Under this policy investor maintains an exposure to stock at a constant percentage of total portfolio. This strategy involves periodic rebalancing to required (desired) proportion by purchasing and selling stocks as and when their prices goes down and up respectively. In other words this plan specifies that value of aggressive portfolio to the value of conservative portfolio will be held constant at a predetermined ratio. However, it is important to this action is taken only there is change in the prices of share at a predetermined percentage.</p> <p><b>Constant Proportion Insurance Policy:</b> Under this 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:</p> <p style="text-align: center;">Target Investment in Shares = Multiplier (Portfolio Value - Floor Value)<br/>Multiplier is a fixed constant whose value shall be more than 1.</p> |
| <b>Q.2</b>  | <b>What are the main features of Forward Rate Agreements (FRA)?</b><br><p style="text-align: right;"><b>(Dec., 2021)</b></p>   |
| <b>Ans.</b> | <ul style="list-style-type: none"> <li>➤ A 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. Unlike futures FRAs are not traded on an exchange thus are called OTC product. Following are main features of FRA.</li> <li>➤ Normally it is used by banks to fix interest costs on anticipated future deposits or interest revenues on variable-rate loans indexed to Benchmark Interest Rate e.g. LIBOR, MIBOR etc.</li> <li>➤ It is an off-Balance Sheet instrument.</li> <li>➤ 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.</li> <li>➤ It is settled at maturity in cash representing the profit or loss. A bank that sells an FRA agrees to pay the buyer the increased interest cost on some "notional" principal amount if Reference Rate of some specified maturity is above a stipulated "Forward Interest Rate" on the contract maturity or settlement date. Conversely, the buyer agrees to pay the seller any decrease in interest cost if Reference Rate fall below the forward rate.</li> <li>➤ Final settlement of the amounts owed by the parties to an FRA is determined by the formula</li> </ul>  |
| <b>Q.3</b>  | <b>What is Net interest position risk and Price risk?</b><br><p style="text-align: right;"><b>(May, 2022)</b></p>  |
| <b>Ans.</b> | <p><b>Net Interest Position Risk:</b> 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. Thus, banks with positive net interest positions will experience a reduction in NII as the market interest rate declines and increases when interest rate rises. Thus, large float is a natural hedge against the variations in interest rates.</p> <p><b>Price Risk:</b> 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. Banks which have an active trading book should, therefore, formulate policies to limit the portfolio size, holding period, duration, defeasance period, stop loss limits, marking to market, etc.</p>   |
| <b>Q.4</b>  | <b>Briefly explain Asset and Liability Management (ALM).</b><br><p style="text-align: right;"><b>(Nov., 2022)</b></p>  |
| <b>Ans.</b> | <ul style="list-style-type: none"> <li>➤ Asset-Liability Management (ALM) is one of the important tools of risk management in commercial banks of India. Indian banking industry is exposed to a number of risks prevailing in the market such as market risk, financial risk, interest rate risk etc. The net income of the</li> </ul>  |

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|             | <p>banks is very sensitive to these factors or risks.</p> <ul style="list-style-type: none"> <li>➤ 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 liquidity risk management, management of market risk, trading risk management, funding and capital planning and profit planning and growth projection.</li> <li>➤ Banks and other financial institutions provide services which expose them to various kinds of risks like credit risk, interest risk, and liquidity risk. Asset liability management is an approach that provides institutions with protection that makes such risk acceptable. Asset-liability management models enable institutions to measure and monitor risk, and provide suitable strategies for their management.</li> <li>➤ It is therefore appropriate for institutions (banks, finance companies, leasing companies, insurance companies, and others) to focus on asset-liability management when they face financial risks of different types. Asset-liability management includes not only a formalization of this understanding, but also a way to quantify and manage these risks.</li> <li>➤ In a sense, the various aspects of balance sheet management deal with planning as well as direction and control of the levels, changes and mixes of assets, liabilities, and capital.</li> </ul>   |
| <b>Q.5</b>  | <b>Explain various methods of hedging of interest rate risk.</b><br><span style="float: right;">(Nov., 2022)</span>  |
| <b>Ans.</b> | <p>Methods of Hedging of Interest Rate Risk can be broadly divided into following two categories:</p> <p><b>(A) Traditional Methods:</b> These methods can further be classified in following categories:</p> <p><b>(i) Asset and Liability Management (ALM):</b> 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.</p> <p><b>(ii) Forward Rate Agreement (FRA):</b> Normally it is used by banks to fix interest costs on anticipated future deposits or interest revenues on variable-rate loans indexed to Benchmark Interest Rate e.g. LIBOR, MIBOR etc. A bank that sells an FRA agrees to pay the buyer the increased interest cost on some "notional" principal amount if Reference Rate of some specified maturity is above a stipulated "Forward Interest Rate" on the contract maturity or settlement date. Conversely, the buyer agrees to pay the seller any decrease in interest cost if Reference Rate fall below the forward rate.</p> <p><b>(B) Modern Methods:</b> These methods can further be classified in following categories:</p> <p><b>(i) Interest Rate Futures (IRF):</b> 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.</p> <p><b>(ii) Interest Rate Options (IRO):</b> Also known as Interest Rate Guarantee (IRG) as option 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.</p> <p><b>(iii) Interest Rate Swaps:</b> 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.</p> <p><b>(iv) Swaptions:</b> 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.</p> |
| <b>Q.6</b>  | <b>Write a short note on Money Market Hedging.</b><br><span style="float: right;">(Nov., 2022)</span>  |
| <b>Ans.</b> | At its simplest, a 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   |

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|             | <p>agreement now (today) to exchange 1 Million 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.</p> <p><b><u>Advantages of Money Market Hedging</u></b><br/>         (i) Fixes the future rate, thus eliminating downside risk exposure.<br/>         (ii) Flexibility with regard to the amount to be covered.<br/>         (iii) Money market hedges may be feasible as a way of hedging for currencies where forward contracts are not available.</p> <p><b><u>Disadvantages of Money Market Hedging</u></b><br/>         (i) More complicated to organize than a forward contract.<br/>         (ii) Fixes the future rate - no opportunity to benefit from favourable movements in exchange rates.</p>  |
| <b>Q.7</b>  | <p><b>Swaptions can be applied for speculation purposes or to hedge a portion of their swap books. What are the other areas of its application?</b><br/> <span style="float: right;">(May, 2023)</span></p>   |
| <b>Ans.</b> | <p>The other areas of application of Swaption other than for speculation are as follows:</p> <p>(a) It can be applied in a variety of ways for both active traders as well as for corporate treasurers.<br/>         (b) It have become useful tools for hedging embedded optionality which is common to the natural course of many businesses.<br/>         (c) It is useful to borrowers targeting an acceptable borrowing rate.<br/>         (d) It is also useful to those businesses tendering for contracts.<br/>         (e) It also provides protection on callable/puttable bond issues.</p>   |
| <b>Q.8</b>  | <p><b>The commodity characteristic approach defines feasible commodities for derivatives trading based on an extensive list of required commodity attributes." What are the required attributes?</b><br/> <span style="float: right;">(May, 2023)</span></p>  |
| <b>Ans.</b> | <p><b>The following attributes are considered crucial for qualifying for the derivatives trade:</b><br/>         (1) A commodity should be durable and it should be possible to store it;<br/>         (2) Units must be homogeneous;<br/>         (3) The commodity must be subject to frequent price fluctuations with wide amplitude; supply and demand must be large;<br/>         (4) Supply must flow naturally to market and there must be breakdowns in an existing pattern of forward contracting.</p>   |
| <b>Q.9</b>  | <p><b>Index Funds is one of the Special Funds. What are other funds in Special Funds category?</b><br/> <span style="float: right;">(May, 2023)</span></p>  |
| <b>Ans.</b> | <p>The other funds in Special Fund category are as follows:</p> <p><b>(a) International Funds:</b> A mutual fund located in India to raise money in India for investing globally.<br/> <b>(b) Offshore Funds:</b> A mutual fund located in India to raise money globally for investing in India.<br/> <b>(c) Sector Funds:</b> They invest their entire fund in a particular industry e.g. utility fund for utility industry like power, gas, and public works.<br/> <b>(d) Money Market Funds:</b> 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.<br/> <b>(e) Fund of Funds:</b> Fund of Funds (FoF) as the name suggests are schemes which invest in other mutual fund schemes. The concept is popular in markets where there are number of mutual fund offerings and choosing a suitable scheme according to one's objective is tough. Just as a mutual fund scheme invests in a portfolio of securities such as equity, debt etc., the underlying investments for a FoF is the units of other mutual fund schemes, either from the same fund family or from other fund houses.<br/> <b>(f) Capital Protection Oriented Fund:</b> 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. The orientation towards protection of capital originates from the portfolio structure of the scheme and not from any bank guarantee, insurance cover etc.<br/> <b>(g) Gold Funds:</b> 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. Gold Funds which are</p> |

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|             | <p>generally in the form of an Exchange Traded Fund (ETF) are listed on the stock exchange and offers investors an opportunity to participate in the bullion market without having to take physical delivery of gold.</p> <p><b>(h) Quant Funds:</b> Quant Fund works on a data-driven approach for stock selection and investment decisions based on a pre-determined rules or parameters using statistics or mathematics-based models.</p>  |
| <b>Q.10</b> | <p><b>Explain in brief the following:</b></p> <p><b>(i) Conversion factor in Interest Rate Futures.</b></p> <p><b>(ii) VEGA and RHO in OPTION VALUE.</b></p>  |
| <b>Ans.</b> | <p><b>(i) Conversion factor:</b> 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. <math>(\text{Conversion Factor}) \times (\text{futures price}) = \text{actual delivery price for a given deliverable bond.}</math></p> <p><b>(ii) Vega:</b> Sensitivity of option value to change in volatility. Vega indicates an absolute change in option value for a one percent change in volatility.</p> <p>For example, a Vega of 0.09 indicates an absolute change in the option's theoretical value will increase by 0.09 if the volatility percentage is increased by 1.0 or decreased by 0.09 if the volatility percentage is decreased by 1.0. Results may not be exact due to rounding. It can also be stated as the change in option price given a one percentage point change in volatility. Like delta and gamma, Vega is also used for hedging.</p> <p><b>Rho:</b> Rho is the change in option price given a one percentage point change in the risk free interest rate. It is the sensitivity of the option value to change in interest rate. Rho indicates an absolute change in option value for a one percentage change in the interest rate.</p> <p>For example, a Rho of 0.06 indicates the option's theoretical value will increase by 0.06 if the interest rate is decreased by 1.0.</p> |
| <b>Q.11</b> | <p><b>What do you mean by International Financial Centre (Gift City)? What are the benefits of IFC?</b></p>   |
| <b>Ans.</b> | <p>International Financial Centre (IFC) is the financial center that caters to the needs of the customers outside their own jurisdiction. Broadly, speaking IFC is a hub that deals with flow of funds, financial products and financial services even though in own land but with different set of regulations and laws.</p> <p>Thus, these centers provide flexibility in currency trading, insurance, banking and other financial services. This flexible regime attracts foreign investors which is of potential benefit not only to the stakeholders but as well as for the country hosting IFC itself.</p> <p>There are numberless direct and indirect benefits of setting up IFC but some major benefits emanating from establishing IFC are as follows:</p> <p>(i) Opportunity for qualified professionals working outside India come here and practice their profession.</p> <p>(ii) A platform for qualified and talented professionals to pursue global opportunities without leaving their homeland.</p> <p>(iii) Stops Brain Drain from India.</p> <p>(iv) Bringing back those financial services transactions presently carried out abroad by overseas financial institutions/entities or branches or subsidiaries of Indian Financial Market.</p> <p>(v) Trading of complicated financial derivative can be started from India.</p>  |

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